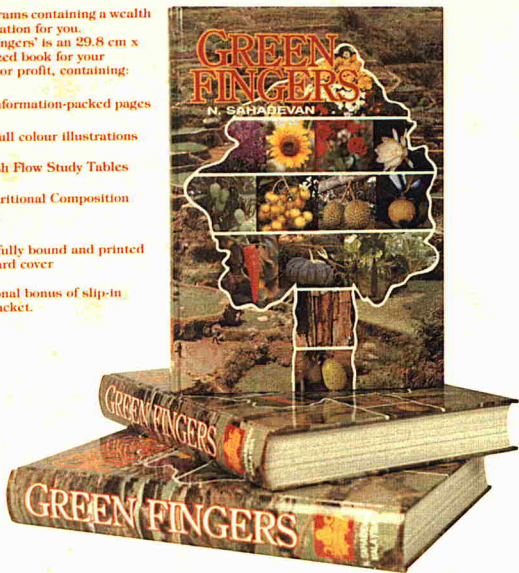


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Malaysia Agricultural Directory & Index 1988/89

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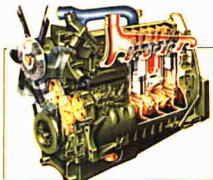
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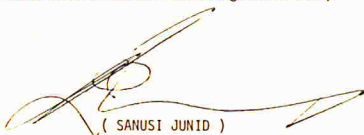
Message from the Minister of Agriculture, Malaysia



Today, we are witnessing an ever increasing interest in the field of agriculture. The graduates, for instance, who had once adopted a very apprehensive view towards agriculture, are now seriously considering it, not only as a means of livelihood, but also as a big-time money earner. Even existing non-agriculture-based firms are inclined to diversify their businesses into agriculture related activities.

These sudden interests is the result of the government's renewed emphasis in creating awareness on the significance of the agricultural sector. This effort will meet greater success if more information and data are made available to the public.

I congratulate Pantai Maju Sdn. Bhd. for its contribution in preparing this Agricultural Directory & Index and I believe it will go a long way in helping the nation to realise the National Agricultural Policy.



(SANUSI JUNID)

Y.B. Datuk Seri Sanusi Bin Junid
Minister of Agriculture, Malaysia



Message from the Chairman of Pantai Maju Sdn. Bhd.



The 1988/89 edition of the Malaysia Agricultural Directory & Index continues to widen the coverage on the Malaysian agricultural industry. Consistent with Pantai Maju's effort to serve the agricultural industry effectively, this third edition has adopted an analytical approach in the presentation of information of topic interest on this sector. The Directory also contains write-ups and listings of more than 2,000 estates, oil palm mills, agricultural institutions in the public sector, associations, societies, embassies and commercial companies.

The publication of this directory would not have been possible without the assistance and co-operation of various government and private institutions and individuals. We would like to express our sincere appreciation to them and to the Honourable Minister of Agriculture, Y.B. Datuk Seri Sanusi Bin Junid in particular for his kind support and endorsement.

We also wish to thank the advertisers/listers for their strong support and finally to UMAGA for their continued co-operation in making this directory a success.

Tan Sri Abdul Kadir Yusof
Chairman, Pantai Maju Sdn. Bhd.



Message from the President of University of Malaya Agriculture Graduate Alumni (UMAGA)



Graduates from the faculty of agriculture, University of Malaya have pioneered the early development of the agriculture industry in Malaysia. This is evidenced by the number of our graduates who now head big corporations, multinational companies, statutory bodies, research organizations and policy making institutions.

The tradition of rendering ourselves useful to society and contributing to the progress of agriculture and economic well-being of our country is once again manifested by the release of the 1988/89 edition of the Malaysia Agricultural Directory & Index. This has been made possible by the concerted effort of the Alumni members and Pantai Maju Sdn. Bhd.

The production schedule has been achieved through the unfailing support of the many agricultural organizations and companies and the strong sense of commitment of the production team and editorial board members.

In this edition, the information contained in it has been expanded and updated. The format and presentation of the directory has improved and the content revised to reflect the present development trend.

The 1988/89 Malaysia Agricultural Directory & Index is symbolic of the vigour and resourcefulness of our Malaysian Agriculture.

Koh Pak Boo
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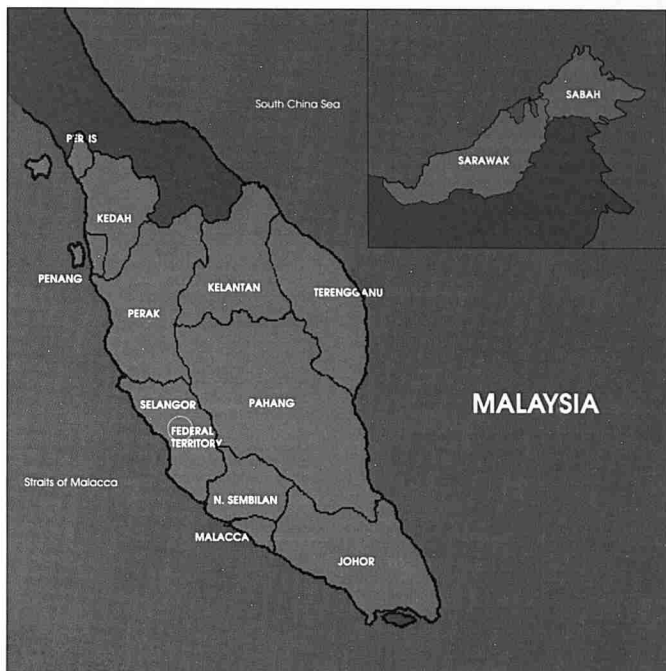
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Malaysian agriculture in brief

Chapter 1



Map of Malaysia

Malaysia is made up of fourteen states, viz., Johore, Malacca, Negeri Sembilan, Selangor, Pahang, Terengganu, Kelantan, Perak, Kedah, Perlis, Penang, Federal Territory, Sabah and Sarawak. Peninsular Malaysia is separated from Sabah and Sarawak by 530 km of the South China Sea. The Peninsula extends 740 km from Perlis in the north to Johore in the south and it has a coastline of 1,930 kilometres. Sabah and Sarawak stretch some 1,120 km from Tanjong Datu (Sarawak) in the west to Hog Point (Sabah)

in the east, and have a coastline of around 2,253 kilometres. The states of Peninsular Malaysia are divided into 81 administrative districts excluding the Federal Territory of Kuala Lumpur. The state of Sarawak consists of seven divisions and these are further sub-divided into 26 districts. The state of Sabah has five divisions, viz., Tawau, Sandakan, Kudat, West Coast and the Interior. These are divided into 23 districts excluding the Federal Territory of Labuan.

LAND FORM

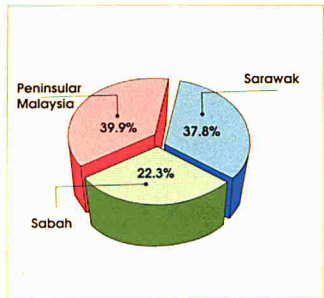
In the Peninsula, the Main Range runs from the Thai border southwards to Negeri Sembilan, dividing it into the eastern and western parts. A large portion of the interior of Kelantan, Terengganu and Pahang is mountainous and contains the highest peak in the Peninsula, Gunung Tahan (2,187 m). The interior of Sabah is criss-crossed by a series of mountain ranges and hills, the most prominent of which is the Crocker Range which separates the narrow lowland of the north-west coast from the interior. The average elevation of this range varies from 762 to 914 metres. In Sarawak, the interior is mountainous, with the highest range adjoining the border with Indonesia. The two highest peaks in Sarawak are Gunung Murud (2,425 m) and Gunung Mulu (2,371 m) which has one of the largest natural caves in the world.

Eighty percent of Malaysia are covered by tropical rain forest. In Sabah and Sarawak, an alluvial coastal plain, fringed by mangrove swamps, lies between the sea and the mountainous interior.

LAND RESOURCE

The total land area in Malaysia amounts to 32.96 million hectares. The distribution of the land resource in the country is shown in Figure 1.

Figure 1. Distribution of the land resource in Malaysia

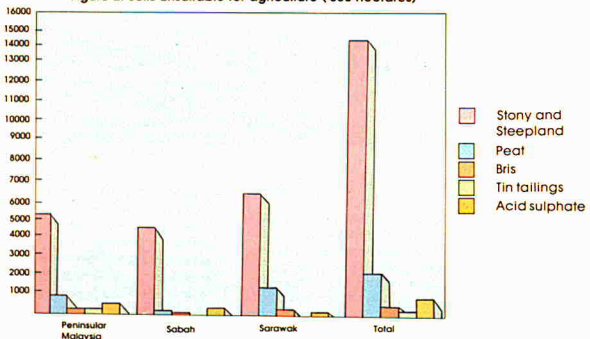


Source: Department of Veterinary Services

There are about 35% of the total land area in the country, amounting to 11.63 million hectares, which are suitable for agriculture. Of these, 6.33, 2.10 and 3.20 million hectares are located in Peninsular Malaysia, Sabah and Sarawak respectively. The rest of the country is made up of land with soils that are unsuitable for agriculture and need substantial amelioration before they can be productive. (Figure 2).

(000 hectares)

Figure 2. Soils unsuitable for agriculture ('000 hectares)



AGRICULTURE IN THE ECONOMY

The contribution of this sector to the Gross Domestic Product (GDP) and direct employment of the country is less compared with that of most Southeast Asian countries. In 1979, agriculture in Malaysia contributed to 24% of the GDP and this proportion has been falling steadily over the last eight years. Presently, this sector accounts for 21.5% of the GDP and this value is expected to decrease to 18.1% by 1990. The efforts to revitalize the agriculture sector are expected to have their full impact on output only by the 1990s.

LAND USE IN RELATION TO CROPS

Plantation crops continue to be the major crops grown in the country. In 1987, there were 1,938, 1,686 and 0.334 million hectares of rubber, oil palm and cocoa respectively. Paddy and coconut are the two other crops that are grown over substantial hectareage. There were 617,700 and 311,000 hectares planted with paddy and coconut respectively in 1987. The other crops grown in large areas are fruits, pepper, vegetables and tobacco.

CROP PRODUCTION

The agriculture sector will continue to contribute significantly to the national economy in real terms through plantation crop production. It is forecasted that the 1988 production of rubber, crude palm oil, palm kernel oil, cocoa, paddy and pepper will be 1,605,000, 4,650,000, 589,000, 1,65,000, 1,620,000 and 16,700 tonnes respectively.

LIVESTOCK

Livestock production is an important aspect of Malaysian agriculture. The main types of animals reared are cattle, buffaloes, goats, sheeps, poultry and swine. The number of these, except

for buffaloes, is increasing rapidly especially swine and poultry. The production of pork and poultry meat and eggs accounted for 92% of the total turnover in the livestock sector. In 1987, the farm-gate value of poultry produced was estimated at 1.28 billion ringgit. This value is projected to increase to 2.2 billion ringgit by the year 2000.

Malaysia was 103 percent self-sufficient in pork in 1985 with a production of 153,000 tonnes. The production of this meat is envisaged to respond to the projected demand of 256,000 tonnes by the year 2000.

AQUACULTURE

The contribution of aquaculture to the total production of fish in the country amounts to about ten percent. This is valued at about 42.6 million ringgit. The area under freshwater fish culture has also increased steadily. Presently there are about 2,600 hectares of freshwater fish pond in the country. The potential of this industry is bright, with a projected production of 136,000 tonnes of fishery products by 1990, increasing to 206,000 by the year 2000.

AGRICULTURE AND EMPLOYMENT

This sector provided 1.91 million jobs or 39.7% of the total national employment in 1980. During the period 1981-85, it generated 42,300 jobs or 6.5% of the total new employment. The share of the agriculture sector in the total employment fell from about 40% during of the Third Malaysia Plan period. It is envisaged that the sector will generate another 49,000 jobs during the Fifth Malaysia Plan period (1986-90), bringing the total employment in agriculture to two million by 1990. In percentage term, the contribution of the agriculture sector to the total employment will fall further to about 33% by the end of the Fifth Malaysia Plan.

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Trends in agricultural sector development

Chapter 2

Substantial interest has been generated over the last year or so in the lucrativeness of realized as well as expected returns from investments in agriculture, particularly in 'new' commodities and/or enterprizes. This has culminated in increased investments and diversification efforts in the cultivation of fruits, the raising of livestock, and exploitation of our fisheries resources and aquaculture, as well as their associated upstream and downstream activities. Many are quick to point out that the renewed interest and accompanying increased investments in agriculture have largely been conditioned by the promotional efforts of, and encouragement provided by the Government since the mid eighties.

The Government programmes and incentives, designed to encourage increased private sector participation in the agricultural sector, are not only targeted at the big players but also at entrepreneurs with medium-scale operations, particularly those who can respond positively to change.

Over the years, agricultural development planning and implementation have grown in complexity for the public sector. The same holds true for the decision framework for investments by the private sector. This has, to a large extent, been precipitated by the erratic performance of the global economy interacting with the emerging structural weaknesses in the agricultural sector and the overall economy. It may also be due to the increase in knowledge and awareness of the strengths, weaknesses, and linkages within the agricultural sector and between sectors as well as those of competitors in the domestic and global markets.

DEVELOPMENT PLANNING

Malaysian planning is rooted to that of a plan-rationale approach as is practised in many newly industrialized countries and Japan. This is in contrast to the market-rationale approach of planning as practised in North America and the state-rationale approach of Russia.

Development plans in Malaysia tend to provide merely the broad development objectives and strategies at the overall, sectoral, and subsectoral levels together with indications of government emphasis. These are used to guide

agriculture development in the country. They also provide indications of the strategic directions for the overall economy, and in turn that of the component sectors and subsectors, together with guidance on the desired pattern of resource allocation by both the public and private sectors.

DICHOTOMY IN AGRICULTURE

Malaysian agriculture continues to be characterized by the presence of an efficient well organized estate subsector engaged in export oriented production of tree crops and a less organized, individually farmed smallholder subsector engaged in tree crops, food crops and mixed farming. This dichotomy, however, is increasingly blurred by the emergence of an increasingly efficient and organized smallholder subsector under the tutelage of public development agencies. Another characteristic is the long standing predominance of a narrow base of tree crops and a far narrower base of short-term food crops. About 80 percent of total cropped land is under rubber, oil palm, and cocoa/coconut, while only about 10% is under a single food crop, rice.

The main concern stemming from these characteristics is the sharp disparity in the levels of efficiency, productivity, competitiveness and hence income. This has resulted in the predominance of poverty among the small farmers. Another area of concern is that the growth of the agriculture sector is dependent on a few tree crops, originating largely from the estate and organized smallholder subsectors. In view of these structural weaknesses, rigidities and problems as well as the required role of agriculture in national development, a series of analyses on the policies, strategies, and programmes were conducted in the early eighties to study their impact on Malaysian agriculture now and in future. This concerted effort culminated in the formulation and enunciation of the long-term National Agricultural Policy (NAP) in early 1984.

THE NATIONAL AGRICULTURAL POLICY

The broad elements of the path ahead for agriculture as well as for the major commodities,

up till the year 2000 were charted in the NAP. In consequence, the signals and new directions embodied in the Fifth Malaysia Plan (FMP) and recent annual budgets may be viewed as on-going adjustment and fine-tuning in response to economic, social, technical and structural changes.

The objective of the NAP is to maximize income from agriculture through efficient utilization of the country's resources and to revitalize the sector's contribution to overall economic development. This objective is firmly cast within the context of recognized linkages and inter-dependencies that exist between agriculture and other sectors, medium-term considerations of economic growth, employment and export earnings, and the importance of the sector to the country's long-term goals of equity and poverty alleviation.

In essence, the NAP aims at ensuring a balanced and sustained rate of growth in the agriculture sector *vis-a-vis* the other sectors of the economy. It provides the broad direction of the country's strategy as well as framework for the development of the sector up to the year 2000. The modernization and revitalizing of the sector constitute the central theme of the NAP, and guidelines on the strategy for land development as well as the development of specific commodities, inclusive of industrial and food crops, livestock, fisheries and forestry products. The underlying theme of the NAP is a drive to increase productivity, efficiency and competitiveness in the development of new resources as well as in the utilization of what is currently available.

Implicitly, the NAP made a distinct shift from the hitherto underlying development strategy of creating a prosperous peasantry, which had been in place since the early sixties. In its place was proposed a new direction of structural transformation, involving the modernization and commercialization of the smallholder subsector through larger scale production units and increased involvement of the private sector. There are indications that the Government is concerned with the glaring structural weaknesses within the agriculture sector and the rigidities in land issues, labour and capital market movement. The intention to eradicate programmes on subsidy in agricultural production and to emphasize underlying crop economics, long-term competitiveness, returns to labour and scale and net incomes as well as supplementary measures to stimulate rural development were clearly articulated. It also marked the start of increasing recognition of

inter-sectoral linkages and emphasized that the transformation process should be effectively directed and controlled on the basis of improved sector-wide planning.

FIFTH MALAYSIA PLAN

The directions for agriculture development as spelled out in the NAP were reiterated and refined in the FMP and clearly presented as the major development thrusts for agriculture and rural development. Firstly, the smallholder subsector would be modernized and commercialized through continuing new land development, *in situ* development, provision of support services, and social and institutional development. Increasingly, elements of group farming, contract farming, and agro-based industries would be introduced within the rural urbanization perspective. Secondly, the extent of government involvement would be rationalized, beginning with the conversion of a range of subsidies to credit schemes and the reduction of the government's primary level marketing and the privatization of abattoirs and other facilities.

Relatively, steps would be taken to encourage increased private sector participation and investment in agriculture through the provision of a comprehensive range of incentives besides moves to overcome the rigidities in the land and financial markets. Lastly, a more balanced commodity and human development approach would be adopted and put into operation through improved sector-wide planning and policy analyses.

The acknowledgement in the FMP of the need for continuous national planning for agriculture and the timely establishment of the Cabinet Committee on Agriculture in 1985 marked a concrete step towards developing capacity and mechanisms for sector-wide planning. Of interest is the greater governmental stress on focussed research in relation to crop diversification, modernizing existing industries, and the creation of new markets through postharvest, marketing and end-use research. Clearly, technological advances in these directions will boost efforts to raise productivity and income from agriculture.

The development directions of the NAP and their reflections in the FMP are important as they recognize the inherent structural weaknesses in the sector in relation to its role in a transforming economy. As high growth rates in the industrial sector are not currently in prospect, added responsibility is placed upon agriculture to further improve its performance.

INDUSTRIAL MASTER PLAN

The recommendations of the Industrial Master Plan (IMP) provide another dimension to the directions for the Malaysian Agricultural Policy. Two of its major recommendations are the expansion of resource-based industries with comparative advantage and the upgrading of small-scale industries. It considers resource-based industries to have high growth potential and hence will have influence on trade balances as well as linkages, particularly with downstream agriculture.

Four of the twelve identified thrust areas are associated with agro-based industries, namely rubber-based, palm oil-based, wood-based, and food processing industries.

Rubber and wood products are given higher priority in this plan. The processing of natural rubber is envisaged to contribute significantly in the area of import substitution for rubber products. However, rubber tyres and selected latex products, e.g. disposal gloves, catheters, condoms and footwears are products with substantial export potential.

With increasing appreciation to disperse the industries, the IMP suggests that export-market oriented industries be located where economy of scale exists, e.g. in the Klang Valley where highly skilled labour is also available in sufficient number. In the case of products which are import substitutes and footloose, however, they could be located in smaller towns with linkages to urban growth centres.

These would provide local employment for farm household members currently underemployed in agriculture, thereby boosting total rural incomes. Village industries are also envisaged to supplement agriculture within the context of rural urbanization.

INCENTIVES

The efforts to promote development in the agriculture sector have been reinforced by plans in the recent annual budgets, especially with respect to that of increasing private sector participation in agriculture. Positive steps include the creation of a New Investment Fund (NIF) to provide cheaper funds for agriculture, removal of import duties on agricultural equipment, provision of tax incentives and allowances, and export refinancing (see Chapter 4).

PAST PERFORMANCE

The decline in importance of the agriculture sector in the overall economy, especially its contribution to economic growth in the past decade, is well documented. During the sixties, when Malaysia's GDP grew by 9% per annum in real terms, agriculture was the mainstay of that remarkable performance, expanding by 7% per annum and accounting for over one-half of export earnings and employment. While the overall output growth continued to increase at 7 to 9% per annum in the seventies, agricultural output increases slowed to less than five percent. This trend has continued into the eighties, dragging down the overall economic growth rate (Table 1). Agriculture's contribution to the overall economy is still significant, at about a fifth of total value added and accounting for about a third of export earnings and employment in 1985 (Tables 2 and 3). The current trend of declining agricultural output would adversely affect the future performance of the Malaysian economy, hence the concern about revitalizing agriculture. Furthermore, the inability of the construction, manufacturing and services sectors to sustain their earlier decade's performance (Table 1), due largely to recessionary pressure, has caused attention to shift to agriculture. Revitalizing agriculture, relates to a planned move towards transforming it into a more efficient and economically viable sector which is effectively linked to the other sectors of the economy, particularly manufacturing and services. It does not refer to a return to its grandeur of the sixties, which is practically unlikely and contrary to the structural change which has taken place. These trends are reflected by the data presented in Tables 1, 2 and 3. Meanwhile the contribution from the manufacturing sector (20.5% of GDP or 15,509 million ringgit) is expected to overtake that from agriculture (18.1% of GDP or 13,713 million ringgit) by 1990, as indicated in Table 1.

The slowdown in GDP growth of the agriculture sector when disaggregated into subsectors indicates marked intra-sectoral variation in performance, and hence structural adjustments within the sector itself. Extraordinary growth was registered by oil palm over the last decade as well as by cocoa and livestock in more recent years (Table 4). Others like rubber, fisheries and coconut have either stagnated or declined while forestry has been erratic and taken together they account in part for the slowdown. These intra-sectoral structural changes will become clearer when one considers the production and crop area trends.

Table 1. GDP by industry of origin, 1970-1990

Sector	1970	1975	1980	1980	1985	1990	Average Annual Growth Rate			
	(\$ million in 1970 prices)			(\$ million in 1978 prices)			1971-75	1976-80	1981-85	1986-90
Primary	4,575.0 (37.2)	5,596.0 (32.2)	7,023.0 (26.8)	14,676.0 (32.8)	18,052.0 (30.4)	20,702.0 (27.4)	4.1	4.6	4.2	2.8
Agriculture, forestry, livestock & fishery	3,797.0 (30.8)	4,804.0 (27.7)	5,809.0 (22.2)	10,189.0 (22.8)	12,046.0 (20.3)	13,713.0 (18.1)	4.8	3.9	3.4	2.6
Mining & quarrying	778.0	792.0	1,214.0	4,489.0	6,006.0	6,989.0	0.4	8.9	6.0	3.1
Secondary	2,125.0 (17.3)	3,504.0 (20.2)	6,560.0 (25.0)	10,998.0 (24.6)	14,405.0 (24.3)	19,509.0 (25.8)	10.5	13.4	5.5	6.3
Manufacturing	1,650.0 (13.4)	2,850.0 (16.4)	5,374.0 (20.5)	8,932.0 (20.0)	11,357.0 (19.1)	15,509.0 (20.5)	11.6	13.5	4.9	6.4
Construction	475.0	654.0	1,186.0	2,066.0	3,048.0	4,000.0	6.6	12.6	8.1	5.6
Tertiary	5,152.0 (41.9)	7,829.0 (45.1)	11,793.0 (45.0)	17,836.0 (39.9)	26,138.0 (44.0)	34,982.0 (46.3)	8.7	8.5	7.9	6.0
Electricity, gas & water	229.0	365.0	592.0	640.0	988.0	1,513.0	9.8	10.2	9.1	8.9
Transporf. storage & communication	581.0	1,071.0	1,696.0	2,542.0	3,805.0	5,494.0	13.0	9.6	8.4	7.6
Wholesale & retail trade	1,633.0 (13.3)	2,219.0 (12.8)	3,295.0 (12.6)	5,383.0 (12.0)	7,551.0 (12.7)	10,252.0 (13.6)	6.3	8.2	7.0	6.3
Finance, insurance, real estate & business services	1,036.0	1,486.0	2,155.0	3,687.0	5,212.0	7,230.0	7.2	8.0	7.2	6.8
Government services	1,367.0 (11.1)	2,210.0 (12.7)	3,398.0 (13.0)	4,563.0 (10.2)	7,270.0 (12.3)	8,842.0 (11.7)	10.0	9.0	9.8	4.0
Other services	306.0	478.0	657.0	1,021.0	1,312.0	1,651.0	9.3	6.6	5.1	4.7
Less imputed bank service charges, plus import duties = GDP at purchasers value	12,308.0	17,365.0	26,188.0	44,702.0	59,344.0	75,591.0	7.1	8.6	5.8	5.0

Source: Compiled from Fourth Malaysia Plan, Table 2-1, 1970-75
Fifth Malaysia Plan, Table 2-10, 1980-90

The growth of palm oil and cocoa products as well as the livestock subsector has also been very substantial (Table 5). The increases in cocoa and oil palm plantings between 1985 and 1987, despite the prevailing lull in their prices (especially the former), underscore the physical and economic dominance of these plantation crops in Malaysian agriculture (Table 6). Even in terms of relative percentage changes it is found that with the notable exception of coconut and to a lesser extent rubber, there has been an across the board increases in tree crop areas while the reverse seems to apply for the short-term crops like tobacco, vegetables and pineapple.

Value added in the agriculture sector increased by 5.3% in 1987 after registering a growth of 4% in 1986, which is commendable considering the FMP targetted growth rate of 2.6% (Table 1). The major contributors were rubber, saw logs, sawn timber, cocoa, palm oil, fishery and livestock while traditional annual crops (rice and minor crops) slipped marginally. Development highlights include palm oil confirming its primary position in terms of value added and occupies the second largest crop area, next to rubber. Together, rubber and oil palm, account for more than two-thirds of total cultivated area in the country.



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Table 2. Commodity exports, 1970-1990

Commodity	1970	1975	1980	1985	1990	Average Annual Growth Rate				
						1971-75	1976-80	1981-85	1986-90	
Rubber										
Quantity ('000 tonnes)	1,345.0	1,460.0	1,525.7	1,495.0	1,465.0	1.7	2.1	-0.4	-0.4	
Price (cts/kg)	128.0	139.0	302.7	191.6	200.0	1.7	16.6	-8.7	0.9	
Value (\$ million)	1,724.0	2,026.0	4,618.0	2,864.0	2,930.0	3.3	19.1	-9.1	0.5	
Share of total exports (%)	33.4	21.9	16.4	7.5	6.9					
Palm Oil										
Quantity ('000 tonnes)	402.0	1,161.0	2,136.2	3,188.0	4,845.0	23.6	14.2	8.3	8.7	
Price (\$/tonne)	657.0	1,161.0	1,177.0	1,237.0	1,000.0	11.6	0.1	1.0	-4.2	
Value (\$ million)	264.0	1,320.0	2,515.3	3,944.0	4,845.0	38.0	14.3	9.4	4.5	
Share of total exports (%)	5.1	14.3	8.9	10.4	11.5					
Cocoa										
Quantity ('000 tonnes)	-	11,730.0	30,640.0	78,000.0	141,800.0	-	15.0	20.5	12.7	
Price (\$/kg)	-	3.1	5.3	5.1	5.8	-	21.7	-1.0	2.8	
Value (\$ million)	-	35.0	161.9	394.0	822.0	-	40.1	19.5	15.8	
Share of total exports (%)	-	0.4	0.6	1.0	1.9					
Pepper										
Quantity ('000 tonnes)	26.0	32.0	31.7	18.6	24.5	4.2	2.4	-10.1	5.7	
Price (\$/tonne)	2,282.0	3,287.0	3,395.4	7,457.0	7,000.0	7.6	2.9	17.0	-1.3	
Value (\$ million)	59.0	106.0	107.7	139.0	172.0	12.4	5.1	5.2	4.4	
Share of total exports (%)	1.1	1.1	0.4	0.4	0.4					
Agricultural Exports										
Share of total exports (%)	39.6	37.8	26.3	19.3	20.7					
Saw Logs										
Quantity ('000 cu. m.)	10,895.0	10,766.0	15,117.0	18,781.0	15,158.0	-0.2	5.2	4.4	-4.2	
Price (\$/cu. m.)	59.0	62.0	173.0	142.0	150.0	1.0	23.1	-3.9	1.1	
Value (\$ million)	643.0	669.0	2,616.2	2,667.0	2,274.0	0.8	29.5	0.4	-3.1	
Sawn Timber										
Quantity ('000 cu. m.)	1,339.0	1,706.0	2,999.9	2,577.0	2,482.0	5.0	14.1	-3.0	0.7	
Price (\$/cu. m.)	149.0	230.0	392.8	395.8	390.0	9.1	10.0	0.2	-0.3	
Value (\$ million)	199.0	392.0	1,178.3	1,020.0	968.0	14.5	25.5	-2.8	-1.0	
Forestry Exports										
Share of total exports (%)	16.3	11.5	13.5	9.7	7.7					
Mining (Tin & Copper)										
Value (\$ million)	1,013.0	1,217.0	9,381.0	10,704.4	8,540.6	3.7	50.6	2.7	-4.4	
Share of total exports (%)	19.6	13.2	33.3	28.1	20.2					
Manufacturers										
Value (\$ million)	572.0	1,927.0	6,269.8	12,229.0	17,365.0	27.5	24.9	14.3	7.3	
Share of total exports (%)	11.0	20.9	22.2	32.1	41.1					
Other exports										
Value (\$ million)	689.0	1,539.0	1,312.7	1,812.0	2,114.0	17.4	-3.1	6.7	3.1	
Share of total exports (%)	13.3	16.7	4.7	4.7	5.0					
Total Gross Exports										
Value (\$ million)	5,163.0	9,231.0	28,171.6	38,094.0	42,280.0	12.3	25.2	6.2	2.1	

Source : Compiled from Fourth Malaysia Plan, Table 2-3, 1970-75
Fifth Malaysia Plan, Tables 2-3 and 2-12, 1980-90

* As a result of recent buoyant commodity prices, contrary to expectations at the time the FMP was prepared, the resultant value and share of total exports have got to be treated with care.



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Table 3. Employment estimates by sector, 1970-90

Sector	1970	1975	1980	1985	1990	Average 1971-75	Annual 1976-80	Growth 1981-85	Rate 1986-90
Agriculture, forestry, livestock & fishery	1,714.6 (50.5)	1,923.5 (45.3)	1,910.9 (39.7)	1,953.2 (35.7)	2,002.2 (32.7)	2.3	-0.1	0.4	0.5
Mining & quarrying	88.6 (2.6)	88.3 (2.1)	80.1 (1.7)	60.5 (1.1)	40.5 (0.7)	-0.1	-1.9	-5.5	-7.7
Manufacturing	386.5 (11.4)	572.0 (13.5)	755.1 (15.7)	828.0 (15.1)	941.1 (15.4)	8.2	5.7	1.9	2.6
Construction	136.7 (4.0)	187.8 (4.4)	270.2 (5.6)	378.7 (6.9)	476.7 (7.8)	6.6	7.5	7.0	4.7
Electricity, gas & water	26.5	33.2	31.0	39.9	46.0	4.6	-1.4	5.2	2.9
Transport, storage & communication	115.1 (3.4)	165.5 (3.9)	209.5 (4.4)	264.9 (4.8)	326.9 (5.3)	7.5	4.8	4.8	4.3
Wholesale & retail trade	371.1 (10.9)	503.4 (11.8)	676.2 (14.0)	846.3 (15.7)	1,044.4 (17.1)	6.3	7.5	4.6	4.3
Finance, insurance, real estate & business services	31.5	40.7	78.3	101.6	120.9	5.3	14.0	5.3	3.5
Government services	396.6 (11.7)	555.8 (13.1)	658.2 (13.7)	819.5 (15.0)	908.3 (14.9)	7.0	3.4	4.5	2.1
Other services	128.7	176.9	147.4	175.9	206.7	6.6	-3.6	3.6	3.3
Total	3,395.6	4,247.1	4,816.9	5,468.5	6,113.7	4.6	3.7	2.6	2.3
Labour Force	3,681.9	4,538.3	5,108.9	5,917.1	6,797.9	4.3	2.4	3.0	2.8
Unemployment	286.0	291.7	292.0	448.6	684.2	0.4	0.2	9.0	8.8
Unemployment rate	7.8	6.4	5.7	7.6	10.1				

Source : Compiled from Fourth Malaysia Plan, Table 4-6, 1970-75
Fifth Malaysia Plan, Table 4-6, 1980-90

Table 4. Value added by agriculture subsectors (M\$ million, constant 1978 prices)

Subsectors	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987**
Rubber	2,456	2,440	2,382	2,354	2,370	2,445	2,394	2,279	2,394	2,459
Oil Palm	1,550	1,898	2,222	2,437	3,039	2,627	3,243	3,604	3,940	3,932
Cocoa	111	143	178	235	320	350	441	558	690	981
Coconut	195	202	196	203	202	197	n.a.*	n.a.	n.a.	n.a.
Forestry & Logging	2,100	2,070	1,966	2,127	2,262	2,436	2,139	2,104	2,025	2,414
Fisheries	1,444	1,434	1,395	1,445	1,380	1,456	1,430	1,317	1,263	1,351
Livestock	318	131	343	355	355	371	395	451	479	493
Miscellaneous*	1,341	560	1,508	1,529	1,447	1,420	1,580	1,602	1,598	1,525
Total	9,514	10,060	10,190	10,685	11,376	11,302	11,623	11,914	12,389	13,155

Source : Compiled from Bank Negara and EPU Reports

* Value added by paddy, fruits, vegetables, pepper, tea, coffee and agric. services.
After 1983 value added from coconut was also include under miscellaneous.

** Estimated

Table 5. Production of agricultural commodities ('000 tonnes) *

Commodity	1980	1983	1985	1987	Percentage Change 1980-87
Rubber	1,530	1,564	1,450	1,580	3.3
Crude Palm Oil	2,576	3,018	4,130	4,532	76
Palm Kernel Oil	222	372	502	576	159
Saw Logs (cu.m.)	27,916	32,764	31,340	34,400	23
Sawn Timber (cu.m.)	6,238	7,139	5,500	6,016	-4
Cocoa	37	69	103	182	392
Padi	2,040	1,774	1,931	1,595	-22
Copra	788	264	250	n.a.	-
Pepper	32	25	19	14.8	-54
Pineapples	185	148	147	150	-19
Fruits	n.a.	547	509	n.a.	-
Coffee	8	8.7	9.6	12	50
Tea	2.7	3	3.2	3.2	18
Tobacco	10.5	9.7	9.3	10.8	-3
Fisheries	744	742	697	578	-22
Beef	15.5	14.6	13.1	18.1	17
Mutton	0.9	0.7	0.65	0.8	-11
Poultry	125	163	220	248	164
Eggs (million)	2,296	2,694	3,076	3,840	67
Pork	123	128	148	166	36
Milk ('000 litres)	8,194	18,910	21,800	27,730	238

Source : BKTES, MARDI

* Except where indicated

Table 6. Crop areas ('000 ha)

Crop	1980	1983	1985	1987	Percentage Change 1980-87
Rubber	2,005	1,971	1,959	1,905	-5
Oil Palm	1,023	1,253	1,465	1,686	65
Cocoa	124	215	258	347	180
Padi	716	666	628	618	-14
Coconut	349	324	274	223	-36
Pepper	12.7	11.4	10	9	-29
Pineapple	12.2	11.1	10.3	7.7	-5
Tobacco	13.2	12.8	14.5	12.3	-7
Vegetables	12.8	7.6	8.1	10.6	-17
Fruit Trees	73	108	122	111	40
Coffee	25.5	28.5	27.4	25.4	0
Tea	2.7	3	3.2	3.2	18

Source : BKTES, MARDI

Despite falling prices since 1985, investments in new cocoa plantings continued to be promoted. In fact new planting by the estate sector in Sabah and Sarawak consisted mainly of oil palm and cocoa. State Economic Development Corporations have begun to develop new land, with the private sector, for the growing of cash crops, tea and fruits. However, the response to cash crops is slow and this can be attributed to a continued preference for tree crops which have established market and proven higher returns.

The agriculture sector accounted for 21.5% of real GDP in 1987, almost unchanged from the previous year's value. By contrast, the manufacturing sector accounted for 22.4% of GDP in 1987, thereby displacing agriculture as the lead sector of the economy. This marks an important milestone if not "turning point" in the development paths of agriculture and manufacturing. Nevertheless, the linkages between agriculture and manufacturing have been increasingly strengthened, as indicated by the index of industrial production in recent years (Table 7).

The growing importance of agro-based industries are underscored and reinforced as indicated by the value added and production of the manufacturing subsectors (Tables 8 and 8a). The disaggregated picture of the relative importance of food manufacturing, rubber products and wood products linkages with agriculture is shown in Tables 7, 8 and 8a. They also indicate the growth of upstream activities, particularly that of fertilizer and pesticide manufacture.

In relation to increased involvement of the private sector in agriculture, various provisions of fiscal, monetary and physical incentives were made available to encourage investments in livestock rearing, aquaculture and deep-sea fishing, besides in plantation agriculture and cash crop farming. At the end of 1987, 39 companies had been granted pioneer status for starfruit, banana, mango and mushroom cultivation, as well as for horticulture, aquaculture, deep-sea fishing and cattle rearing projects. Another nine companies were granted the investment tax allowance, mainly for cocoa cultivation. A breakdown of the progress of the recipients of the incentives under the Promotion of Investment Act, 1986 is presented in Table 9 in order to give an idea of the range of enterprises involved as well as the level of proposed investments. In

relation to the extension of the NIF to agricultural activities, e.g. palm oil, cocoa, rubber and vegetable production, 87 applications involving credit of over 300 million ringgit were approved in 1987.

FUTURE TRENDS

In addressing the future prospects in the medium-term, it is envisaged that the macro-situation and hence the trends would continue to be dominated by plantation crops, viz., oil palm, rubber and cocoa. It is further projected that their related downstream and upstream activities and services would begin to play a more important role in the economic development of the country. The micro-situations, however, are more fluid. There would probably be increased investment and integration of new enterprises or commodities especially in food and food crop production. This is seen in the areas of fruit cultivation and aquaculture and food processing which the government is promoting in a big way.

The crop or product mix is unlikely to change drastically from that stated in the NAP and FMP without any sustained lead in demand and major changes in incentive policy.

Table 7. Peninsular Malaysia : Index of industrial production, (1981 = 100)

	Weight	1982	1983	1984	1985	1986	1987
Mining	30.4	105.4	132.7	165.6	166.4	192.4	197.9
Petroleum mining	23.0	111.2	152.3	196.7	200.1	238.5	245.3
Manufacturing	65.7	103.6	112.6	125.4	117.6	126.1	141.9
Food manufacturing	10.6	109.4	109.5	122.9	134.3	154.7	159.5
Dairy products	1.2	98.5	103.8	107.7	119.3	122.0	130.6
Fish, crustaceans	0.3	65.5	61.9	48.1	49.2	57.2	66.4
Palm oil	6.0	117.2	110.9	132.0	149.9	173.1	175.4
Palm kernel oil	0.6	139.3	153.0	168.4	198.8	239.8	233.9
Large rice mills	0.5	93.9	108.6	96.5	102.4	110.9	119.0
Flour mills	0.4	89.4	93.0	96.5	95.9	99.9	109.0
Biscuit factories	0.3	98.4	105.7	116.3	102.0	114.8	125.6
Sugar factories & refineries	0.7	98.3	117.3	120.9	118.5	135.2	147.5
Prepared animal feeds	0.6	87.4	96.7	107.5	109.0	128.4	141.4
Beverage industries	2.4	94.7	84.3	82.5	87.0	85.1	88.3
Tobacco manufacturers	2.4	109.0	104.8	113.6	106.8	105.9	106.3
Wood & wood product (excl. furniture)	5.5	108.4	121.4	99.3	89.0	90.1	107.5
Sawmills	4.0	110.4	124.5	100.9	115.4	89.3	104.8
Plywood, hard and particle board*	1.5	103.4	113.6	97.0	90.1	92.3	114.1
Industrial chemicals	0.9	86.4	88.7	101.4	106.3	99.5	111.9
Fertilizers and pesticides	0.6	78.5	78.0	89.4	102.3	92.9	106.4
Rubber products	3.7	105.7	108.4	119.2	112.9	124.4	156.2
Tyres and tubes	1.5	89.2	93.9	81.8	87.2	92.8	124.5
Rubber and latex processing	2.2	114.1	115.8	126.4	124.5	135.3	162.2
Other rubber products	0.9	112.4	114.6	115.4	126.1	150.4	194.7

Source: Department of Statistics, Monthly Statistics - various issues.
Monthly Industrial Statistics Peninsular Malaysia, March 1988

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Table 8. Value added by manufacturing sector (million ringgit)

	1979	1981	1982	1983	1984	1985
Processing of Estate type agricultural products	1,085.5	977.5	n.a.	825.6	1,300.9	979.1
Food	601.3	836.5	1,424.0	912.4	960.8	970.4
Beverages	164.8	305.4	292.0	287.2	284.2	303.1
Tobacco products	174.6	271.5	312.0	383.4	351.5	509.4
Wood products	668.5	870.7	886.0	770.7	709.3	653.6
Furniture and fixtures	45.6	100.9	90.0	75.0	80.5	99.8
Rubber products	284.1	377.3	618.0	470.8	405.9	416.7
Chemical & Chemical products	538.1	461.6	523.0	1,181.6	1,788.0	1,907.6

Source : Bank Negara, Quarterly Economic Bulletin - various issues.
Latest issues - Quarterly Bulletin, Vol. 2 No. 3, December 1987

Table 8a. Peninsular Malaysia - Production of selected manufactured products

Products	1982	1983	1984	1985	1986	1987 (Jan - Sept)
Food and beverages						
Sweetened condensed milk (tonnes)	110,840	113,782	11,7442	129,507	126,884	98,298
Canned fish, frozen shrimps/ prawns (tonnes)	11,486	11,743	9,346	10,059	12,180	10,688
Refined sugar (tonnes)	477,489	583,809	603,173	591,200	673,745	576,960
Prepared animal feeds (tonnes)	485,671	559,488	626,681	640,110	768,027	619,801
Biscuits (tonnes)	44,807	48,128	53,069	46,636	52,345	39,524
Beer and stout (litres)	118,061	95,351	99,828	102,608	101,279	73,356
Tobacco products						
Cigarettes (tonnes)	14,054	13,502	14,671	13,839	13,706	9,945
Wood products						
Plywood (cu. metres)	562,307	619,657	530,103	497,033	502,996	461,640
Veneer sheet and blockboard (cu. metres)	172,868	193,364	179,971	162,461	187,453	217,236
Timber mouldings (cu. metres)	74,726	76,510	82,422	82,560	81,201	79,184
Rubber products						
Tyres and inner tubes (thousand units)	9,209	9,201	8,187	9,570	10,769	10,913
Rubber compound (tonnes)	12,361	11,516	11,266	10,188	10,564	9,119
Rubber gloves (thousand pairs)	138,595	197,785	202,137	255,450	293,955	281,678
Rubber sheeting (tonnes)	2,814	3,973	4,861	3,728	5,775	6,005
Chemical products						
Soap and soap compound (tonnes)	33,204	35,255	33,506	42,316	48,492	37,871
Liquid herbicides and insecticides (thousand litres)	9,261	9,968	12,071	11,231	11,820	10,826

Source : Department of Statistics, Malaysia

Table 9. Progress in private investments in food subsector (approved projects for investment incentives)*

Project/Activity	1986		1987		1988**	
	No. of projects	Proposed investment (\$ million)	No. of projects	Proposed investment (\$ million)	No. of projects	Proposed investment (\$ million)
Prawn rearing	5	49.7	7	13.7	2	3.1
Mixed farming	2	8.7	1	2.2	-	-
Fruits/Vegetables	4	43.6	6	19.3	5	43.4
Cattle rearing	3	7.7	1	2.1	-	-
Floriculture	1	1.8	2	0.6	1	0.2
Prawn/Fish processing	4	13.5	2	10.5	-	-
Animal processing	1	3.3	2	33.2	3	30.4
General processing	3	10.2	14	22.9	5	38.3
Cocoa	-	-	9	15.8	2	1.2
Mushrooms	-	-	3	1.8	1	1.7
Deep sea fishing	-	-	2	34.5	1	0.8
Miscellaneous crops	-	-	2	15.7	3	11.8
Poultry farming (ap. and p. farm)	-	-	1	7.0	4	24.3
Eel farming (rearing)	-	-	1	1.4	-	-
Rabbit farming	-	-	-	-	1	0.4
Goose farming	-	-	-	-	3	3.1
Tissue culture	-	-	-	-	1	0.1

* Under Investment Incentives Act, 1986

** as of 18/3/88

Source: Ministry of Agriculture, Malaysia

The production of new food crops (besides rice) and fruits (especially starfruit, papaya, banana (cv. Emas), guava, mangosteen and durian), livestock and fishery, and processed food products are likely to increase in localized areas. These are the results of previous and new investments brought about by various government programmes and incentives. The significance of the impact of these changes would depend on how the entrepreneurs view the incentives already offered by the government.

With the better showing of the agriculture sector in the later half of 1987, and in the first six months of 1988, it is expected that performance of the sector until 1990 is likely to continue to be promising. This is thought to be so because of the improvement in the prices of the various primary commodities. The primary commodity price scenario is expected to remain buoyant until then.

In relation to the above crops, it should be pointed out that the inherent structure of their production-marketing-consumption system is largely different from those of our traditional commodities. Consequently, this will serve as a fertile area for the entrepreneurs to invest.

There would also be opportunities for vertical diversification arising from these areas.

CONCLUSION

The agriculture sector has provided many opportunities which have not only contributed significantly to the economic development of Malaysia but also provided attractive returns to our farming community. This sector is expected to continue to be a prime mover of the Malaysian economy. In this context, very many more opportunities on agriculture would be generated, the realization of which will help to reduce our over dependence on imported food through horizontal diversification of the agricultural economy. The plantation crop area is envisaged to remain the mainstay of the agricultural economy while we will see more vertical diversification arising from it.

Agriculture in the 1990s will see increased participation from the private sector especially in the non-plantation crop areas. This is envisaged to come about through the rational use of the basic productive resources of land, labour, capital and entrepreneurship in the spirit of Malaysia Incorporated.

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Profile of major primary commodities

Chapter 3

Export earnings from the major agricultural commodities, viz., rubber, palm oil, sawlogs and sawn timber, cocoa and pepper accounted for 39.8% of total export value, equivalent to 11,200 million ringgit, in 1980. The export earnings for the same commodities decreased to 37.5% in 1987, amounting to 16,926 million ringgit.

The overall strong performance of the agriculture sector was largely attributed to the substantial increase in the output of palm oil and cocoa throughout the Fourth Plan period (1981-1985) as well as the strong output growth in sawlogs during the earlier part of the period. In contrast, the output of rubber almost stagnated, while that of paddy, coconut and pepper declined. Among the other crops, the output of coffee increased, that of fruits remained fairly constant, while the output of pineapple, vegetables, tobacco and tea declined. The production of meat and animal products increased significantly, while marine fishlandings and production from aquaculture declined.

The areas planted with oil palm and cocoa increased markedly, while the area under rubber recorded a slight decline. Paddy increased slightly in area, while less coconut and pepper

were planted. The area planted with fruits remained fairly constant. Areas under vegetables, pineapple and tobacco declined. These changes in planted areas affected the production levels of the respective crops.

RUBBER

Rubber still plays an important role in the national economy although in the past few years, a considerable amount of rubber land had been converted to oil palm and cocoa plantations. The decline in total planted area with rubber is shown in Table 1.

Due to this decrease in planted area, the production of rubber also declined throughout the period. The contribution of rubber, in monetary terms, to the agricultural output declined from 23.4% in 1980 to 18.7% in 1985 but increased to 30.3% in 1987. Output of rubber in 1986 was estimated to decline by 0.6% to 1,460,000 tonnes compared with 1,469,000 tonnes in 1985. The production in 1987 remained at the 1986 level. Ninety-seven percent of the total rubber output, amounting to 1,416,200 tonnes, was from the Peninsula. Of this amount,

Table 1. Rubber area, yield and production from 1983 to 1987

	1983	1984	1985	1986	1987
Planted area ('000 hectares)	1,974.1	1,967.4	1,950.4	1,947.4	1,938.0
Yield (kg/ha)					
Smallholdings	984	974	978	1,017	1,025
Estates	1,423	1,373	1,397	1,453	1,465
Production ('000 tonnes)	1,563.7	1,530.6	1,469.1	1,460	1,460
Smallholdings	1,016.2	1,012.5	959.3	993	1,000
Estates	547.5	518.1	506.8	467	460
% of world production	38.8	35.9	33.8	33.2	31.5

Source : Malaysian Economic Report 1987/88

This report is a compilation of the following publications :
The Malaysian Economic Reports, 1975-1987, The Fifth Malaysian Plan, Information Malaysia and Statistics on Commodities.

68% was produced by smallholders and the remainder by estates. Rubber production in Sabah was estimated at 1.7% and in Sarawak at 1.3% of the total in 1987.

With improved clones as well as better tapping techniques, average yields in 1987 in the smallholdings increased to 1,025 kilogrammes per hectare and in estates to 1,465 kilogrammes per hectare. Of the total area under rubber in 1987, 1,617,000 hectares were located in Peninsular Malaysia with the estate sector accounting for 387,000 hectares. At the same time, area under smallholdings was estimated to increase to 1,230,000 hectares. In 1987, the total area under rubber in Sabah was 86,793 hectares while in 1986, 206,300 hectares of rubber were recorded in Sarawak.

The total volume of natural rubber exported in 1987 amounted to 1,622,976 tonnes (Table 2). While Malaysia continues to be a leading natural rubber (NR) producer and supplier, its share of the world market has declined steadily from 38.8% in 1983 to 31.5% in 1987. In real terms, however, our exports remained at 1.50 to 1.56 million tonnes per annum.

PALM OIL

Palm oil overtook rubber as the largest commodity in the agricultural sector in the Fourth Plan period. Its share in agricultural output, in

monetary terms, rose from 21.8% in 1980 to 24.3% in 1987. Palm oil is expected to play a prominent role in the expanding oils and fats market during the Fifth Malaysia Plan period (1986-1990). The country is in a position to take advantage of the growing opportunities, given its strong leadership in this commodity advancements in research and development, and favourable agro-climatic environment, as well as the availability of large tracts of land suitable for the planting of this crop. Malaysia is also in a position to expand its downstream processing activities in end-use production as well as in ancillary and related industries, including oleo-chemicals.

With the increases in matured oil palm areas and in productivity as shown in Table 3, the production of crude palm oil (CPO) in 1986 expanded by 9.9 percent to 4,544 million tonnes compared with 4,133 million tonnes in 1985. There was, however, a decline in production by 3.2 percent in 1987 compared with that of the previous year. Ninety-one percent of the palm oil production came from Peninsular Malaysia.

Palm oil production is envisaged to increase to six million tonnes by 1990 and to 8.9 million tonnes by the year 2000. Malaysia's share of the world CPO market increased from 56.7% in 1983 to 60.5% in 1986, and declining slightly to 57.8% in 1987.

Table 2. Export volume and value of natural rubber, 1980-1987

Year	Peninsular Malaysia		Sabah		Sarawak		Total	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
1980	1,460,098	4,448.9	30,448	81.1	35,145	88.0	1,525,691	4,618.0
1981	1,432,796	3,601.6	24,514	54.3	27,973	57.2	1,485,283	3,713.1
1982	1,340,920	2,594.9	21,328	36.0	15,919	24.2	1,378,167	2,655.1
1983	1,523,181	3,582.2	20,969	44.4	18,856	37.0	1,563,006	3,663.6
1984	1,548,756	3,587.6	23,973	49.3	17,865	34.6	1,590,594	3,671.5
1985	1,458,830	2,809.1	20,952	35.1	17,101	27.2	1,496,883	2,871.4
1986	1,476,029	3,110.0	24,597	52.4	16,248	20.3	1,516,874	3,182.7
1987	1,530,000	n.a.	29,478	62.9	19,905	n.a.	1,580,000	-

Source : Ministry of Primary Industries, Malaysia

n.a. = not available

Volume in tonnes. Value in million ringgit

Table 3. Oil palm area and production from 1983 to 1987

	1983	1984	1985	1986	1987
Planted area ('000 hectares)	1,258	1,349	1,468	1,543	1,686
Production ('000 tonnes)					
Crude palm oil (CPO)	3,018	3,716	4,133	4,544	4,400
Palm kernel oil	360	423	512	584	589
% of world production	56.7	59.1	60.0	60.5	57.8

Source : Ministry of Primary Industries, Ministry of Finance, PORLA

India was our main palm oil importer in 1986/87. Her imports amounted to 0.86 million tonnes in 1986, increasing to 1.06 million tonnes in 1987. The other major buyers of Malaysian palm oil are presented in Table 4.

The total cultivated area under palm oil increased to 1,685,581 hectares in 1987 compared with 1,543,000 million hectares in 1986. The distribution of oil palm area, by state, in 1987 is shown in Table 5.

Table 4. Exports of palm oil by major destination in 1986 and 1987

Country	1986		1987	
	Tonnes	%	Tonnes	%
India	855,861	18.8	1,055,884	25.0
Singapore	777,923	17.1	581,333	13.8
Pakistan	641,097	14.1	430,183	10.2
EEC	498,733	10.9	427,517	10.1
Japan	220,622	4.8	217,693	5.2
USA	304,833	6.7	181,933	4.3
USSR	178,448	3.9	162,673	3.9
Iraq	151,750	3.3	155,484	3.7
Indonesia	5,016	0.1	152,844	3.6
Korea Rep.	166,042	3.6	129,909	3.1
Saudi Arabia	102,558	2.2	106,078	2.5
Jordan	58,601	1.3	87,271	2.1
China PR.	40,814	0.9	85,717	2.0
Turkey	108,686	2.4	69,230	1.7
Australia	56,331	1.2	62,599	1.2
Kenya	16,544	0.4	46,387	1.1
Yemen AR.	40,914	0.9	41,187	1.0
Egypt	28,632	0.6	35,956	0.9
Mozambique	12,988	0.3	31,373	0.7
Sudan	40,953	0.9	20,635	0.5
Sri Lanka	14,082	0.3	17,942	0.4
Taiwan	17,662	0.4	14,080	0.3
Bangladesh	33,336	0.7	14,005	0.3
Rest of the World	186,380	4.2	90,431	2.1
Total (Tonnes)	4,558,806	100.0	4,218,344	100.0
Total (M\$ Million)	M\$ 3,099.2		M\$ 3,348.8	

Source : PORLA

Table 5. Distribution of oil palm area (hectares), by state, in 1987

State	Small holders	FELDA	FELDA	RISDA	State schemes/ govt. agencies	Private estates	Total
Johore	53,015	107,582	19,946	5,555	14,642	236,148	436,888
Kedah	4,635	283	1,207	509	-	17,390	24,022
Kelantan	880	29,188	6,370	502	6,329	12,793	56,062
Malacca	982	119	2,921	753	-	15,336	20,111
N. Sembilan	5,230	23,307	4,166	1,649	915	42,369	77,636
Pahang	5,639	225,040	24,186	10,278	20,172	113,464	398,509
Perak	24,006	19,040	25,901	3,088	4,850	121,306	198,191
P. Pinang	5,977	-	141	65	-	6,342	12,525
Selangor	30,693	9,010	5,088	314	4,256	88,914	138,275
Terengganu	1,208	35,517	15,589	10,103	478	49,021	111,916
Sabah	2,810	46,882	-	-	50,275	81,907	181,874
Sarawak	915	594	-	-	20,069	7,994	29,572
Malaysia	135,718	496,562	105,515	32,816	121,986	792,984	1,685,581

Source : PORLA

PADDY

Production decreased by 1.1 percent per annum from 2,040,200 tonnes in 1980 to 1,642,000 tonnes in 1987. This is equivalent to 76.5% of the total domestic requirements for rice. Rice production fell short of the self-sufficiency target of 80 to 85% spelt out in the National Agricultural Policy. This decline in output was due largely to adverse weather conditions; pest and disease outbreaks, especially *Penyakit Merah Virus*; continuing instability in yields and cropping intensities, even in the major granary areas; and the increase in abandoned paddy land. Steps taken to rehabilitate contiguous tracts of idle land in the irrigated areas of Kedah, Kelantan, Negeri Sembilan, Perak and Pulau Pinang, through various forms of group farming and paddy estates have yet to realize their full impact on production.

The decline in production was also due to the fact that the new paddy scheme in Trans-Perak and rehabilitation programmes of Balik Pulau-

Seberang Perai, Kedah Valley, and Kemasin have yet to come into full production since they were at that time under various stages of implementation.

Future production efforts will be concentrated in the granary areas of Muda, Kemubu, Besut, North-West Selangor, Krian-Sungai Manik, Trans-Perak, Kemasin-Semerak, and Seberang Prai. The production of rice in the existing paddy land outside these granary areas will be gradually phased out and replaced by other more remunerative crops. Consequently, the self-sufficiency level will depend mainly on the future output from the granary areas. The granary areas are estimated to produce 55 to 60% of our domestic requirements for rice.

There was a 12.3% decline in production of paddy in 1986 compared with that of the previous year. The production declined further by 4.6 percent in 1987 to 1,642,000 tonnes. Table 6 shows the paddy area and production for Malaysia.

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Table 6. Paddy area and production from 1983 to 1987

	1983	1984	1985	1986	1987
Planted area ('000 hectares)	665.8	630.8	663.3	626.4	617.7
Total production ('000 tonnes)	1,734.3	1,571.7	1,963.1	1,721.6	1,642.0
MADA production ('000 tonnes)	485.8	630.8	805.6	803.1	705.7
KADA production ('000 tonnes)	138.3	85.3	133.7	142.9	144.1

Source : Malaysian Economic Report 1987/88

Paddy output from the MADA Scheme, the largest irrigation scheme in Malaysia involving 63,000 paddy farmers, declined by 12.1% to 705,690 tonnes in 1987 compared with the production of the previous year. Water stress due to the short supply of water reduced the 1987 off-season yield to an average of three tonnes per hectare compared with that of the preceding 1986 main season of 4.7 tonnes per hectare. Total cultivated area during the two seasons in 1987 was estimated at 187,235 hectares compared with 186,960 hectares in 1986.

Production from the KADA scheme increased by 0.8% to 144,140 tonnes in 1987 compared with 142,960 tonnes in 1986 because of higher yields. Improvements in water management were particularly significant in contributing towards the higher average yield of 4.4 tonnes per hectare in 1987. The total cultivated area was estimated to increase by 1.7% to 36,700 hectares.

The total planted paddy area in Peninsular Malaysia in 1987 was estimated to decrease by 2.5% to 421,000 hectares, accounting for 68.2% of the total paddy area in the country. In Sarawak, there are 154,700 hectares of paddy (25%), while in Sabah there are 41,990 hectares (6.8%). Fifty-six percent of the paddy fields are provided with irrigation facilities.

COCOA

Cocoa production increased steadily during the Fourth Plan period, except in 1983 when production stagnated due to the prolonged drought in the early part of the year and the lateness of the year-end crop. Production increased from 36,500 tonnes in 1980 to 132,000 tonnes in 1987 as a result of an increase in planted area, the effects of mature budding as well as increased productivity, particularly in the estates.

Table 7. Planted area (hectares) of cocoa under estates and smallholdings from 1980-87

Year	Peninsular Malaysia			Sabah			Sarawak			Grand Total
	Estates	Small-holdings	Total	Estates	Small-holdings	Total	Estates	Small-holdings	Total	
1980	25,261	32,084	57,345	38,897	19,087	57,984	97	8,429	8,526	123,855
1981	28,556	36,062	64,618	59,145	24,310	83,455	407	10,304	10,711	158,784
1982	30,556	51,629	82,185	85,985	28,489	114,474	766	11,974	12,740	209,399
1983	32,641	51,308	83,949	100,106	32,623	132,729	916	13,486	14,402	231,080
1984	32,571	56,592	89,163	116,957	42,331	159,288	1,117	15,942	15,942	265,510
1985	33,533	73,399	106,932	125,800	46,913	172,713	1,376	22,876	24,252	303,897
1986	36,855	80,670	117,525	138,261	51,560	189,821	1,512	25,142	26,654	334,000
1987	35,860	74,140	110,000	138,475	52,525	191,000	-	-	40,000	341,000

Source : Ministry of Primary Industries, Malaysia

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The production increase was also encouraged by the recovery in the world cocoa market towards the latter part of the Fourth Plan period.

Cocoa has emerged as the third most important crop in the country and is favourably positioned to continue its rapid growth. Its production, which accounted for five percent of total agricultural output in 1987, is expected to register a rapid growth rate of 11.5 percent per annum. At this rate, its production is envisaged to increase from 132,000 tonnes in 1987 to 177,200 in 1990. This high rate of production increase is due to the expected expansion in area, increased planting density in intercropped areas and improvement in yield. Table 7 shows the planted area of cocoa under estates and smallholdings in Malaysia.

Based on the potential productivity levels and availability of suitable land, Sabah is expected to be the major focal point in the development of the cocoa industry during the Fifth Malaysia Plan Period. The higher volume of cocoa beans graded under the Standard Malaysian Cocoa Grading Scheme in Peninsular Malaysia has also helped to improve and maintain consistency in the quality of Malaysian cocoa beans in the export market.

Table 8. Production and export of dry cocoa beans, 1972-1987

Year	Production (tonnes)	Export volume	Export value (million ringgit)
1972	5,000	4,084	6.5
1973	9,000	5,656	14.9
1974	10,000	9,720	32.9
1975	13,000	11,730	35.3
1976	15,434	14,749	65.5
1977	16,708	13,611	113.2
1978	17,664	17,626	130.7
1979	26,580	24,101	157.7
1980	36,500	34,835	161.9
1981	45,200	42,237	171.5
1982	66,200	57,614	198.1
1983	69,000	57,268	228.6
1984	88,000	65,804	338.1
1985	100,000	81,465	n.a.
1986	118,000	87,380	n.a.
1987*	185,000	157,428	n.a.

Sources: Ministry of Agriculture

Yearbook of statistics, 1986, Department of Statistics, Malaysia
 FAO Commodity review and outlook, 1970/71 to 1984/85 issues

* Estimated figure, USDA Foreign Agricultural service
 n.a. = not available

Following the expansion in the productive area, output of cocoa in 1987 continued to grow producing 132,000 tonnes (Table 8). This volume of production amounts to 7.7% of world production in 1987, ranking Malaysia as the fourth largest world producer after the Ivory Coast, Brazil and Ghana (Table 9). The exports of Malaysian cocoa beans and products also continued to increase (Table 10).

Table 9. Major cocoa-producing countries in 1986

Country	Production volume ('000 tonnes)	
	1985/86	1986/87*
Ivory coast	580	525
Brazil	384	415
Ghana	220	225
Nigeria	135	125
Cameroun	115	120
Equador	112	100
Costa Rica	95	n.a.
Colombia	44	45
Mexico	41	43
Dominican Republic	37	40
Indonesia	36	38
Papua New Guinea	31	30
Total	1,950	-

Sources: Ministry of Primary Industries, Malaysia
 USDA Foreign Agricultural service

* Forecast (USDA)

PEPPER

Output of pepper registered a decline of 9.7 percent per annum during the Fourth Plan Period, shrinking by more than one half from 31,600 tonnes in 1980 to 16,600 tonnes in 1984. The production recovered slightly to 19,000 tonnes in 1985. The depressed market conditions and the outbreak of the serious foot-rot disease in the early part of the Fourth Plan period resulted in farmers neglecting their farms and switching to more lucrative crops.

Despite the continuous upsurge in the average price of pepper to a record 35-year high of about 13,000 ringgit per tonne for white pepper in February 1986, the production in 1986 decreased to 15,800 tonnes compared with 19,000 tonnes in 1985. In 1987, due to newly planted areas and the increase in prices of black pepper, production increased to 15,000 tonnes. Production in Sarawak, representing 97.5% of total production, is expected to increase by 8.9 percent while the remaining 2.5% production from Sabah and Johore is expected to increase by 2.7 percent.

Table 10. Export volume of cocoa beans and products, 1976-1987

Year	Export volume (tonnes)				Chocolate
	Cocoa bean	Cocoa butter	Cocoa paste	Cocoa powder	
1976	14,751	184	7	317	51
1977	13,611	965	13	879	255
1978	17,626	1,617	71	1,392	230
1979	24,100	1,995	n.a.	1,261	219
1980	30,640	2,691	21	1,214	269
1981	42,237	3,237	49	1,462	268
1982	57,614	4,218	165	1,468	175
1983	57,269	5,274	2,045	1,414	327
1984	65,804	8,814	2,968	2,513	275
1985	81,465	9,234	2,637	4,421	203
1986	87,380	10,951	3,585	4,593	358
1987 ^p	97,294	12,194	3,991	5,114	398

Sources: Department of Statistics, Malaysia

Relevant reports from the various Ministries and agencies

p = provisional

n.a. = not available

The total cultivated area under pepper is also estimated to increase 8,900 hectares in 1987, with 98% of the total cultivated area located in Sarawak. The increase in area under pepper during the last two years was in response to better prices.

Table 11 shows the basic statistics on pepper production. The area under pepper cultivation by state in Malaysia is shown in Table 12.

Table 11. Basic statistics on pepper (1975-1987)

Year	Area (hectares)	Production (tonnes)	Export Volume (tonnes)	White Pepper Prices (\$/100kg)	Black Pepper Prices (\$/100kg)
1975	9,225	32,885	32,430	204	152
1980	13,295	31,570	31,718	385	261
1981	12,568	28,846	28,767	362	221
1982	12,197	25,258	28,857	315	222
1983	11,283	23,548	23,503	376	258
1984	10,562	16,626	16,603	561	340
1985	5,413	19,070	18,896	749	598
1986	6,120	15,380	15,203	1,192	864
1987	8,901	15,100	14,200	1,140	904

Table 12. Area under pepper cultivation by state (1975-87)
No. of hectares

Year	Peninsular Malaysia	Sabah	Sarawak	Total
1975	921	72	8,232	9,225
1980	1,200	395	11,700	13,295
1981	910	348	11,310	12,568
1982	720	327	11,150	12,197
1983	150	333	10,800	11,283
1984	200	222	10,140	10,562
1985	200	173	5,040	5,413
1986	27	173	5,920	6,120
1987	35	166	8,700	8,901

Source : Ministry of Primary Industries, Malaysia

Malaysia will continue to be one of the leading producers and exporters of pepper in the world.

PINEAPPLE

Pineapple production dropped substantially from 185,300 tonnes in 1980 to 149,700 tonnes in 1987. The area under pineapple also declined from 12,200 hectares in 1980 to 7,684 hectares in 1987. This was mainly due to the decrease in the pineapple smallholdings (3,354 hectares) in 1987 and in the area under estates (4,330 hectares) as a result of the conversion pineapple plantations to oil palm plantations.

The pineapple areas under smallholdings and estates are shown in Table 13 and the production of fresh pineapple is shown in Table 14.

TOBACCO

The production of tobacco (green leaves) declined from 119 million kilogrammes valued at 82.55 million ringgit in 1986 to 109 million kilogrammes valued at 73.25 million ringgit in 1987. Consequently, the production of cured leaves declined from 12.87 million kilogrammes worth 167.07 million ringgit to 10.68 million kilogrammes worth 132.61 million ringgit.

In 1987, 12,314 hectares were planted with tobacco. After taking into account the effects of droughts and diseases affecting 547 hectares, the remaining harvested area was 11,767 hectares, compared with 14,478 hectares in 1986.

Table 13. Pineapple area (hectares) under smallholdings and estates (1980-87)

Year	Small holdings	%total	Estates	%total	Total
1980	5,299	43.8	6,802	56.2	12,101
1981	4,721	40.4	6,964	59.6	11,685
1982	3,378	34.7	6,356	65.3	9,734
1983	3,723	34.8	6,961	65.2	10,684
1984	2,460	27.9	6,356	72.1	8,816
1985	3,372	32.6	6,964	67.4	10,336
1986	3,356	32.5	6,964	67.5	10,320
1987	3,354	43.6	4,330	56.4	7,684

Source : Ministry of Primary Industries, Malaysia

Table 14. Production of fresh pineapple (tonnes), 1970-87

Year	Smallholdings	%	Canner Estates	%	Total
1970	209,009	66.7	104,398	33.3	313,407
1975	116,456	54.1	98,787	45.9	215,243
1980	73,743	39.8	111,530	60.2	185,273
1981	57,119	37.2	96,512	62.8	153,631
1982	33,330	21.8	119,673	78.2	153,003
1983	22,634	15.3	125,572	84.7	148,206
1984	23,644	16.4	120,640	83.6	144,284
1985	18,796	12.3	133,751	87.7	152,547
1986	14,937	10.5	127,642	89.5	142,579
1987	19,578	13.1	130,180	86.9	149,758

Source : Ministry of Primary Industries, Malaysia

About 65% (8,022 hectares) of the total planted area is in Kelantan, 21% (2,580 hectares) in Terengganu, 5% (602 hectares) in Kedah, 4% (502 hectares) in Perlis, 2% (268 hectares) in Pahang, and the rest in Malacca, Negeri Sembilan and Johore. The basic statistics on tobacco are shown in Table 15.

SOME CONCLUDING REMARKS

A major thrust for the primary commodity sectors during the Fifth Malaysia Plan Period will be directed at increasing the production of palm oil and cocoa, while sustaining that of rubber.

Palm oil is expected to play a prominent role in the expanding oils and fats market during the FMP period. The production of palm oil is projected to grow by 6.7% annually during the period to reach six million tonnes by 1990.

This increase is expected to come from both an expansion in hectareage as well as improvements in yield. Planted hectareage is projected to increase by 3.8% per annum to reach 1,764,990 hectares in 1990.

Rubber will continue to play an important role in the Malaysian economy. In the long-term, consolidation and modernization of the industry would be emphasized, especially in the smallholder subsector. The focus, however, will be more of productivity increases rather than in the development of new areas.

Cocoa is now the third most important crop in the country. The projected cocoa area of 258,000 hectares in 1985 had already been surpassed by about 46,000 hectares. This rapid growth rate is envisaged to continue. Its share in agricultural output is expected to increase to 6.9% soon compared with the 4.7% in 1987.

Table 15. Basic statistics on flue-cured virginia tobacco (1970-1987)

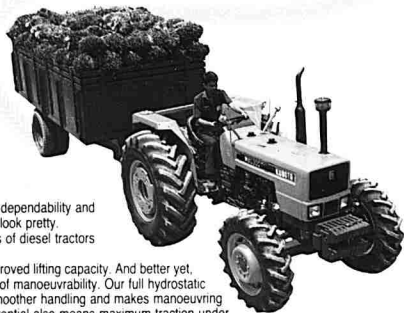
Year	Area (hectares)	Production ('000 kg)		Yield of Cured leaves (kg ha)
		Green leaves	Cured leaves	
1970	2,059	18,941	1,894	920
1975	14,448	92,026	9,203	637
1980	13,238	99,414	10,497	793
1981	12,969	67,924	7,694	593
1982	12,727	82,655	9,578	723
1983	12,793	91,948	9,685	704
1984	10,548	72,036	7,158	651
1985	14,478	88,009	9,346	552
1986	15,822	118,974	12,871	813
1987	12,314	109,000	10,680	867

Source : Ministry of Primary Industries, Malaysia

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The contribution of the agriculture sector to the national economy, although dropping in its Gross Domestic Product share of 22.8% in 1980 to 21.5% in 1987, is still very significant. This is reflected by the increase in the real value of output from 10.2 billion ringgit in 1980 to 12.5 billion ringgit in 1987, and this is projected to increase to 12.8 billion ringgit in 1988. In view of the importance of this sector and its continuing positive contribution to the Malaysian economy, the Government has formulated numerous development policies and strategies to ensure an orderly development of this sector while also generating new investment opportunities. To make these opportunities a reality, the Government has also taken a step further to encourage and stimulate investment in this sector by the provision of incentives.

The provision of investment incentives is governed by two principal legislations, namely the Income Tax Act, 1967 and the Promotion of Investment Act, 1986. The principal agencies involved with respect to the Promotion of Investment Act are the Malaysian Industrial Development Authority (MIDA), the Ministry of Trade and Industry and the Ministry of Finance. The implementation of the Income Tax Act is the responsibility of the Department of Inland Revenue under the Ministry of Finance.

INCENTIVES FOR THE AGRICULTURAL SECTOR

Pioneer Status

Currently, the agricultural sector is also eligible for Pioneer Status. This incentive is given to companies producing "promoted products" or engaged in "promoted activities" (Appendix 1), allowing them total exemption from income, development and excess profit taxes over a period of five years, commencing from production day as determined by the Minister of Trade and Industry. A further five years' tax relief may be given to a company processing agricultural produce and which fulfills certain criteria as determined by the Minister of Trade and Industry. These are:

- the company's fixed assets (excluding land) at the end of the initial five-year period reach at least M\$ 25 million or

- employment level reaches 500 full-time Malaysian workers or
- other requirements which, in the opinion of the Minister of Trade and Industry, would contribute towards promoting and enhancing the economic or technological development of the country.

Investment Tax Allowance (ITA)

This is an alternative to pioneer status. Under the ITA qualifying expenditure, incurred within five years from the date of approval, is eligible for a maximum tax credit of 100%. For integrated agricultural projects (Appendix 1) with respect to manufacturing activity, qualifying expenditure incurred in another five year period from a date determined by the Minister of Trade and Industry (the date may be during or after the first five years) is also eligible for the Investment Tax Allowance.

Capital expenditures which qualify for ITA include:

- the clearing and preparation of land,
- the planting of crops,
- the provision of irrigation or drainage systems,
- the provision of plant and machinery used in Malaysia for the purpose of crop cultivation, animal farming, aquaculture, inland or deep sea fishing and other agricultural or pastoral pursuits, and
- the construction of access roads including bridges,
- the construction or purchase of buildings (including those provided for the welfare of persons or as living accommodation for persons) and structural improvements on land or other structures which are used for the purpose of crop cultivation, animal farming, aquaculture, inland fishing and other agricultural or pastoral pursuits.

The above mentioned roads, bridges, buildings, structural improvements on land and other

structures should form part of the land used for the purpose of such crop cultivation, animal farming, aquaculture, inland fishing and other agricultural or pastoral pursuits.

Agricultural Allowance

The Agricultural Allowance replaces the Plantation Allowance, and is applicable to all agricultural activities. Capital expenditures that are eligible for deductions are as follows :

- expenditure incurred on the clearing and preparation of land, planting of crops and construction of roads for purposes of agriculture is eligible for a yearly allowance of 50% of the expenditure incurred.
- expenditure incurred on construction of buildings, for the welfare of persons or living accommodation, can be written off at a rate of 20% per annum, and
- expenditure incurred on the construction of any other building used for the purposes of working the farm can be written off over a period of ten years, that is, at the rate of 10% per annum.

This allowance is given irrespective of whether a company has been granted Pioneer Status or the Investment Tax Allowance.

Export Allowance

An Export Allowance equivalent to 5% of the F.O.B. value of export sales will be granted to certain agricultural produce as determined by the Minister of Trade and Industry.

This incentive is available to resident companies and it is given as a deduction against the gross income of the company and is thus available for set-off against income from other sources in the same year, and any excess can be carried forward as business losses, to be utilized in future years against any business income.

Accelerated Depreciation Allowance (ADA)

This incentive has been extended to the year of assessment 1989. From the basic year 1986, the incentive would be in the form of an initial

allowance of 20% and an annual allowance of 40 percent. With this, the total capital expenditure can be written off within two years instead of one, as was the case under the former ADA. This incentive is provided to encourage industries to invest in capital expenditure, modernization and expansion of their operations.

Double Deduction for promotion of exports

Resident companies that incur certain expenses for the purpose of seeking opportunities for the export of agro-based products manufactured in Malaysia are eligible for double deductions. The expenses that qualify are those incurred on:

- overseas advertising.
- supply of free samples abroad.
- export market research.
- preparation of tenders for supply of goods overseas.
- supply of technical information abroad.
- exhibits and/or participation required in trade or industrial exhibitions approved by the Ministry of Trade and Industry.
- services rendered for public relations work connected with export.
- fares in respect of travel overseas by employees of companies for business.
- accommodation and sustenance expenses incurred by Malaysian businessmen going overseas for business subject to 200 ringgit per day, and
- cost of maintaining sales offices overseas for the promotion of exports.

In the case of companies with pioneer status, the deductions are accumulated and allowed against post pioneer income.

Double Deduction of export credit insurance premium

With effect from year of assessment 1986, exporters who penetrate non-traditional markets are eligible for double deductions on premium

payments on export credit insurance to a company approved by the Minister of Finance.

Industrial Building Allowance (IBA)

Approved buildings used as warehouses and as bulk storage installations for storing goods for export are eligible for IBA consisting of an initial allowance of 10% and an annual allowance of two percent.

Incentives for research and development

The following incentives are available to encourage research and development in the industry:

- expenses of a revenue nature, incurred by a person on scientific research related to his business and directly undertaken by him or on his behalf, is eligible for deduction. Revenue expenditure incurred for research approved by the Minister of Finance is eligible for double deduction.
- industrial building allowance in the form of an initial allowance of 10% and an annual allowance of 2% is available for buildings used for purposes of approved research, and
- plant and machinery used for purposes of approved research are eligible for capital allowances.

Export Credit Refinancing Scheme (ECR)

To promote the growth of exports of manufactured goods, including agro-based products, the Government has arranged for the Central Bank to introduce the ECR facility, whereby Malaysian exporters may obtain credit at preferential rates of interest to enable them to compete more effectively in international markets.

The credit is also extended by commercial banks to exporters of goods manufactured in Malaysia, the maximum period of refinancing for all eligible products for pre-shipment being six months.

Goods that are eligible for refinancing are determined through a "negative list" concept. This means, products not listed in the negative list will be eligible for refinancing under the

pre-shipment and post-shipment refinancing schemes provided they satisfy the 20% value-added and 30% local content criteria. Nevertheless, these criteria will be implemented flexibly, taking into account special circumstances.

The maximum interest rate chargeable by the commercial banks under this facility is 5% per annum, which is significantly lower than the current mode base lending rate of commercial banks (7%) and these banks may seek refinancing from the Central Bank at an even lower rate of interest (3.5% p.a.).

The maximum amount of refinancing for each firm is five million ringgit but higher limits may be given on a case by case basis upon application to the Central Bank.

The minimum amount for refinancing, that is, the minimum value of each substitution bill, is 20,000 ringgit expressed to the nearest thousand ringgit. Exporters can "bunch" several smaller bills to make up 20,000 ringgit.

New Investment Fund (NIF)

Under this scheme the Central Bank will channel Government deposits amounting to one billion ringgit to commercial banks to be lent to new eligible investment projects by all enterprises, including non-resident controlled companies whose fixed investments are in Malaysia. The minimum amount of financing is 250,000 ringgit per project, and funding is available for a maximum of 75% of investment expenditure, excluding land, for a period of not more than five years. This scheme excludes working capital requirements (except in special cases for the export industry) and loans to finance or refinance the acquisition of shares, land or existing assets. Under the NIF, currently, the interest rate charged will not exceed 1.25% above the prevailing base lending rate of commercial banks.

INCENTIVES FOR AGRICULTURAL PROCESSING/INTEGRATED AGRICULTURAL PROJECTS

All the incentives mentioned above, except for the Agricultural Allowance and Export Allowance, are available to agricultural processing and integrated agricultural projects.

In addition to these incentives, the agricultural processing and integrated agricultural projects are also eligible for Abatement of Adjusted Income and Reinvestment Allowance, as will be discussed below.

Abatement of adjusted income

Abatement of adjusted income for exports

It is available to resident agricultural manufacturing companies exporting, directly or through agents, products which are manufactured in Malaysia. The abatement is as follows:

- abatement of adjusted income equivalent to 10% of the "value-added" of the exported products.
- abatement of adjusted income equivalent to 5% of the value of "indigenous Malaysian materials" used in the manufacture of the exported products. These "indigenous Malaysian materials" apply to materials grown, cultivated, reared, captured or extracted in Malaysia and extractions thereof, or
- abatement of adjusted income equivalent to 5% of the value of Malaysian materials used in the manufacture of the products exported. Such materials should be manufactured in Malaysia.

Abatement of adjusted income for location

An abatement of 5% of the adjusted income is available to resident manufacturing companies located in promoted industrial areas, for a minimum of five consecutive years.

Abatement of adjusted income for small-scale industries

An abatement of 5% of the adjusted income is available to small-scale manufacturing companies for a period of five years commencing from the year of assessment in the basic period in which the business commences. A further 5% abatement will be given if the small-scale manufacturers comply with the Government policy on capital participation in

the industry. These incentives are applicable to companies that are resident in Malaysia and the business must have commenced on or after 1st January 1986.

New manufacturers may opt for either abatement of adjusted income or Pioneer Status/Investment Tax Allowance. Both new and existing manufacturers qualify for the abatement of adjusted income only on expiry of their Pioneer Status or Investment Tax Allowance/Credit under the Promotion of Investment Act, 1986 or under the repealed Investment Incentives Act, 1968.

Reinvestment Allowance

This allowance has been extended for another three years up to the year of assessment, 1989. All existing companies engaged in expansion of manufacturing or processing plants, which are currently not enjoying any form of incentive, are eligible to apply for the Reinvestment Allowance. This allows a 25% allowance on expenditure on plant, machinery and industrial buildings incurred for the expansion purpose.

PROCEDURES FOR APPLYING FOR INCENTIVES

Any company engaged in agriculture and/or processing projects can apply for the incentives as governed by the Promotion of Investment Act, 1986. The company wishing to engage in a processing project will also have to apply for a manufacturing licence under the Industrial Coordination Act, 1975, that is only if the company's shareholders' fund is one million ringgit and above, or if it employs at least 50 full-time paid employees.

Currently, the application for a licence under the Industrial Coordination Act (ICA) and for Pioneer Status and Investment Tax Allowance under the Promotion of Investment Act has been integrated into one form. This form that relates to the setting up of a new manufacturing project is ICA Form (3). For expansion of existing projects, ICA Form (4) is used. The forms are obtainable at no charge from MIDA Headquarters, the Industries Division of the Ministry of Trade and Industry or from any MIDA Regional Office.

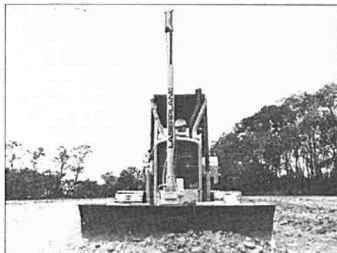
The application for Pioneer Status/Investment Tax Allowance and/or manufacturing licence should be submitted to MIDA. The prospective applicant

should apply directly to the Department of Inland Revenue for the Agriculture Allowance, Export Allowance, Industrial Building Allowance, Abatement of Adjusted Income, Double Deduction of Export Credit Insurance Premium and Double Deduction for Promotion of Export Overseas, and the Incentive for Research and Development. For the Export Credit Refinancing

Scheme and the New Investment Fund, the company can apply to any commercial bank. Prior to applying to the Department of Inland Revenue for the Reinvestment Allowance, the company's expansion programmes must first be approved by the Ministry of Trade and Industry unless the said company is exempt under the Industrial Coordination Act.

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The Industrial Master Plan (IMP) launched by the Government in 1986 charts the course of Malaysia's industrialization in respect to the development strategies and programmes for the decade 1986-1995. Basically, the IMP aims at transforming Malaysia through a leap-frogging process, from an agriculture based, small sized economy into a full-fledged industrial country. To transform Malaysia into a new era of development, a systematic approach to accelerate industrialization in Malaysia was formulated.

Generally, IMP provides a general direction and perspective of our industrial development in short, medium and long-term. The major thrust of the strategy is characterized by the outward-oriented industrialization approach. After completing the first stage of import-substitution, Malaysia turns to export of manufactured goods on a large scale to maintain high industrial growth.

This strategy would permit the exploitation of economics of scale and contribute to efficient import substitution by ensuring low-cost manufacture.

Malaysia is entering a new phase in development. The economic progress during the last decade was achieved mainly through the primary sector exports, and the country benefited from favourable commodity prices. In recent years, the development of the economy had deteriorated. The changing environment for a new approach to development is needed. The manufacturing sector should play a dynamic role, guided by new long-term development objectives to continue the process of economic development. New development strategies and policies are needed to support this process.

The main objectives of manufacturing development set by the IMP are as the following:

- to accelerate the growth of the manufacturing sector to ensure a continued rapid expansion of the economy and to provide basis for meeting the social objectives consistent with the New Economic Policy (NEP).

- to promote opportunities for the maximum and efficient utilization of the nation's abundantly endowed natural resources,
- to build up the foundation for leap-frogging towards an advanced industrial country in the formation age by increasing indigenous technological capability and competitiveness.

In the IMP, four areas are related to the agriculture sector, namely, rubber, palm oil, food processing and wood-based industries.

RUBBER PRODUCT INDUSTRY

The rubber product industry is a resource-based industry, utilizing natural rubber (NR), carbon black, zinc oxide, stearic acid, clay and whitening which are available within the country. The Government has declared resource-based industries as priority industries and the rubber product industry has been singled out to play a major role in the industrialization programme of the country. The industry has undergone considerable expansion over the last decade, initially as an import-substitution industry, followed by a marked expansion of export-oriented activities. The growth of the industry was further aided by a programme of fiscal and non-fiscal incentives with flexible and liberal policies on ownership, control and choice of location.

The global economic recession with its adverse repercussions on the Malaysian economy, coupled with the growing competition from the developed and other developing countries, have slowed down the growth of exports. These have also increased the inflow of imports into the country. The prospect for the growth of the rubber product industry and achieving the objectives of the industry will, to a large extent, be determined by the growth prospects of the industrialized countries.

The major objectives of this industry are as the following :

- to make the rubber products manufacturing one of the leading areas in

This report is a compilation of relevant sections of the IMP report.

the expansion of the resource-based industries in order to achieve greater industrialization in Malaysia.

- to encourage greater domestic utilization of NR in order to increase value added and foreign exchange and to increase the local consumption of rubber from the current level of 65,000 tonnes to 159,400 tonnes by 1990 and 308,800 tonnes by 1995.
- to develop the rubber product industry into an export-oriented industry and to raise Malaysia's rubber product manufacture's share in the world from the present 0.4 percent to 1.5 percent by the year 1995, and
- to make Malaysia a major exporter of tyres and tubes, with a targetted value of one billion ringgit (in 1981 constant term) by 1995.

Rubber products

The selection of rubber products to be manufactured is based on (i) market potential (domestic and export), (ii) value added, (iii) and technology capabilities. Based on these criteria, the manufacture of rubber products has been grouped under three priorities and in two development phases (Table 1).

Radial ply steel-belted passenger car tyres, radial ply textile and steel belted truck tyres, precured retreads, and automotive component, are accorded first priority for development during the first phase of the plan period (1986-1990). Radial ply aeroplane tyres, motorcycle tyres, winter tyres and low rolling resistance tyres are placed in the second priority during the same period to allow for technological absorption and commercial application, following which they would be placed in the priority one list for development during the second phase of the plan period (1991-1995). These tyres require a high proportion of NR compared with the passenger car tyres and have high value added content. They are the obvious choice for export.

Latex products such as toys, medical latex products, latex thread and fashion footwear would also be placed in the first priority list for development in the first phase of the plan period and second in priority in the second phase. Nonetheless, this sector should receive equal importance in the overall policy programmes and incentives measures.

Both these sectors will remain major foreign exchange earners and are expected to contribute substantially to increased value added, employment and NR consumption. Also second in priority to be developed between the 1991-1995 time frame would be the continuous processing, injection moulding and production and manufacture of rubber products on an integrated scale. These developments, if successful, will constitute a radical change in the process technology of the rubber product manufacturing sector.

Growth path in rubber product manufacture

Tyres and tubes

The tyres and tubes sector is expected to spearhead the future expansion of the rubber product industry. Apart from strengthening its position as an import substitution industry, this sector is expected to develop into an export-oriented industry in line with the objective of making Malaysia a major exporter of tyres. Overall, production is targetted to grow at a rate of 15 percent per annum over the plan period, i.e., from an estimated value of 570 million ringgit in 1986 to about two billion ringgit in 1995 (in 1981 constant terms) as shown in Table 2. In the first phase of the plan period, the production of tyres and tubes is targetted to grow around 12.5 percent followed by an accelerated growth rate of about 17.4 percent during the second phase. During the initial period of development, the sector is expected to prepare for a major programme of export orientation in its production lines and marketing approach. Correspondingly, this period should also see the implementation of a package of incentives which will stimulate export production and increase the level of competitiveness of the sector.

The export of tyres and tubes is targetted to reach one billion ringgit (in 1981 constant terms) or 50 percent of the total tyres and tubes production in 1995. This requires exports to grow at a rate of 41 percent per annum between 1986-1990 and 38 percent per annum between 1991-1995. These are somewhat demanding targets when compared with past growth trends and prevailing market conditions, but they are essential if Malaysia is to become a major exporter of tyres and tubes.

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Latex products

The latex product sector is expected to maintain its stronghold in the export market at least during the first phase of the plan period. Production is targeted to grow at an average rate of 15 percent per annum between 1986-1990 followed by a slower rate of growth of about 10.1 percent per annum between 1991-1995 as indicated in Table 3. Exports are expected to continue to register a rapid growth rate of about 17 percent between 1986-1990 and a lower growth rate of about 10.6 percent between 1991-1995. Similar to the overall target for the rubber product industry, the share of latex products import to total domestic consumption is expected to decline to about ten percent by 1995, a target which is not too difficult to achieve judging from the sector's past performance.

Footwear

Overall, the footwear sector is expected to recover from its previous depressed position and to maintain its share in the global market. As indicated in Table 4, production of footwear is targeted to grow at a rate of about eight percent per annum, that is, from an estimated 209 million ringgit in 1986 to about 450 million ringgit in 1995. Exports are expected to grow at a rate of 13 percent per annum over the same period and imports are expected to be maintained at around ten percent of total domestic consumption over the entire period.

Other rubber products

There is considerable room for the expansion of the 'other rubber product' sector, initially, to satisfy domestic consumption, through a second round import substitution strategy. Secondly, to capture a sizeable share of the expanding overseas market. Overall, production is targeted to grow at a rate of 16.4 percent per annum from 135 million ringgit in 1986 to about 550 million in 1995 as shown in Table 5. This requires export to grow at a much higher rate of 32 percent per annum during the second phase of the plan period compared with 5.9% during the first phase. Imports are expected to be reduced to ten percent of domestic consumption by 1995.

Rubber consumption

On the basis of the production targets indicated in Table 6, the domestic processing of rubber is expected to reach 159,400 tonnes by 1990 and 308,800 tonnes by 1995. Included in this overall target is the gradual increase in the consumption of synthetic rubber which is expected to constitute 30 percent of the total rubber consumption by 1995.

Supply plan

The production of rubber products is expected to increase by 711 million ringgit between 1986-1990, and by 1,908 million ringgit between 1991-1995, registering a growth rate of 12.3 percent per annum over the 1986-1990 period, and 14.8 percent per annum over the 1991-1995 period (Table 6). The growth of imports is envisaged to decline substantially and the expectation is that it will grow by about 1.6% per annum over the 1986-1990 period. By 1995 imports are expected to account for only 4.6% of the total supply compared with 17% in 1982. Its ratio to production will decline from 0.21 in 1982 to 0.05 in 1995. While imports are estimated to grow faster over the period 1991-1995 (4.6% per annum), nevertheless, its share of total supply and as a ratio to total production is not expected to show any significant change.

Of all the rubber products, imports of tyres and tubes and latex products are envisaged to grow at a relatively higher rate than the other products and well above the average for the industry. However, imports of other rubber products are targeted to decline throughout the 1986-1995 period.

Investment requirements

Tyre factories are relatively capital intensive when compared with latex products and have therefore a higher capital-labour ratio. The summary of investment and employment requirements between 1986-1990 and 1991-1995 are shown in Table 7.

Overall, the investment requirements for the rubber product industry during the 1986-1990 period would amount to about 773 million ringgit and an estimated 1,412 million ringgit during the 1991-1995 period. Thus between 1986-1995 the total projected investment would amount to some 2,815 million ringgit.

Employment generation

For the total estimated investment of some 2,185 million ringgit an estimated 44,380 jobs are expected to be generated between 1986-1995. About half of the jobs are estimated to be generated during the period 1986-1990. The bulk of the employment generation will come from the footwear production (18,000), accounting for about forty percent of the total new jobs, other products (9,000) 20.3%, latex products (8,000) 18% and tyres (9,380) 21.1 percent.

Profile of the rubber product industry in 1995

By 1995, the rubber product industry is expected to increase by 4.9 times compared with that in 1982 (Table 8). In terms of employment, some 68,000 people would be employed by this industry in 1995 compared with that of 24,000 in 1982. Granted the correct dosage of technology and market capability, Malaysia is expected to be in a strong position to achieve comparative advantage in the export of tyres. It is further anticipated that there will be a rapid growth in exports of rubber products towards the end of 1995. Tyres and tubes will contribute about 50 percent of total production.

The overall contribution of rubber products industry to the manufacturing sector and the national GDP will only increase from 3 to 5 percent and 0.5 to 1.2 percent respectively by 1995.

PALM OIL PRODUCT INDUSTRY

The Malaysian palm oil industry has undergone two distinct phases of growth, each reflecting a milestone in the progress towards the overall establishment of the palm oil industry. During the first phase there was massive planting of oil palm. This was in response to the encouragement given by the Government to diversify Malaysia's agriculture sector. The second phase of growth was in the rapid establishment of palm oil processing.

Presently, Malaysia is in a position to embark on the third phase of growth, that is, increasing the output of downstream products and promoting the establishment of a crude palm kernel oil-based processing sector.

Development objectives

Considering the present state of development in the palm oil and palm kernel oil processing and the export market potential, the following objectives have been formulated.

- Increasing the manufacture and exports of downstream products

It is noted that Malaysia could target itself to utilize about 870,000 tonnes of palm oil for downstream product manufacture by 1995. It is reckoned that if palm kernel oil (PKO) utilization in oleochemicals manufacture is included, then the total volume of palm and palm kernel oil to be used for downstream processing will exceed 1,150,000 tonnes by 1995.

- Rationalizing the refining and fractionation sector

It is estimated that out of a total crude palm oil (CPO) production of about seven million tonnes targeted for 1995, more than 87 percent will be in the processed palm oil (PPO) form. Considering this and the fact that other palm oil producing countries, especially Indonesia, are planning to venture into palm oil cultivation in a big way, it is therefore vital that the competitiveness of this sector be ensured and safeguarded.

- Establishment of a palm kernel based processing sector

In the past, crude palm kernel oil (CPKO) output was relatively low resulting in the lack of adequate emphasis in its development. With output expected to increase to an estimated 840,000 tonnes in 1995, it is obvious that this large raw material supply advantage could be exploited to Malaysia's benefit.

Palm oil products

Currently, the output of the Malaysian palm oil industry is dominated by processed palm oil products such as RBD palm oil, RBD palm olein and RBD stearin. Small quantities of oleochemicals, manufactured fat products and speciality fat products are produced. The major investment in by-product exploitation will be in energy generation. However, certain technology breakthroughs in extraction technique for vitamin

E and other valuable products may lead to new investments by 1990. In the long-term, palm diesel production may prove to be viable.

Growth path in palm oil processing

Export prospects

The total processed exports (palm and palm kernel oil based) are targeted to reach about 7.3 million tonnes in 1995, representing a 300 percent increase over the 1981 level of 2.4 million tonnes (Table 9). Corresponding to this rise, export earnings expressed in 1981 constant prices will increase from 2.98 billion ringgit to about 10.1 billion ringgit in 1995 (Table 9). Ninety five percent of the total palm and palm kernel oil processed would be exported indicating that this industry is export oriented.

Malaysia is expected to supply about 20 percent of the world's oleochemical requirements (based on natural oils and fats) in 1995. More than 90 percent of exports will be in the form of fatty acids, fatty acid methyl esters and glycerine. Only about 120,000 tonnes of fatty alcohol and 10,000 tonnes of fatty amines are expected to be manufactured and exported.

Exports of PPKO category of products are expected to increase to about 370,000 tonnes in 1995 accounting for about one third of the world PKO edible market requirements. The range of products would include among others RBD PKO, RBD PK olein and stearin, hydrogenated RBD PK stearin, and crude PK olein and stearin.

The manufacture of fat products is projected to contribute about sixteen percent of world's exports in 1995. Considering that Malaysian exports in relation to world exports in 1981 were already 10.2 percent, the achievement of the present target by way of establishing off-shore fat product packing and distribution facilities could be considered within reach. A breakdown of the various fat products that will be exported during the period 1986-1995 is shown in Table 10.

Production

The total output of both palm and palm kernel oil based products is expected to increase from about three million tonnes in 1981 to about 10.5 million tonnes in 1995. The total output in 1981 was

100 percent palm oil based as there was no local processing of CPKO. In 1995, however, about nine percent of the total processed output will be palm kernel oil based. Details of these in both quantity and value terms are shown in Tables 9 and 11.

In 1987, the total export earnings for overall output of palm oil based products stood at 173.4 million ringgit. Oleochemical products contributes 114.1 million ringgit followed by prepared edible fat of vegetable origin (16.7 million ringgit), soap (36.1 million ringgit), margarine (4.26 million ringgit) and vanaspati (2.2 million ringgit).

The total export of oleochemical was 104,500 tonnes in 1987 while for soap (14,300 tonnes), vanaspati (1,800 tonnes), prepared edible fats of vegetable origin (15,000 tonnes) and margarine (2,300 tonnes).

Supply plan

During the period 1986-95, the supply of palm oil and palm kernel oil based processed products is expected to grow at an average annual rate of 6.2 percent. On a subsector basis, PPKO will record the highest annual growth of 22.4% per annum followed by the growth in the oleochemicals production (excluding glycerine) at 18.5% per annum. Corresponding the high growth of the oleochemicals production glycerine, the by-product will also register a substantial growth of 17.4% per annum. Palm oil based speciality fats will experience an annual average growth of 16.7% per annum. This impressive growth in speciality fats would take place because output will have increased to about 40,000 tonnes in 1995 from an initial low level of about 10,000 tonnes in 1986.

Investment requirements

Investments in refineries, oleochemical plants and fat products manufacturing units

Additional investments that will be required during the plan period are estimated at 1.1 billion ringgit to achieve the various targets. Investments in oleochemicals alone will be about 910 million ringgit or 83 percent of total additional investment. More than 71 percent of the investments in oleochemicals are expected to be made during the second half of the plan period.

Investments in the by-products area

The major investment in the by-product exploitation area will be in energy generation, although certain technology breakthroughs in extraction technique for Vitamin E and other valuable minor products may lead to new investments by 1990. In the long-term, palm diesel production may be viable and further investments will be expected.

Offshore investments

A possible strategy for strengthening the market expansion for palm oil products would be to establish repacking and distribution centres in strategic consuming regions. There are many possible locations where such offshore distribution centres could be established.

WOOD-BASED INDUSTRY

The timber industry for many years has played an important role in the national economy. The export of logs, sawn timber, panel products and other wood products was valued at 4.7 billion ringgit, accounting for 14.4 percent of the country's total commodity export in 1983. Despite the increase of log production from 23.9 million cubic metres in 1973 to 32.8 million cubic metres in 1987, the percent contribution to total export was reduced to 15.2 percent.

Development objectives

- To transform the wood-based industry into a major resource-based industry and to make it a significant contributor to the national economy.
- To generate maximum value added from forest resources which are expected to decline in the future.
- To make Malaysia a highly visible and reputable centre for furniture and joinery/mouldings in the world wood-based products market.

Use of rubber wood

There are about 1.7 million hectares of rubber trees under cultivation. The total annual volume of rubber wood available, calculated on a felling rate of 2.9 percent of the total 1.7 million

hectares of rubber would be about 13.5 million cubic metres of logs of ten centimetres diameter and above. It is estimated that about 20% of the total rubber wood production is suitable for timber conversion.

The use of rubber wood is gaining popularity in the overseas markets. In 1979, exports amounted to 900 cubic metres with a value of 29 million ringgit. There are about 40 sawmills producing 120,000 cubic metres of sawn rubber wood in the country. The total rubber wood consumption was estimated at 400,000 cubic metres.

Wood product

Priority products are identified as follows:

- sawmilling products
- moulded products
- panel products
- joinery products
- furniture products

The export path for joinery, mouldings and furnitures is projected to be the fastest, with accelerated growth after 1990. During 1986 to 1990, development of this area will be mainly in establishing the furniture complex and integrated rubber wood processing plants in Peninsular Malaysia and the timber processing zones in Sabah and Sarawak (Table 13).

Supply plan

It is estimated that the aggregate demand for sawn wood, panel products, joinery and furniture worthed 3,834 million ringgit in 1986 will increase to 6,939 million ringgit in the year 1995, an increase of some 81 percent. This projected increase has been broken down into its domestic consumption and export components (Table 13). Over the next ten years, following the implementation of forest conservation policies, log output will be gradually reduced from its 1984 level of 31.7 million cubic metres to approximately 29 million cubic metres by 1995 (Table 14).

FOOD PROCESSING INDUSTRY

The food processing industry covers a wide range of food products, from animal feed to frozen meat, from wheat flour to soft drink and beer, and from canned pineapple to cocoa butter. Each of these products has a uniqueness, particular opportunities and problems of its own.

The industry's contribution of value added was 1,001.1 million ringgit in 1981 (Manufacturing Census, 1981), accounting for 1.8 percent of Gross Domestic Product (GDP). Within the manufacturing sector, the industry's value added contribution was 10.7 percent in the same year.

Employment was increased from 35,000 in 1973 to 49,000 in 1981, which reflected the average annual growth rate of 4.3 percent per annum. The industry's share in the total manufacturing employment, however, declined from 11.6 percent to 8.5 percent.

The industry has been primarily catering for the domestic market. Exports of processed foods were less than 15 percent of the industry's total output and the amount in 1983 was 608.4 million ringgit. Imports, on the other hand, were 1,008.3 million ringgit in the same year. Some of the food manufacturing activities are presented in Table 15 (excludes rice milling and edible oils and fats).

The gross output of the food processing industry has grown substantially between 1973 and 1981. In 1973, the gross output was valued at 1.2 billion ringgit, which has risen to 4.4 billion ringgit in 1981 (Table 16). The average annual production growth rate registered 12% per annum during the period. In terms of value added, the food processing industry grew by 4.2 times between 1973 and 1981, increasing from 240.2 million ringgit to 1,001.1 million ringgit. The percentage contribution to the GDP increased from 1.3 percent in 1973 to 1.8 percent in 1981. The contribution to the manufacturing sector had also increased in absolute terms as shown in Table 16. Although its percentage contribution to the national employment had increased slightly over the period 1973-1981, its percentage contribution declined from 11.6 percent in 1973 to 8.5 percent in 1981. Table 16 also shows the 5 1/2 fold increase in exports of processed food between 1973 and 1981. Although imports are high in absolute terms, they increased by 3 1/2 fold over the same period.

The food processing industry in Malaysia depends substantially on imported raw materials with some exceptions such as processed fish products, cocoa manufacture and canned pineapple. Since the late 1960's, investment in food processing has been encouraged. The establishment of sugar refining, flour milling, manufacturing of dairy products, beverage and animal feed industries which depend largely on imported raw materials, now account for nearly 70% of the food processing industry output. The present food processing

industry can be divided into a modern processing sector based on modern technology and processing mainly imported raw materials, and a less modern processing sector based on small scale processing of agricultural produce by traditional processing methods.

Table 17 shows two scenarios of the Malaysian food processing industry and its comparison with other selected reference countries. Without the edible oils, fats and rice milling being taken into account, Malaysia's food processing industry lacks lustre performance in terms of percentage of value added contribution to her GDP and to her manufacturing sector's value added, as compared with other reference countries.

The food processing industry forms a significant part of the overall industrial sector of the Malaysian economy. The food processing industry contributes substantially to the economy in terms of employment generated, savings in foreign exchange, creating value-added and increasing rural income. The food processing industry potentially has wide backward and forward linkages to several other supporting industries such as crop production, packaging, refrigeration, processing equipment and machinery industries.

Trends of the food industry

The gross output of the food processing industry increased from 1.2 billion ringgit in 1973 to 4.4 billion ringgit in 1981 in current terms (See Figure 1). Between 1973 and 1981, the annual average growth rate is 11.1 percent. The largest subsector is the dairy products which accounts 635.3 million ringgit. This is followed by animal feeds subsector, beverages subsector, sugar refining subsector and flour mills subsector. These five subsectors are largely dependent on imported raw materials. The share of output of all the subsectors is shown in Figure 2. Figure 1 also shows the value added as well as employment for the food processing industry. Employment in the food processing industry has risen from 35,000 in 1973 to 49,000 in 1981. The value added per employee has increased from 6,900 ringgit in 1973 to 20,400 ringgit in 1981. This implies that the food processing industry's productivity had improved over the period.

Development objectives

The food processing industry is one of the most basic industries, affecting the characteristics and quality of the nation's diet. Furthermore, in any developing countries, the industry is normally

one of the largest subsectors within the manufacturing sector, accounting for more than ten percent of its total output and Malaysia is no exception. The growth of the food processing industry, therefore, bears significant impact to the country's overall development. The development objectives are:

- to develop the food processing industry capable of supporting the quality of the nation's diet, commensurating with increasing national income level,
- to develop some of the subsectors into strategic export-oriented industries taking advantage of the indigenous natural resources, and
- to reduce the dependence of raw materials on imports by developing substitutes using local resources.

Food products

The potential areas for investment in food processing, based on local resources, are meat processing, fruits and vegetables processing, cocoa processing, animal feeds as well as utilization of agricultural waste/by-products. To ensure greater utilization of raw materials and further downstream processing of the meat processing industry (including fruit juice concentrate and vegetable juice/puree), cocoa products industry and agricultural waste/by-products processing industry are declared as priority industries in order to qualify for incentives under the new incentive system.

Growth path in food products

The export of the food processing industry is projected to grow from 607.7 million ringgit in 1985 to 825.9 ringgit in 1990, and to 1.2 billion ringgit in 1995 (Table 18).

The aggregate supply and demand model is shown in Table 19. The domestic demand is projected to rise from 5.6 billion ringgit in 1985 to 9.8 billion ringgit in 1995. The projected production of the food processing subsectors is shown in Table 20. The production of these subsectors are projected to grow with increasing average annual growth rates except fish processing subsector. Table 21 shows the projected imports of processed food. Imports of most food products except dairy products are projected to grow at declining growth rates between 1985 and 1995 owing to some import substitution possibilities.

The projected investment and employment requirements for the food processing industry are shown in Table 22. The outlook of the food processing industry in 1995 is shown in Table 23. The industry's output is expected to increase from 4.4 billion ringgit in 1981 to 9.6 billion ringgit in 1995. The major subsector such as the manufacture of dairy products, sugar and sugar confectionery, animal feeds and beverages still dominate the output of the industry in 1995.

Downstream activities of food-processing industry

In 1987, Malaysia imported 2,637.4 million ringgit and exported 2,142.4 million ringgit worth of foodstuff. The gross value of output of the canning, preservation and processing of fish, crustacea and similar foods is 214 million ringgit. Production of canned fish and frozen shrimps/prawns in 1987 was worth 37 million ringgit and 128 million ringgit, 57 million ringgit worth of processed meat and 138 million ringgit of fish products was imported in 1987. The demand for tropical juices and puree is growing at an annual rate of five percent. Fruit such as passion fruit, guava, starfruit, mangosteen, jackfruit, watermelon and papaya can be made into exotic tropical fruit juices/concentrates.

Table 1. Classification of products in terms of priority for development

Priority	During 1986 - 1990	During 1991-1995
1	<ul style="list-style-type: none"> Radial ply steel belted passenger passenger car tyres Radial ply textiles and steel belted truck tyres OTR tyres solid tyres Precured retreads Automotive components Latex products - toys, medical latex products, latex thread Fashion footwear 	<ul style="list-style-type: none"> Radial ply steel belted passenger car tyres Radial ply aeroplane tyres Radial ply motorcycle tyres Winter tyres for export Low rolling resistance tyres for export Precured retreads Rubber to metal bonded Engineering components (eg. building mounts - anti-vibration mounts)
2	<ul style="list-style-type: none"> Radial ply aeroplane tyres Radial ply motorcycle tyres Winter tyres for export Low rolling resistance tyres Rubber to metal bonded Engineering components (eg. building mounts, anti-vibration mounts) Belting - V belts Hose - moulded, woven, hydraulic Some sports goods - golf balls 	<ul style="list-style-type: none"> Latex products - toys, medical latex products, latex thread* Hose Belting - V belts, transmission & conveyor belts Automotive components Fashion footwear Continuous processing Injection moulding & integrated rubber production and manufacture
3	<ul style="list-style-type: none"> General rubber goods Rubber bands Floor covering sheeting and matting Joint rings Moulded products 	<ul style="list-style-type: none"> General rubber goods Floor covering sheeting and matting Moulded products

Source: Industrial Master Plan, MIDA

Table 2. Supply and demand projections of tyres and tubes

(Million ringgit in 1981 constant prices)

Demand	1982 (actual)	1985	1986	1987	1988	1989	1990	Average annual growth rate % (1986-1990)	1991	1992	1993	1994	1995	Average annual growth rate % (1991-1995)
Domestic consumption	395	395	395	395	395	395	395	8.5	856	926	1,001	1,081	1,166	8.1
Exports	11	36	56	78	108	149	205	41.0	283	390	539	743	1,000	38
Total	406	560	626	698	781	879	996	12.2	1,139	1,316	1,540	1,824	2,166	16.8
Supply														
Production	362	508	569	637	715	807	917	12.5	1,054	1,224	1,440	1,717	2,050	17.4
Imports	44	52	57	61	66	72	79	8.7	85	92	100	107	116	8
Total	406	560	626	698	781	879	996	12.2	1,139	1,316	1,540	1,824	2,166	16.8
Ratios														
Exports/Production	0.03	0.07	0.09	0.12	0.15	0.18	0.22	-	0.26	0.32	0.37	0.43	0.5	-
Export/Total rubber														
Products export	0.05	0.11	0.15	0.16	0.2	0.23	0.27	-	0.3	0.34	0.38	0.43	0.47	-
Import/Production	0.12	0.1	0.1	0.09	0.09	0.09	0.09	-	0.08	0.08	0.07	0.06	0.06	-
Import/Consumption	0.11	0.10	0.10	0.10	0.10	0.10	0.10	-	0.10	0.10	0.10	0.10	0.10	-

Source: Industrial Master Plan, MIDA

Table 3. Supply and demand projections of latex products

(Million ringgit in 1981 constant prices)

Demand	1982 (actual)	1985	1986	1987	1988	1989	1990	Average Annual Growth rate % (1986-1990)	1991	1992	1993	1994	1995	Average annual growth rate % (1991-1995)
Domestic consumption	54	67	72	77	83	89	97	7.6	104	112	121	130	140	7.6
Exports	108	177	208	244	286	334	390	17.1	432	477	527	583	646	10.6
Total	162	244	280	321	369	423	487	14.8	536	589	648	713	786	10
Supply														
Production	156	237	273	314	361	415	477	15	525	578	637	701	772	10.1
Imports	6	7	7	7	8	8	10	7.4	11	11	11	12	14	7
Total	162	244	280	321	369	423	487	14.8	536	589	648	713	786	10
Ratios														
Exports/Production	0.69	0.75	0.76	0.78	0.79	0.80	0.81	-	0.82	0.83	0.83	0.83	0.84	-
Export/Total rubber														
Product export	0.50	0.55	0.54	0.51	0.53	0.52	0.51	-	0.46	0.42	0.38	0.34	0.30	-
Import/Production	0.04	0.03	0.03	0.02	0.02	0.02	0.02	-	0.02	0.02	0.02	0.02	0.02	-
Import/Consumption	0.11	0.10	0.10	0.09	0.10	0.09	0.10	-	0.11	0.10	0.09	0.09	0.10	-

Source : Industrial Master Plan, MIDA

Table 4. Supply and demand projections of footwear

(Million ringgit in 1981 constant prices)

Demand	1982 (actual)	1985	1986	1987	1988	1989	1990	Average annual growth rate % (1986-1990)	1991	1992	1993	1994	1995	Average annual growth rate % (1991-1995)
Domestic consumption	140	176	188	177	212	224	237	6.1	250	263	277	291	305	5.2
Exports	45	51	57	87	72	82	94	13.0	107	122	137	155	175	13.2
Total	195	227	245	264	284	306	331	7.0	357	385	414	446	480	7.7
Supply														
Production	166	209	226	244	263	284	307	8.0	332	359	387	418	450	8.0
Imports	19	18	19	20	21	22	24	6.0	25	26	27	28	30	4.5
Total	185	227	245	264	284	306	331	7.9	357	385	414	446	480	7.7
Ratios														
Exports/Production	0.27	0.24	0.25	0.36	0.27	0.29	0.31	-	0.32	0.34	0.35	0.37	0.39	-
Export/Total Rubber	0.21	0.16	0.15	0.18	0.13	0.13	0.12	-	0.11	0.11	0.10	0.09	0.08	-
Product export	0.11	0.10	0.08	0.08	0.08	0.08	0.08	-	0.8	0.7	0.9	0.7	0.7	-
Import/Production	0.11	0.10	0.08	0.08	0.08	0.08	0.08	-	0.10	0.10	0.10	0.10	0.10	-
Import/Consumption	0.13	0.10	0.10	0.11	0.10	0.10	0.10	-	0.10	0.10	0.10	0.10	0.10	-

Source : Industrial Master Plan, MIDA

Table 5. Supply and demand projection of other rubber products

(Million ringgit in 1981 constant prices)

Demand	1982 (actual)	1985	1986	1987	1988	1989	1990	Average annual growth rate % (1986-1990)	1991	1992	1993	1994	1995	Average annual growth rate % (1991-1995)
Domestic consumption	135	120	128	137	147	157	168	7.0	182	197	213	230	249	8.2
Exports	50	60	64	68	71	75	80	5.9	111	150	198	256	326	32.0
Total	185	180	192	205	218	232	248	6.6	293	347	411	486	575	18.3
Supply														
Production	93	120	135	151	169	190	213	12.2	258	312	377	457	550	21.0
Imports	92	60	57	54	49	42	35	-11.4	35	35	34	29	25	-7.0
Total	185	180	192	205	218	232	248	6.6	293	347	411	486	575	18.3
Ratios														
Exports/Production	0.54	0.50	0.47	0.45	0.42	0.39	0.37	-	0.43	0.48	0.52	0.56	0.59	-
Exports/Total Rubber Products exports	0.23	0.19	0.17	0.14	0.13	0.12	0.10	-	0.12	0.13	0.14	0.15	0.15	-
Import/Production	1.0	0.50	0.42	0.36	0.29	0.22	0.16	-	0.14	0.11	0.09	0.06	0.05	-
Import/Consumption	0.68	0.50	0.45	0.39	0.33	0.27	0.21	-	0.19	0.18	0.16	0.13	0.10	-

Source : Industrial Master Plan, MIDA

Table 6. Aggregate supply and demand projection for rubber products industry

(Million ringgit in 1981 constant prices)

Demand	1982 (actual)	1985	1986	1987	1988	1989	1990	Average annual growth rate % (1986-1990)	1991	1992	1993	1994	1995	Average annual growth rate % (1991-1995)
Domestic consumption	724	887	958	1,011	1,115	1,200	1,293	8	1,392	1,498	1,612	1,732	1,860	7.5
Exports	214	324	385	477	537	640	769	19	933	1,139	1,401	1,737	2,147	23.0
Total	938	1,211	1,343	1,488	1,652	1,840	2,062	11	2,325	2,637	3,013	3,469	4,007	14.2
Supply														
Production	777	1,074	1,203	1,346	1,508	1,696	1,914	12	2,169	2,473	2,841	3,293	3,822	14.8
Imports	161	137	140	142	144	144	148	2	156	164	172	176	185	4.6
Total	938	1,211	1,343	1,488	1,652	1,840	2,062	11	2,325	2,637	3,013	3,469	4,007	14.2
Ratios														
Exports/Production	0.28	0.31	0.32	0.34	0.36	0.38	0.40	-	0.43	0.46	0.49	0.53	0.54	-
Exports/Total														
Manufacturing Exports	-	0.01	-	-	-	-	0.02	-	-	-	-	-	0.04	-
Import/Production	0.21	0.13	0.12	0.10	0.10	0.08	0.08	-	0.07	0.07	0.05	0.05	0.05	-
Import/Consumption	0.22	0.15	0.14	0.14	0.13	0.12	0.11	-	0.11	0.11	0.08	0.10	0.10	-

Source : Industrial Master Plan, MIDA

Table 7. Investment plan and employment projections

(Million ringgit in 1981 constant terms)

	1986-1990	1991-1995	Total(1986-1995)
Increased output	1,140	1,908	3,048
Investment			
Expansion of existing plants	490	1,102	1,592
Establishment of new plants	283	310	593
Total	773	1,412	2,185
Additional employment (persons)	20,700	23,680	44,380

Source : Industrial Master Plan, MIDA

Table 8. The rubber products industry in 1995

(Million ringgit - 1981 constant terms)

	1982	1995	Growth (x 100%)
Output - Total	777	3,822	4.9
• Tyres and tubes	362	2,050	5.7
• Latex products	156	772	4.9
• Footwear	166	450	2.7
• Others	93	550	5.9
Value added	328	1,560	4.8
Employment (persons)	23,825	68,205	2.9
Exports - Total	214	2,147	10.0
• Tyres and tubes	11	1,000	91.0
• Latex products	108	646	6.0
• Footwear	45	175	3.9
• Others	50	326	6.5
World output share (%)	0.4	1.5	-
Import ratio	0.22	0.1	-
Contribution to GDP (%)	0.5	1.2	-
Contribution to manufacturing sector value added (%)	3.0	5.0	-
Intra-industry structure (%)			
• Tyres and tubes	46.6	53.6	-
• Latex products	20.0	20.2	-
• Footwear	21.4	11.8	-
• Others	12.0	14.4	-
Rubber consumption ('000 tonnes)	64.8	308.8	4.8
NR:SR consumption ratio	9:1	7:3	

Table 9. Aggregate supply and demand projections for palm & palm kernel oil based processed products, 1981-1995

Unit: 000 tonnes

	1981 + b	1984 + c	1985	1987	1988	1989	1990	Average annual growth percent 1986-1990	1991	1992	1993	1994	1995	Average annual growth percent 1991-1995
Demand														
Domestic Consumption														
Cooking oil	106.0	124.0	136.0	142.0	148.0	154.0	160.0	4.1	168.0	176.0	184.0	192.0	200.0	4.5
Manufactured Fat Products (excluding cooking oil)	23.1	29.0	31.9	33.4	35.0	36.6	38.4	4.7	40.2	42.1	44.1	46.1	48.3	4.7
Oleochemicals (excluding glycerine)	1.9	2.3	2.6	2.8	3.0	3.2	3.4	6.9	3.7	3.9	4.2	4.5	4.8	6.7
Glycerine	0.8	1.1	1.3	1.4	1.5	1.6	1.7	6.9	1.8	2.0	2.1	2.3	2.4	7.5
Total Domestic Consumption	131.8	156.4	171.8	179.6	187.5	195.4	203.5	4.3	213.7	224.0	234.4	244.9	255.5	4.6
Export														
Processed Palm Oil (PPO)	2,375.4	3,027.1	3,975.0	4,327.0	4,689.0	5,047.0	5,394.0	7.9	5,514.0	5,634.0	5,765.0	5,938.0	6,060.0	2.4
Processed Palm Kernel Oil (PPKO)	-	28.4	60.0	78.0	99.0	128.0	165.0	28.8	193.0	226.0	265.0	312.0	369.0	17.6
Manufactured Fat Products (excluding cooking oil)	58.5	25.3	44.8	50.0	55.2	61.2	68.0	11.0	75.4	83.7	92.9	103.2	114.5	11.0
Oleochemicals (excluding glycerine)	-	112.7	147.4	182.2	217.0	246.8	306.6	20.1	366.3	456.1	515.8	605.5	685.2	16.9
Glycerine	1.1	9.9	14.0	17.2	19.3	23.0	29.4	20.4	33.8	41.8	47.2	55.2	62.4	16.6
Palm oil based speciality fats	2.0	7.0	10.0	15.0	20.0	25.0	30.0	31.6	32.0	34.0	36.0	38.0	40.0	5.7
Total Exports	2,437.0	3,210.4	4,251.2	4,669.4	5,099.5	5,531.0	5,993.0	119.8	6,214.5	6,475.6	6,721.9	7,051.9	7,331.1	4.2
Total Demand	2,568.8+a	3,366.8	4,423.0	4,849.0	5,287.0	5,726.4	6,195.5	8.8	6,428.2	6,699.6	6,956.3	7,296.8	7,586.6	4.2
Supply														
Production														
Manufactured Fat Products (excluding cooking oil)	81.6	54.3	76.7	83.4	90.2	97.8	106.4	8.5	115.6	125.8	137.0	149.3	162.9	8.9
Cooking Oil	106.0	124.0	136.0	142.0	148.0	154.0	160.0	4.1	168.0	176.0	184.0	192.0	200.0	4.5
Oleochemical (excluding glycerine)	-	115.0	150.0	185.0	220.0	250.0	310.0	19.9	370.0	450.0	520.0	610.0	690.0	16.9
Glycerine	1.2	11.0	15.3	18.6	20.8	24.6	31.1	19.4	35.6	43.8	49.3	57.5	64.9	16.1
Processed Palm Oil (PPO)	2,375.4	3,027.1	3,975.0	4,327.0	4,689.0	5,047.0	5,394.0	7.9	5,614.0	5,634.0	5,765.0	5,938.0	6,060.0	2.4
Processed Palm Kernel Oil (PPKO)	-	28.4	60.0	78.0	99.0	128.0	165.0	28.8	193.0	226.0	265.0	312.0	369.0	17.6
Palm Oil based speciality fats	2.0	7.0	10.0	15.0	20.0	25.0	30.0	31.6	32.0	34.0	36.0	38.0	40.0	5.7
Total Production/Supply	2,566.2+a	3,366.8	4,423.0	4,849.0	5,287.0	5,726.4	6,195.5	8.8	6,428.2	6,699.6	6,956.3	7,296.8	7,586.6	4.2
Ratios														
Total Export/Total Production	0.95	0.95	0.96	0.96	0.96	0.97	0.97	-	0.97	0.97	0.97	0.97	0.97	-

Notes : +a Total demand does not equate total production because imports of oleochemicals and glycerine have not been taken into account

+b Actual
+c Estimated
Source : Industrial Master Plan, MDA

Table 10. Projected exports of manufactured fat products

Unit: tonnes

	Export Demand			Total Export Demand
	Vanaspati	Shortening	Margarine	
1981 +a	33,924	21,109	3,433	58,466
1984 +b	2,170	18,967	4,203	25,340
1986	19,003	21,877	3,885	44,765
1987	21,092	24,283	4,312	49,687
1988	23,413	26,955	4,786	55,154
1989	25,988	29,920	5,313	61,221
1990	32,021	33,211	5,897	67,955
1991	32,021	36,864	6,546	75,431
1992	35,542	40,919	7,266	83,727
1993	39,453	45,420	8,065	92,938
1994	43,792	50,417	8,952	103,161
1995	48,609	55,963	9,937	114,509

Notes : +a Actual
 +b Estimated

Source : Industrial Master Plan, MIDA

Table 11. Aggregate supply and demand projections for palm & palm kernel oil based processed products 1986-1995

Unit: Million m.t. 1981 constant prices

	1981+b	1984+c	1986	1987	1988	1989	1990	Average annual growth percent 1986-1990	1991	1992	1993	1994	1995	Average annual growth percent 1991-1995
Demand														
Domestic Consumption														
Cooking oil	156.8	182.3	199.9	208.7	217.6	226.4	235.2	4.1	247.0	258.7	270.5	282.2	294.0	4.5
Manufactured fat products (excluding cooking oil)	49.8	70.9	67.4	70.6	73.9	77.3	81.1	4.7	84.9	88.9	93.1	97.5	102.1	4.7
Oleochemicals (excluding glycerine)	3.2	3.9	4.4	4.8	5.1	5.4	5.8	7.2	6.3	6.6	7.1	7.7	8.2	6.8
Glycerine	1.6	3.0	3.5	3.8	4.1	4.3	4.6	7.1	4.9	5.4	5.7	6.2	6.5	7.3
Total Domestic Consumption	210.4	260.1	275.2	287.9	300.7	313.4	326.7	4.4	343.1	359.6	376.4	393.6	410.8	4.6
Export														
Processed Palm Oil (PPO)	2,681.1	3,940.1	4,770.0	5,192.4	5,626.8	6,056.4	6,472.8	7.9	6,616.8	6,760.8	6,918.0	7,125.6	7,272.0	2.4
Processed Palm Kernel Oil (PPKO)	-	59.3	108.5	140.8	178.4	230.3	296.5	28.6	350.3	414.6	491.5	585.2	699.4	18.9
Manufactured fat products (excluding cooking oil)	78.4	44.0	65.2	72.4	80.4	89.2	99.0	11.0	109.9	122.0	135.4	150.3	166.8	11.0
Oleochemicals (excluding glycerine)	-	203.7	250.1	332.8	396.4	460.5	682.8	26.2	796.6	967.7	1,081.5	1,399.0	1,608.3	19.2
Glycerine	3.0	26.7	37.8	46.4	52.1	62.1	79.4	20.4	91.3	112.9	127.4	149.0	168.5	16.6
Palm Oil based speciality fats	8.0	28.0	40.0	60.0	80.0	100.0	120.0	31.6	129.0	136.0	144.0	152.0	160.0	5.7
Total Exports	2,770.5	4,301.8	5,200.6	5,844.8	6,414.1	6,998.5	7,750.5	10.0	8,092.9	8,514.0	8,897.8	9,561.1	10,075.0	5.6
Total Demand	2,980.9+a	4,561.9	5,565.8	6,132.7	6,714.8	7,311.9	8,077.2	9.8	8,436.0	8,873.6	9,274.2	9,954.7	10,485.8	5.6
Supply														
Production														
Manufactured fat products (excluding cooking oil)	128.2	114.9	132.6	143.0	154.3	166.5	180.1	7.9	194.8	210.9	228.5	247.8	268.9	8.4
Cooking oil	155.8	182.3	199.9	208.7	217.6	226.4	235.2	4.1	247.0	258.7	270.5	282.2	294.0	4.5
Oleochemicals (excluding glycerine)	-	207.6	273.5	337.6	401.5	465.9	688.4	25.9	802.9	974.3				
Glycerine	1,826.6	1,816.5	19.1	50.2	56.2	66.4	84.0	19.4	96.2	118.3	133.1	155.2	175.0	16.1
Processed Palm Oil (PPO)	2,681.1	3,940.1	4,770.0	5,192.4	5,626.8	6,056.4	6,472.8	7.9	6,616.8	6,760.8	6,918.0	7,125.6	7,272.0	2.4
Processed Palm Kernel Oil (PPKO)	-	59.3	108.5	140.8	178.4	230.3	296.5	28.6	350.3	414.6	491.5	585.2	699.4	18.9
Palm Oil based Speciality Fats	8.0	28.0	40.0	60.0	80.0	100.0	120.0	31.6	128.0	136.0	144.0	152.0	160.0	5.7
Total Production/Supply	2,976.3+a	4,561.9	5,565.8	6,132.7	6,714.8	7,311.9	8,077.0	9.8	8,436.0	8,873.6	9,274.2	9,954.7	10,485.8	5.6

Source: Industrial Master Plan, MDA

Notes: +a: Total demand does not equal total production because imports

or oleochemicals and glycerine have not been taken into account

+b: Actual Estimated

Table 12. Projected rate of domestic processing

Unit: Million cubic metres

	Year	Total Log (A)	Domestic Process (B)	Export	B/A (%)
Sabah	1983	11.5	2.0	9.5	17.4
	1995	10.0*	7.5***	2.5	75
Sarawak	1983	10.6	1.4	9.2	13.2
	1995	12.0	5.5	6.5	54.2
Peninsular Malaysia	1983	10.6	10.5	0.01	99
	1995	7.0**	7.0	0.0	100.0
Total	1983	32.7	13.9	18.8	42.5
	1995	29.0	20.0	9.0	69.0

Source : Industrial Master Plan, MIDA

Note : * including plantation logs of 4 million cubic metres
 ** including 2 million cubic metres of rubber logs
 *** including 2 million cubic metres for projected use for pulp and paper

Table 13. Aggregate supply and demand projections for wood based products

	1981 Actual	1983 Estimated	1986	1987	1988	1989	1990	Average annual growth rate (1986-1990)	1991	1992	1993	1994	1995	Average annual growth rate (1991- 1995)
Demand														
Domestic consumption	1,358	1,426	1,900	2,048	2,183	2,304	2,426	6.32	2,526	2,618	2,703	2,783	2,898	3.5
Export	1,592	1,699	1,934	2,013	2,131	2,249	2,411	5.67	2,567	2,846	3,137	3,510	4,041	12.04
Total	2,950	3,125	3,834	4,061	4,314	4,553	4,837	5.99	5,093	5,464	5,840	6,293	6,939	8.05
Supply														
Production	2,895	3,070	3,780	4,008	4,261	4,501	4,785	6.07	5,041	5,413	5,789	6,243	6,889	8.13
Import	55	55	54	53	53	52	52	-0.76	52	51	51	50	50	-0.8
Total	2,950	3,125	3,838	4,061	4,314	4,553	4,837	5.99	5,093	5,464	5,840	6,293	6,939	8.05
Ratio														
Export/production	0.55	0.55	0.51	0.5	0.5	0.5	0.5	-	0.51	0.53	0.54	0.56	0.59	-
Import/production	0.0192	0.0179	0.0142	0.0133	0.0124	0.0116	0.0108	-	0.0102	0.0095	0.0088	0.0081	0.0073	-
Import/consumption	0.041	0.0385	0.0282	0.026	0.0242	0.0228	0.0214	-	0.0204	0.0196	0.0188	0.0181	0.0173	-

Source: Industrial Master Plan, MDA

Table 14. Projected supply of logs

(million cubic metres)

Year	Peninsular Malaysia	Indigenous logs	Sabah Plantation	Sarawak	Total available
1983*	10.6	11.5	-	10.7	32.4
1984	10.7	11	-	10	31.7
1985	7**	10	0.1	12	29.1
1990	7	6	1	12	26
1990	7	6	4	12	29

Source : Industrial Master Plan, MIDA

Note : * Actual figures

** Consisting of 5 million cubic metres of
indigenous logs and 2 million cubic metres of rubberwood

Table 15. Food manufacturing activities and beverage industries regrouped under various sub-sectors

Sub-sector	Malaysia Industrial Classification	Industry
Meat processing	31110	Slaughtering, preparing and preserving meat
Dairy products	31121	Ice cream
	31129	Manufacturing of other dairy products
	31219**	Eggs processing
Fish products	31140	Canning, preserving and processing of fish, crustacea and similar foods
Edible oils and fats	31151*	Coconut oil
	31152*	Palm oil
	31153*	Palm kernel oil
	31159*	Other vegetable and animal oils and fats
Cereal-based products	31161*	Small rice mills
	31162*	Large rice mills
	31163	Wheat flour milling
	31169	Other grain milling (excl. spices)
	31171	Biscuit manufacturing
	31172	Manufacturing of other baked goods
	31214	Manufacturing of noodles and related products
	31216	Starch manufacturing from grains
Fruit and vegetable processing	31131	Pineapple canning
	31139	Other fruit and vegetable processing, packing and canning
	31164	Sago and tapioca processing
Sugar and sugar confectionery	31180	Sugar refining
	31190*	Sugar confectionery manufacturing
Coffee, cocoa, tea and spice manufacture group	31190	Cocoa products and manufacture
	31212	Coffee manufacturing
	31213	Tea processing
	31215	Spice and curry products
Prepared animal feed	31220	Manufacture of prepared animal feed
Miscellaneous products n.e.c.	31219	Sauces manufacture
	31219	Manufacture of essence and flavour related products including MSG
	31219	Dessicated coconut
Beverages	31330	Alcoholic beverage including beers
	31310	Spirits and alcohol manufacture
	31340	Soft drinks manufacture including carbonated water

Source: Industrial Master Plan, MIDA

Notes: * Not included in this sectoral study

** Egg processing and coconut products are extracted from manufacture of products n.e.c. (MIC 31219). However, egg processing is regrouped under subsector on manufacture of dairy products. Similarly sugar confectionery manufacture from cocoa products manufacture is regrouped under sugar manufacture subsector.

Table 16. Food processing industry: Output, value added employment and trade, 1973 and 1981*

	1973	1981
Output of Food Processing Industry	\$1,168.0 million	\$4,361.9 million
Value added of Food Processing Industry	\$ 240.2 million	\$1,001.1 million
% contribution to GDP	1.3%	1.8%
% contribution to manufacturing value added	9.7%	10.7%
Employment of Food Processing Industry	34,725	49,118
% contribution to national employment	0.8%	0.9%
% contribution to manufacturing sector's employment	11.6%	8.5%
Exports of processed food	\$ 104.2 million	\$ 603.1 million
Imports of processed food	\$ 270.0 million	\$ 959.0 million
Trade balance	\$ 165.8 million	-\$ 355.9 million

Source : Industrial Master Plan, MIDA

* excludes edible oils and fat subsector and rice-milling.

Sources: (1) Census of Manufacturing Industries, 1973 and 1981

(2) External Trade Statistics, Department of Statistics, Malaysia

Table 17. Comparison of Malaysia's food processing industry with reference countries

(Million US\$ - current values)

	Malaysia * 1981	Malaysia ** 1981	Indonesia 1979	Philippines 1977	Republic of Korea 1980	Brazil 1977
Output						
Amount	\$1,817.00	\$4,258.20	\$1,340	\$2,910.80	\$6,033.10	\$21,060.80
Value added						
Amount	\$428.00	\$785.30	\$407.10	\$583.40	\$1,979.80	\$6,421.50
% contribution to GDP	1.8%	3.2%	0.8%	2.8%	3.3%	3.6%
% contribution to manufacturing sector's value added	10.7%	19.3%	19.7%	34.4%	10.39%	13.0%
Employment						
Number of workers	49,118	76,093	151,500	204,700	172,900	527,000
% contribution to national employment	0.9%	1.5%	0.3%	1.2%	1.3%	4.7%
% contribution to manufacturing sector	8.5%	13.1%	17.5%	26.3%	8.16%	13.3%

Source : Industrial Master Plan, MIDA.

Notes : * Excludes all vegetable and animal oils and fats (under MIC Codes 31151, 31152, 31153 & 31159) and rice mills (under MIC Codes 31161 and 31162) rice mills.

** Include all vegetable and animal oils and fats (under MIC Codes 31151 & 31152, 31153 & 31159) and rice mills (under Codes 31161 and 31162)

Table 18. Projected export from food processing subsectors
in Malaysia between 1985 and 1995

(Million ringgit - 1981 constant values)

Subsectors	1981*	1983**	1985	Projection 1990	1995	Average Growth Rate 1985-1990	Average Growth Rate 1990-1995
Meat processing***	3.1	4.8	7.6	23.1	42.6	25.0%	13.0%
Dairy products	33.1	37.9	43.4	60.8	85.3	7.0%	7.0%
Fish products	210.6	204.7	199.0	209.2	231	1.0%	2.0%
Processed cereals and cereal preparations	23.0	26.4	30.5	42.8	60	7.0%	7.0%
Fruit and vegetable processing	72.0	70.6	69.2	72.7	88.4	1.0%	4.0%
Coconut products	12.4	12.6	12.9	14.2	18.1	2.0%	5.0%
Sugar and sugar confectionery	78.3	76.7	75.2	71.5	68	-1.0%	-1.0%
Coffee, cocoa, tea and spice manufacture	57.8	77.5	106.7	252.3	500.7	18.8%	14.7%
Prepared animal feeds	0.1	0.1	0.1	0.1	0.1	0.0%	0.0%
Miscellaneous food products	26.8	29.5	32.6	45.7	73.6	7.0%	10.0%
Beverages	28.2	29.3	30.5	33.5	36.4	1.9%	1.7%
Total	545.4	570.1	607.7	825.9	36.4	6.3%	7.8%

Source : Industrial Master Plan, MIDA

Notes : * Based on actual data. Recompiled from export trade statistics
published by Department of Statistics, Kuala Lumpur

** Estimates

*** Includes exports of frozen chicken and pork

Table 19. Projected aggregate supply and demand for Malaysia's Food Processing Industry between 1985 and 1995

(Million Ringgit, 1981 constant values)

	1981*	1983**	1985	Projection 1990	1995	Average Growth Rate 1985-1990	Average Growth Rate 1990-1995
Domestic Demand	4,503.5	5,035.1	5,631.6	7,414.6	9,793.9	5.6%	5.7%
Exports	545.4	570.1	607.7	825.9	1,204.2	6.3%	7.8%
Total Demand	5,048.9	5,605.2	6,239.3	8,240.5	10,998.1	5.7%	5.9%
Local Production	4,361.9	4,803.7	5,305.4	7,043.6	9,576.1	5.8%	6.3%
Imports	687.0	801.5	933.9	1,196.9	1,422.0	5.1%	3.5%
Total Supply	5,048.9	5,606.2	6,239.3	8,240.5	10,998.1	5.7%	5.9%
Ratios							
Export/Production (%)	12.5	11.9	11.4	11.7	12.6		
Import/Domestic Demand (%)	15.2	15.9	16.6	16.1	14.5		

Source : Industrial Master Plan, MIDA

Notes : • Based on actual data
 ** Estimates

Table 20. Projected local production for food processing subsectors in Malaysia between 1985 and 1995

(Million ringgit, 1981 constant values)

Subsectors	1981*	1983**	1985	Projections		Average Growth Rate 1985-1990	Average Growth Rate 1990-1995
				1990	1995		
Meat processing	37.3	42.9	49.9	90.0	163.5	12.5%	12.7%
Dairy products	635.3	721.8	819.7	1,145.9	1,601.7	6.9%	6.9%
Fish products	282.1	274.6	265.3	251.4	280.6	-1.1%	2.2%
Processed cereals and cereal preparations	820.2	895.0	976.8	1,216.9	1,531.8	4.5%	4.7%
Fruit and vegetable processing	224.2	219.7	215.4	226.4	275.4	1.0%	4.0%
Coconut products	17.1	17.8	18.6	21.4	27.2	2.8%	4.9%
Sugar and sugar confectionery	777.1	844.4	918.4	1,127.3	1,392.8	4.2%	4.3%
Coffee, cocoa, tea and spice manufacture	194.9	226.9	269.0	513.5	903.3	13.8%	12.0%
Animal feeds	634.0	709.7	794.4	1,053.1	1,396.0	5.8%	5.8%
Miscellaneous food products	154.0	163.4	172.5	221.6	306.3	5.1%	6.7%
Beverages	585.7	687.5	805.4	1,176.1	1,697.5	7.9%	7.6%
Total	4,361.9	4,803.5	5,305.4	7,043.6	9,576.1	5.8%	6.3%

Source : Industrial Master Plan, MIDA

Notes : * Based on production = domestic demand + exports - imports

** Estimates

Table 21. Projected imports by food processing subsectors in Malaysia, 1985 and 1995

(Million ringgit, 1981 constant values)

Subsectors	1981*	1983**	Projections			Average Growth Rate 1985-1990	Average Growth Rate 1990-1995
			1985	1990	1995		
Meat processing +	36.1	43.7	52.8	70.6	77.9	6.0%	2.0%
Dairy products ++	84.9	102.7	124.3	166.3	222.5	6.0%	6.0%
Fish products	80.0	96.8	117.1	188.6	240.8	10.0%	5.0%
Processed cereals and cereal preparations	102.4	112.9	124.5	144.3	151.7	3.0%	1.0%
Fruit and vegetable processing	103.3	131.5	162.0	236.0	305.8	8.0%	5.0%
Coconut products	***	***	***	***	***	0.0%	0.0%
Sugar and sugar confectionery	8.8	10.3	12.0	17.6	22.5	8.0%	5.0%
Coffee, cocoa, tea and spice manufacture	93.9	109.5	127.7	121.5	104.3	-1.0%	-3.0%
Prepared animal feeds +++	0.1	0.1	0.1	0.1	0.1	0.0%	0.0%
Miscellaneous food products	52.6	63.6	77.0	98.3	113.9	5.0%	3.0%
Beverages	124.9	130.4	136.4	153.6	182.5	5.0%	3.5%
Total	687.0	801.5	933.9	1196.9	1422.0	5.1%	3.5%

Source : Industrial Master Plan, MIDA

Notes : * Actual data. Recompiled from external trade statistics published by Department of Statistics, Malaysia

** Estimated imports based on adjustments made to past growth rates between 1975 and 1982

*** Negligible imports

+ includes frozen beef

++ Excludes the amount of milk powder that is being used as raw materials

+++ Excludes mineral mixes and supplements

Table 22. Projected investment and manpower requirements for different periods,
1986-1990 and 1991-1995

(Million ringgit, 1981 constant values)

Subsectors	Period 1986-1990		Period 1991-1995	
	Investment (\$ million)	Employment (No. of persons)	Investment (\$million)	Employment (No. of persons)
Meat processing	10-15	700	20-25	1,300
Dairy products	10-15	400	95-100	3,000
Fish products	Negligible	-	20-25	900
Processed cereals and cereal preparations	50-55	4,800	100-110	9,600
Fruit and vegetable processing	10-15	600	65-70	3,000
Coconut products	5-10	200	5-10	200
Sugar and sugar confectionery	35-45	600	30-40	500
Coffee, cocoa, tea and spice manufacture	100-110	7,100	80-85	5,600
Animal feeds	40-45	1,400	25-30	900
Miscellaneous food products	10-15	400	20-25	700
Beverages	15-20	800	25-30	1,300
Total	285-345	1,7000	485-550	27,000

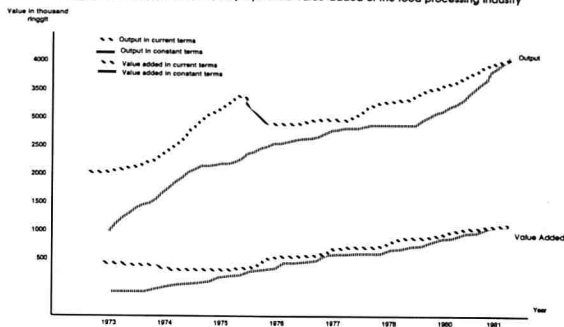
Source : Industrial Master Plan, MIDA

Table 23. Processing of fruits and vegetables that have potential

Products	Production scale	Remarks
Processed Fruits		
Rambutan		
Canned - whole seedless in syrup - by itself and in fruit cocktail	Medium or large	Supply - seasonal, usually twice a year Depitting process Acceptance - good Market - wide especially for export
Guava		
Canned - pieces in syrup Canned - juice	Medium or large	Supply - short, non seasonal Acceptance - good Market - wide esp. for export Criteria for canning -high recovery -small core -firm flesh
Mango		
Canned - piece in syrup Pickled/Candied/dried Canned puree and juice	Medium or large Small	Supply - seasonal, usually twice in year one peak season
Nangka		
Canned - pieces in syrup - by itself or in fruit cocktail	Medium or large	Supply - short, non seasonal Acceptance - good Market - wide esp. for export
Banana		
Banana figs (pisang salai)	Small	Banana figs - use of ripe banana
Banana chips (kerepek pisang)	Small	Banana chips - use of unripe mature banana
Banana powder	Medium or large (commercial)	To be used as a base for other foods - potential for export
Papaya		
One of ingredients in fruit cocktail	Medium or large	Fruits - must be firm and at right stage of ripeness for easy handling
Puree	Small	Red variety for colour can be used as base for sauces
Pickled/Candied/Dried Papain	Small	

Source : Industrial Master Plan, MIDA

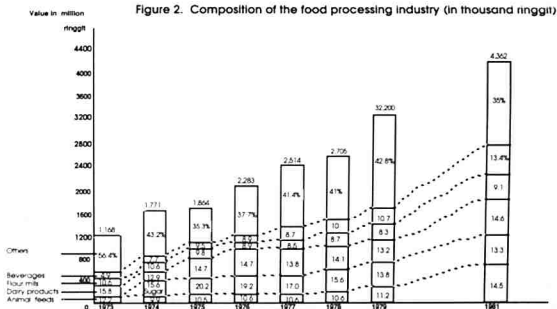
Figure 1. Trend of production, employment & value-added of the food processing industry



Year	1973	1974	1975	1976	1977	1978	1979	1980	1981
Output (\$'000)	1,168,026	1,770,786	1,864,105	2,282,649	2,514,339	2,704,911	3,200,013	N.A.	4,361,901
Employment	34,725	29,954	32,082	35,625	37,071	37,559	41,066	N.A.	49,118
Value added (\$'000)	240,216	302,274	391,177	491,941	560,732	673,678	743,112	N.A.	1,001,104
Value added per employee (\$'000)	6.90	10.10	12.20	13.80	15.10	17.90	18.10	N.A.	20.40

Source : Industrial Survey 1974-1979
Census of Manufacturing Industries 1973 to 1981
Department of Statistics, Malaysia

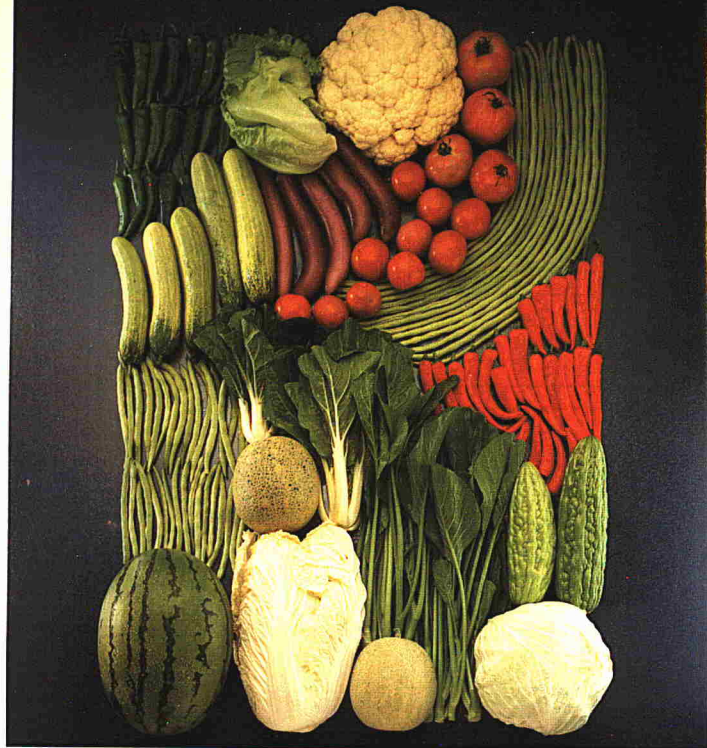
Note: Data on output value added and employment for the food processing industry includes all items under MIC codes 31110-31340 excluding data on all oils and fats i.e. 31151, 31152, 31153 and 31159 and large and small rice mills i.e. 31161 and 31162



Output	1973	1974	1975	1976	1977	1978	1979	1980	1981
Manufacture of prepared animal feeds	143,014	176,098	195,265	242,451	265,265	287,655	356,811	N.A.	634,036
Sugar manufacturing	-	277,068	376,862	435,707	427,670	421,324	442,683	N.A.	582,255
Dairy products	184,469	229,172	274,942	335,257	346,427	380,860	423,172	N.A.	635,549
Flour mills and other grain milling	123,962	188,374	183,024	204,012	212,862	236,314	266,203	N.A.	395,575
Beverages	57,813	135,968	176,452	203,643	219,883	270,482	342,137	N.A.	585,763
Others	658,768	764,106	657,510	861,579	1,042,232	1,108,276	1,369,007	N.A.	1,528,723
Total	1,168,026	1,770,786	1,864,055	2,282,649	2,514,339	2,704,911	3,200,013	N.A.	4,361,701

Source: (1) Industrial Surveys, 1974-1979
 (2) Census of Manufacturing Industries, 1973 and 1981,
 Departments of Statistics, Malaysia

value in thousand ringgit
 Note: Data on output value added and employment for the food processing industry includes all items under MIC codes 31110-31340 excluding data on all oils and fats i.e. 31151, 31152, 31153 and 31159 and large and small rice mills i.e. 31161 and 31162



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Rain gun irrigation

Water can be considered the life blood of the earth. Its mobility, energy transformation and chemicals and physical behaviour permeate into every aspect of organic life. Plants and animals are continuously exposed and influenced by the endless flux of water known as the hydrologic cycle. Agriculture has initial access to much of the world's fresh water supplies, and this places great pressure on it to be a wise guardian of the water in its segment of the hydrologic cycle.

Emphasis should, therefore, be placed on getting the proper perspective on water use in agriculture in the country. This can be achieved by a careful analysis of the nation's water budget through balancing total precipitation with existing and prospective water use patterns. The impact of agriculture on the nation's water supply-demand situation will be clearer as we analyze the agricultural sector's responsibilities in water conservation programmes and protection of our water resources, and in prudent planning, management and implementation of complementary water use patterns.

It is a frequent misconception that Malaysia is a land with abundant rainfall, where water is ubiquitous and available throughout the year.

The truth is Malaysia experiences periods of excess water as well as periods of droughts, both of which can be major limitations to agricultural production. The latter is due primarily to uneven rainfall distribution and the distinct dry period in between monsoons. Despite the abundance of water at certain times of the year the need for water budgetting should not be ignored. Indeed, water budgetting should be emphasized in view of the increased industrial, urban and agricultural development, coupled with an increasing population growth. Efforts to improve water use efficiency are largely on a local scale. Farms and plantations practise varying degrees of water and soil conservation measures through (i) construction of ridges and terraces, and tillage to reduce runoff, (ii) use of plastic film or organic mulches to reduce evaporation, (iii) weeding, (iv) improving storage and conveyance facilities to reduce seepage, (v) providing an adequate supply of plant nutrients, (vi) controlled irrigation, and (vii) water harvesting. These have been carried out in an *ad hoc* manner in many cases, thus prompting the need to increase research and extension of information on many aspects of irrigation, drainage, water conservation and management, water use patterns and other related fields in the country.

ROLE OF AGRICULTURE IN EFFICIENT WATER USE

Malaysia has a total land area of 329,757 sq. km (or 33 million hectares or 130,000 sq. miles), of which 75% or 247,318 sq. km (97,500 sq. miles) are covered by forests and swamps and about 13.2% or 43,528 sq. km (17,270 sq. miles) by agricultural crops consisting primarily of rubber, oil palm, coconut, rice, fruits and cocoa. The rest of the land is occupied by cities, villages and towns. It is the agricultural, forest and swamp lands that receive a major portion of the 84.3 million ha-metres of precipitation that falls on Malaysia each year. Prudent management and proper use of this land have a tremendous influence on the quantity and quality of the water that flows into our streams, lakes and rivers.

The large water supply that 'runs' off the land is of primary concern to industry, urban use, recreation, fish and wildlife. Where and when it falls, and what happens after it falls on the earth, are of importance to our economic well-being and health. In this context, agriculture has two important roles, viz.: (i) to protect the amount and quality of runoff water through proper land use and management, and (ii) to maximise, where feasible, the use of water through careful and efficient agricultural practices (*i.e.* reduce wastage). Both these roles are important in influencing the over-all economy and health of the nation's population.

MALAYSIA'S WATER BUDGET

Malaysia receives a mean annual precipitation of 2,500 mm of rainfall or 84.3 million ha-metres of water. When rain falls, a portion of it evaporates from the ground or vegetation; another portion infiltrates into the soil, and the rest flows over the land surface as runoff. It is estimated that about 60% or 50.6 million ha-metres of water or the equivalent of 1,500 mm return to the atmosphere via evaporation and transpiration. The remaining 1,000 mm or 33.7 million ha-metres of water enter our streams, lakes, rivers and ground (as ground water). This amount constitutes our available aggregate water supply. About 11.7 million ha-metres of water flow as surface runoff while the rest, 22 million ha-metres of water infiltrates into the ground. A major part of the water that infiltrates into the soil (about 16.9 million ha-metres) is retained as soil moisture which is essential for plant growth, while the rest percolates down to the water-tables.

The available aggregate water supply per day works out to 0.09 million ha-metres (913.5 billion litres/day) or around 60,930 litres/person/day. The estimate for the United States of America is 31,500 litres/person/day. Only a fraction of this value is actually used for agriculture, industry and municipalities.

Agriculture has a vital role to play in maximizing the efficiency of the water budget that is lost through evapo-transpiration (about 50.6 million ha-metres) mainly via secondary forest, jungle, non-irrigated cropland, pasture and land with vegetation of little or no economic value. If all this land is producing at peak efficiency, then the 50.6 million ha-metres of water that are needed for evapo-transpiration are said to be wisely used. If they are not, then million of ha-metres of valuable water are not contributing their maximum to the growing needs of our rapidly expanding population. On cultivated land, factors that affect water loss through evapo-transpiration include proper balance of plant nutrients in fertilizers, proper and effective application of fertilizers, use of genetically superior seeds, proper and effective mechanization for planting and tillage, proper crop protection measures, and others. In general, the more adequately the influencing factors work together to approach peak efficiency, the more wisely used will be the water needed for evapo-transpiration; the less efficiently they are used, the more water will be wasted.

In jungle, **belukar**, and on land with non-economic or low-value vegetation, the low-value plants have some ecological value for providing food or cover for birds, fish and wildlife. While the need for plant conservation is necessary and important, nevertheless replacing them where possible with more valuable crops would make for more efficient use of our total water supply.

The 60-70 percent water lost by evaporation and transpiration, which is often disregarded in water budget studies, is actually the most important to man, as it sustains plant and animal life. It has been estimated, for example, that 1,350 litres of water are required by wheat plants to produce 1.1 kg of bread and 13,050 litres of water are consumed by cattle and used by the forage they eat to produce 0.5 kg of beef. Every phase of the total agricultural industry has, therefore, a key role in maximizing the efficacy of the major portion (60 - 70 percent) of the total water budget through proper and prudent farm techniques and practices.

To this end, the relevant government and private agencies have a role to meet some of the responsibilities of agriculture's strategic water conservation programmes through research, extension and advice on programmes involving moisture, evapo-transpiration conservation, water yield improvement, evaluation of precipitation patterns and frequency, vegetation conversion, flood abatement, drainage, economics of recreation, irrigation efficiency, water treatment, re-use of water and other aspects of water conservation and usage.

Strip-cropping in which alternate strips of close growing crops and intertilled crops are grown in rows at right angle to the direction of slope is also widely practised. It is effective because the close growing crop tends to slow down the water, filter out the silt and permit more time for infiltration.

Water spreading is another method for conserving water normally lost in runoff. It involves the collection and diversion of runoff water from higher land for spreading and storage on levelled cropland in another area.



Drip Irrigation

SURFACE WATER MANAGEMENT

Water conservation practices

If water conservation is to be effected, ways must be found to control evaporation, transpiration and runoff. Research has shown that the best possibilities for moisture conservation are in controlling that portion of precipitation that runs off the land. Control of surface water to prolong retention on the surface and increase the amount entering the soil has been a goal of agriculturists for centuries. Contour cultivation has been effectively used for years to conserve moisture by creating ridges and trenches which temporarily retain water and allow more time for infiltration. The degree of effectiveness of this technique in conserving moisture and reducing runoff depends on soil type, rainfall intensity, rainfall distribution and amount, and steepness of slope.

Land forming which involves rearranging the land surface effectively spreads water uniformly over fields, thus increasing the time for infiltration. Maintaining a good surface soil structure also reduces runoff and enhances infiltration. Practices that encourage good surface soil structure include the use of mulch and incorporation of organic matter into the soil.

Tillage practices designed to maintain optimum surface conditions for high infiltration and minimum runoff have been developed, e.g., minimum, reduced and strip tillage. Reduced tillage is an effective water conservation measure not only because of less soil compaction by farm machinery but also because the rough surface can store more water in the micro-depressions and prolong the opportunity for infiltration into the soil.

Control of evaporation and seepage loss from storage and conveyance facilities is an important aspect of water conservation. Chemicals such as sodium hexamatophosphate have been used to reduce seepage in reservoirs in the United States. Other compounds which show promise as linings for water canals are cationic asphalts, resinous polymers, water repellants (e.g. silicones), butyl sheeting and plastic film.

WATER RESOURCE UTILIZATION

The uneven distribution of rainfall in a country makes it necessary for man to construct dams and reservoirs to collect water from runoff, streams and rivers to be diverted to drier areas or stored for later use. Water is directed for irrigation through a canal network, comprising canals, distributaries, water courses and field channels. Besides the surface water described above, ground water too constitutes a large water reserve for use by farmers. The management of ground water reservoirs requires detailed studies of ground water potential and hydrological formation in selected areas. The underground aquifers (formation or strata within the saturated zone below the ground surface from which ground water can be obtained) are supplemented from sources other than rainfall, e.g., seepage from canals, ponds, tanks, rivers and percolation from irrigated fields. Soil conservation measures, such as contour bunding and gully plugging, aid in recharging ground water.

SOIL-PLANT-WATER RELATIONSHIPS

The soil and plant form a close relationship with each other that affects the movement, retention and use of water. Two properties of the soil, viz., its infiltration rate and water holding capacity, are most important in influencing irrigation. Other important soil properties that affect management of irrigation water are soil texture, soil structure, capillary conductivity, soil profile conditions and depth of water-table.

Soil water is one of the most important components in the soil. It affects intensely many physical and chemical reactions of the soil, as well as plant growth. When rain falls on dry soil, it is distributed around the soil particles where it is held by adhesive and cohesive forces; it displaces air in the pore spaces and eventually fills the pores. When all the pores are filled, the soil becomes saturated and is at its maximum retentive capacity.



Overhead sprinkler system

Water use efficiency (crop yield / evapotranspiration) is influenced by crop and soil management practices. Crop yield can be increased appreciably by management practices which improve water use efficiency through reduction in evapotranspiration by methods described earlier, e.g. (i) selecting plant species that adapt to the environment, (ii) using appropriate planting density, (iii) sowing at the right time when water is available to ensure good germination, (iv) weed elimination, (v) proper pest and disease control, (vi) tillage and (vii) giving adequate fertilizers to increase root development and hasten maturity.

SOIL WATER MANAGEMENT

Drainage

Drainage to remove excess water is important to permit roots to proliferate and penetrate deep into the soil profile. Without proper drainage, the high water-table restricts roots to the upper few centimetres of the soil only and when drought sets in, the soil then becomes too dry to supply the needs of the plant. Drainage is accomplished by surface drainage, subsurface drainage or a combination of the two. In low-lying coastal areas and peat soil, surface drainage is essential for profitable agriculture.

Structure stabilization

One of the most effective ways of maintaining surface soil in a water receptive and retentive condition is to protect the surface from direct sunlight, wind and the impact of rainfall. This can be done by using mulches or chemical soil stabilisers. The latter, usually a polymer, can improve infiltration, slow down evaporation and reduce runoff in a fine textured soil. Synthetic soil conditioners have not been widely used, in spite of its favourable effects on infiltration and water storage, because of the mechanical difficulty of treating deep soil layers, and the high cost of material.

Evapo-transpiration control

Out of the three modes of loss of infiltrated water, viz., (i) evaporation, (ii) transpiration by plants and (iii) percolation, the first accounts for the major part of water loss from agricultural soils. Evaporation is a complex, energy controlled process which is strongly influenced by micro-meteorological conditions (e.g. wind speed, air turbulence, relative humidity and radiant energy) above the soil surface, as well as soil properties (e.g. intrinsic soil factors and adsorptive forces at the liquid - soil interface). Mulching can also reduce evaporation, especially in the top few centimetres of the soil.

Transpiration is a very inefficient process from the moisture conservation view point because less than five percent of the absorbed water is actually used for plant growth. The remaining 95

percent that is evaporated and transpired from the leaves function only to cool the plant. Transpiration can be reduced through the use of antitranspirants, but commercial application has yet to be realized.

IRRIGATION

Irrigation wells

Irrigation wells are classified into (i) open wells, (ii) shallow tube wells, and (iii) deep tube wells. Energy is required to pump water from wells, rivers and canals for irrigation. Pumps driven by fuel-operated engines and electric motors are commonly used to lift water from these water sources.

Both open wells and tube wells are used in Malaysia. Tube wells may be grouped according to the method of construction, viz., driven, jetted and drilled. The first two are relatively shallow and are generally less than 15 m deep. Drilled tube wells extend to deeper aquifers and are constructed using drilling machines.

Irrigation methods

Three general methods of applying water on cropland are surface irrigation, sprinkler or overhead irrigation and subsurface irrigation. The primary objective is to apply water uniformly to the crops, without harm to the plants, at least cost and using minimum water. Irrigation water



Furrow irrigation (Courtesy of Vitapro Sdn. Bhd.)

can be conserved by applying the right amount of water at the right place in the proper time span. The amount to apply at a given time depends on the infiltration characteristics of the soil and by the needs and rooting characteristics of the crop.

Surface furrow irrigation is used on crops planted in rows. It is suitable for most soils except sands that have a high infiltration rate and poor lateral distribution between furrows. Furrow irrigation requires proper land grading such that water can travel the length of the row without stagnating. Furrows of 7.5 - 12.5 cm deep are appropriate for vegetables while some row crops and orchards may require deeper furrows.

In the sprinkler method of irrigation, water is sprayed into the air and allowed to fall on the ground surface. With careful selection of nozzle sizes, operating pressures and sprinkler spacing, the required amount of water to refill the crop root zone can be applied uniformly to suit the infiltration rate of the soil. The method is usually not suited for fine textured soils, e.g. heavy clays, where the infiltration rate is about 4 mm/hour. Land levelling is not essential for irrigation with sprinklers. Surface runoff of irrigation water can also be reduced. This method is best suited to medium and large farms of ten hectares and above. Fully portable units are available for smaller farms. Although this system has many advantages, some of its limitations include (i) strong wind may distort pattern and cause uneven water distribution, (ii) ripening soft fruit must be protected from the spray, (iii) a stable water supply is necessary and (iv) high power requirement (from 0.5 to more than 10 kg/sq. cm pressure).

The most common type of sprinkler is the rotating head system. It consists of a head with one or two nozzles which rotate slowly by the action of water passing through. The heads are placed on riser pipes fixed at uniform intervals along the length of the lateral pipes which are usually laid on the ground surface. They may also be mounted on posts above the crop height and rotated through 90 degree to irrigate a rectangular strip. For larger areas a portable system can be used; when a strip of land is irrigated, the pipe and sprinklers are moved to the next strip of land. The cost of setting up a system ranges from 5,000 to 8,000 ringgit per hectare. For nurseries, a jet or mist system which gives fine circular sprays of water is commonly used.

Drip or trickle irrigation is one of the latest methods of irrigation which is becoming increasingly popular. Through this method of frequent watering and with a volume approaching the consumptive use of the plants, conventional losses through deep percolation, runoff and evaporation are eliminated. Emitters or drippers are placed at regular intervals along the small diameter plastic lateral lines (usually 13 mm diameter) to deliver water near the base of the plant. Several types of drippers are available ranging from a simple 0.9 mm microbore tube to more sophisticated pressure compensating drip emitters. Operating pressures of 0.15 to 1 kg/sq. cm are used and filters are necessary to avoid blockage. Water is applied slowly at a constant rate of two litres/hour to keep the soil moisture within the desired range of plant growth.

The initial high cost ranging from 7,000 to 20,000 ringgit per hectare, depending on the length of tubes and number of emitters, is the main limitation to large-scale application. For widely spaced crops like fruit trees, the system may be more economical than sprinklers. Crops like papaya, guava, durian and various vegetables have been found to respond well to drip irrigation. There is considerable savings in water of up to 30-50 %, since the water could be applied almost precisely to the root zone. Like the sprinkler method, drip irrigation permits the application of fertilizers through the system. This practice is called fertigation.

IRRIGATION FOR SOME CROPS

As recent as fifteen years ago, it would have been a rare sight to observe overhead sprinkler or drip irrigation systems in the country, although the open canal system of irrigation was already widely used in paddy areas. The overhead sprinkler system is now a common sight in many fruit, vegetable and ornamental farms. In the highlands, the system is widely used for vegetables grown in the open e.g. cabbage, tomatoes and sugar peas, as well as for ornamentals grown under plastic shelter e.g. chrysanthemums and roses. In the lowlands, the system is a common sight in many farms, especially for crops such as chillies, cucumber, crucifers, kangkong, maize, brinjal, orchids and others. The overhead sprinkler system is also popular in oil palm, cocoa, rubber, fruit and ornamental nurseries. The over-all popularity of the overhead sprinkler over the drip system is mainly because of its lower cost; the cost of setting up the former system ranges from 5,000

to \$8,000/ha while the latter system costs between \$7,000 to \$20,000/ha depending on the length of tubes and number of emitters. Drip irrigation is used mainly for field planted tree crops such as durian, mango and papaya, especially during crop establishment.

In some low-lying areas where the water-table tends to be high, e.g. in ex-paddy areas, furrow irrigation is practised for short-term crops such as leafy vegetables and rockmelon. This method is popular in certain areas in Malacca, especially among the rockmelon farmers. The advantage of this method is its low capital outlay and operating cost.



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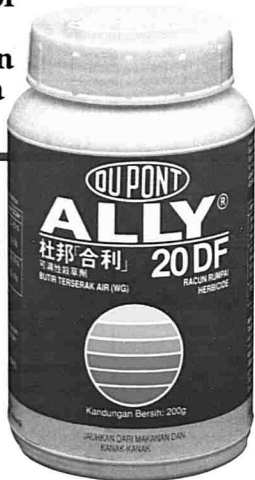
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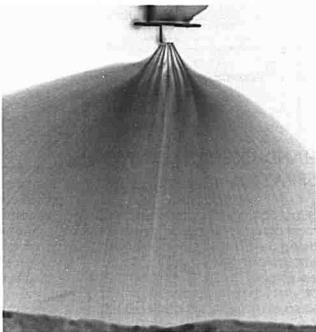
The cost of research and development (R and D) leading to commercialization of a new pesticide has increased dramatically in the last 30 years. The average development cost per marketable product increased from about US\$1 million in 1956 to about US\$30 million in 1987. New compounds tend to be complex, requiring many more synthetic steps and costly production facilities. Government requirements to demonstrate the safety and efficacy of these new products are also becoming more stringent. This is inevitable as the world becomes more conscious of the dangers of pesticide usage. Malaysia is no exception. The Pesticide Act, 1974 was implemented in 1981. Any pesticide manufactured, formulated, packed and sold in Malaysia has to be registered with the Pesticide Board.

The general trend in pesticide usage is an increase especially with herbicides. Insecticides will remain a major input in agricultural production. Pesticide resistance and toxicity, and their impact on health and ecology will remain the main issues of concern. Meanwhile, the rising labour costs in agriculture especially in the areas of pest, disease and weed management will increase the need to improve the efficacy of pesticide usage for this purpose. It is safe to assume that the needs for pesticide usage will continue to increase in the foreseeable future. In view of this it is envisaged that there will be more efforts made to maximize the benefits of pesticide usage and minimize the risks involved.

While a great deal of R and D effort is concentrated on the development of new compounds, formulations, control strategies and integrated methods, there is limited attempts aimed at improving present application methods and developing new ones. The design of the knapsack sprayer has remained relatively unchanged since it was first manufactured in the late nineteenth century. With this sprayer, it is often assumed that the potent pesticide will find its way to the target pest. This, however, is usually not the case as no more than 20% of the pesticide leaving the sprayer actually hit the target pests or area. Most of it is lost through evaporation and drifts. Farmers usually associate spray efficiency with pesticide efficacy rather than with the sprayer effectiveness. It is increasingly clear that a proper and effective use of sprayer, in terms of nozzle type and size, pump pressure and direction of spray, will contribute significantly to increased efficacy of

the pesticides and thus reduce agricultural production cost substantially.

In the management of pests and diseases, most pesticides are applied as sprays diluted in water. The application of chemicals is often carried out when weather and soil conditions permit, rather than in relation to pest infestation levels. Another limitation associated with this operation is the availability and transportation of water especially at smallholder levels.



*Droplets delivered from an electrodyne sprayer
(Courtesy of ICI Agrochemicals (M) Sdn. Bhd.)*

The development of pesticide and its subsequent marketing in more advanced agricultural countries tend to be targeted at large farms which use tractor powered or aerial sprays. The increasing cost of pesticide application and concern on environmental pollution in these countries have prompted more evaluation on the methods of pesticide application. In the tropical countries, the problems faced by pesticide users are different as the equipments used are portable and usually hand-operated. These equipments are commonly used by smallholders in whose farms a wide range of crops may need treatment.

In this chapter, issues related to the methods of spraying and the equipments used in relation to the socio-economic and climatic conditions are reviewed and discussed.

Table 1. Types of pesticides spray equipment owned by smallholder farmers in Malaysia

Crop	Location	Year	Percent of farmers owning	
			Manual knapsack	Motorized sprayers
Rice	Muda area	1983	58	none
	Muda area	1985	72	8
	Tg. Karang	1982	54	30
Tobacco	Kelantan, Terengganu, Melaka and Kedah	1977	62	none
	Kelantan	1984	100	none
Vegetables	Cameron Highlands	1987	80	20

HAND-OPERATED HYDRAULIC SPRAYERS

Hand-operated or compression sprayers are the most common pesticide application equipments being used. This is especially so among the smallholders, who usually have only one spraying equipment (Table 1). There are some 40 different brands of the knapsack sprayer in Peninsular Malaysia, ranging in cost from 30 to 170 ringgit per unit. The low cost sprayers are locally made while the better sprayers which are more costly are generally imported. The local sprayers are of conventional design with the pressure chamber outside the tank. They are made from brass metal sheets, either galvanized or coated with a resin material or firm stainless steel. The imported sprayers have spray tanks made of plastic or aluminium with piston or diaphragm pumps. These plastic tanks are made from high-density polyethylene or polypropylene, incorporating an ultra-violet (UV) light inhibitor material for durability. These types of pump are usually molded to fit the contour of the operator's back and as such they are more comfortable to carry over time. This is made more so by its lighter weight.

The proportion of spray, from the pump, reaching its target is affected by the droplet sizes and climatic conditions. Hydraulic sprays contain a wide range of droplet sizes where the largest droplets may be 1,000 times larger than the smallest.

These larger droplets are likely to bounce off the foliage and eventually lost to the soil. The smallest droplets, on the other hand, are prone to evaporation. The efficacy of pesticide is thus reduced because of inappropriate droplet sizes. The average droplet sizes decrease with an increase in pump pressure and increase with a larger orifice in the spray nozzle. Thus, in order to avoid larger droplets in sprays, it is desirable to maintain a pump pressure of at least one bar. This is easier to do in the better sprayers which have pressure regulation. Application efficiency can be improved by selecting appropriate nozzle to produce the optimum droplet size. Some indications of the various droplet sizes in relation to different target are presented in Table 2. For herbicides, larger droplets (> 250 μm) are essential to reduce the risk of drift, but the smaller droplets are often more effective.

Table 2. Optimum droplet size ranges for selected targets

Target	Droplet size (μm)
Flying insects	10 - 50
Insects on foliage	30 - 50
Foliage	40 - 100
Soil (and avoidance of drift)	250 - 500

The orifice of the nozzle tip is constantly eroded by chemical action and abrasion. This causes an increase in the liquid flow rate, droplet size, and a change in the spray pattern.

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As a result, the volume of pesticide discharged is unnecessarily increased, and hence wastage occurs. Besides, the efficacy of the pesticide is also reduced because of the bigger droplet size. Thus, nozzles should be cleaned after use to reduce corrosion and should be replaced regularly for spray efficiency.

POWER-OPERATED HYDRAULIC SPRAYERS

There are various designs of power-operated sprayers, ranging from hand-carried engine-driven pump units to larger self-propelled sprayers. The smaller units have a two or four-stroke internal combustion engine with pump which may be carried as a knapsack. Larger sprayer may be mounted on a tractor with the pump driven by the power take-off (PTO) or self-propelled pump engine.

Among the motorized sprayers, the knapsack mistblowers are the most common. These plastic tank sprayers are powered by light weight two-stroke, 35 to 70 cc engines. Sprayers with recent designs are fitted with electronic ignition to ensure smooth running. These mistblowers can be converted for dispensing dry formulations like dusts and granules by removing the spray hose from the tank and inserting a wider tube to feed particles down from the tank into the airstream.

The dust is dispersed along the length of a tube with a series of holes. In Malaysia, this is referred to as "vinyl tube duster", "vinyl pipe duster" or "motorized duster" and is commonly used to combat infestation of plant hoppers in a paddy field. Some paddy farmers even use the mistblowers to disperse paddy seeds in direct seeding. As the price of each unit is high, most paddy farmers do not own these machines. Instead, they borrow them from the agricultural authorities at a nominal fee or employ contractors who use these machines to do the spraying. The Muda Agricultural Development Authority (MADA) in Kedah, for instance, has more than 400 units of motorized mistblowers available for loan to farmers. These sprayers are also used in oil palm and cocoa plantations, and fruit orchards for pest and disease control because of their versatility.

Another type of power-operated sprayer is the fogging machine. When a pesticide dissolved in oil is injected into a hot gas and vaporized, the condensation of the oil when discharged into the atmosphere forms a dense fog. This technique of pesticide application has been used in Malaysia since 1955 for mosquito control, and for pest control in warehouses, perennial crop plantations and paddy farms. The major drawback of this technique is the limited range of suitable pesticides that can be effectively applied. Other shortcomings are (i) the droplet



*A trailer mounted mechanize spray system - The ACM SS-A1
(Courtesy of Agricultural Chemical (M) Sdn. Bhd.)*



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*Dusting of insecticides using a motorized mist blower
(Courtesy of Dr. Lim Guan Soon and Dr. Peter Ooi)*

deposition on tall trees is poor, and (ii) the technique is not effective when there is strong wind movement. Nevertheless, it has been found to be useful in controlling larger areas of paddy infested with rice bugs, the mirid pests in cocoa and some foliar diseases in rubber.

These spraying systems may be mounted onto tractors and driven by the tractor PTO. Most tractors have a standard three-point linkage on which the sprayer with spray booms is mounted. These fully automatic systems have high work rates but are unsuitable for fields with uneven terrain. They may be adapted by fitting two to four lances on long rubber hoses for tree spraying in estates. Alternatively, the sprayer may be mounted on a trailer and drawn by a tractor or Land Rover. This system consists of a motor and power pump, a tanker and sprayer lances and nozzles connected to 100-200 m long hoses. The work rate of this system is lower but it has been found to be more practical.

CONTROLLED DROPLET APPLICATION (CDA)

This form of pesticide application emphasizes the importance of correct droplet size and spray uniformity for effective control. A promising method of controlling droplet sizes within narrow limits is by the use of spinning discs with which the droplet size may be adjusted by varying the rotational speed. These hand-carried, battery-operated spinning disc sprayers have been most extensively used in Africa where water is scarce. The sprayers are often made of plastic and lack the durability for rough farm handling. As the spinning disc uses a considerable amount of battery power, its operational cost can be appreciable. Concern has been expressed on the increased hazards to spray operators as the sprays contain higher concentrations of active ingredients. These sprays can be very hazardous when inhaled by sprayer operators if they are not

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*Aerial application of insecticides
(Courtesy of Dr. Peter Ooi)*

careful whenever there are sudden changes in wind directions, especially in open fields. In the estates, CDA applications of herbicides for weed control offer considerable advantages over conventional knapsack sprayers, particularly in having uniform spray droplets, and increased efficiency in chemical and labour usages. There are, however, several disadvantages in using CDA applicators. Droplets from CDA applicators are very fine and are highly subjected to wind drifts. It has been observed that a wind speed of as low as four kilometres per hour can cause lateral displacement of CDA droplets of up to 20 centimetres. The fineness of CDA droplets renders them barely visible and hence the supervision of this type of operation is more difficult. The cost of operation for CDA applicator is very high because the high consumption need for battery power by the machine. This has limited the adoption of CDA applicator as a spray equipment especially by the smallholders.

Control of spray droplet movement has been improved by using an applicator that can electrostatically charge the sprays. This new technique uses a strong electric field to charge spray droplets so that they will be deposited evenly over the upper as well as the lower leaf surfaces of the target plant thus reducing loss to

the soil and through wind drift. The main disadvantages, however, is that most of the charged spray is deposited on the nearest on earthed surface, usually the top of plants. Penetration of the spray to the lower leaves is poor. The pesticide to be applied through this equipment needs to be specially formulated for it to be dispensed through the electrodynamic nozzles.

AERIAL SPRAYING

Aerial application of pesticide is especially critical when there are extensive outbreaks of pest or disease infestation which have to be controlled very quickly. Fixed wing aircrafts have been used to control coconut leaf moth and oil palm bagworms with considerable effectiveness. For the control of rice brown planthopper, the use of helicopter for this purpose has been found to be more versatile because where necessary it can avoid obstacles such as trees, high tension wires and houses near paddy fields. However, its effectiveness has been found to be variable depending on field condition. It is more effective in fields where paddy plants are six to eight weeks old when the plant canopy is still sparse. It is generally more expensive to use helicopter for aerial spraying. But it has certain advantages over the fixed wing aircrafts. The helicopter is



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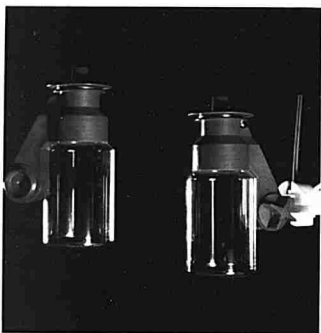
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able to land for reloading and refuelling in a nearby field. Sprays can be directed at the heavily infested areas. With their better manoeuvring ability, helicopters are more suited to operate in hilly areas. The strong downwash created by the rotors enable better droplet penetration into the crop canopy.

The major problem associated with aerial spraying is that the extensive spray drifts give rise to greater hazards. Droplets are released at a greater height above the crop, thus with evaporation and wind drifts these droplets can be carried far beyond the target area. As a result, substantial environmental pollution occurs. Aerial spraying, because of its extensive spray coverage is non-selective in its action, thus killing pests and natural enemies over a larger area.

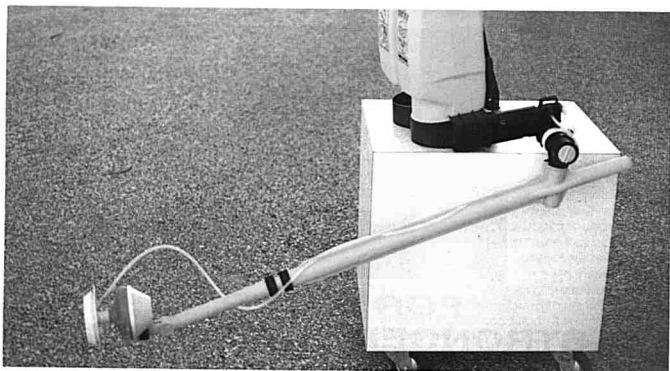
USE OF SPRAY EQUIPMENTS

The lever-operated knapsack sprayer will continue to play an important role in Malaysian agriculture. This is because of its relatively low cost per unit and ease of use. These equipments besides being simple to operate and maintain, are suitable for small scale spraying operations. With the subsidy scheme on this type of sprayers provided by the government, ownership of these sprayers are likely to further increase. Most farmers, however, still lack the required skills to



*An electrodynamic sprayer - The Electrodyn
(Courtesy of ICI Agrochemicals (M) Sdn. Bhd.)*

spray their crops effectively and avoid unnecessary body contaminations. They also lack knowledge on sprayer maintenance resulting in poor pesticide spray. As a result, their pumps tend to break down very quickly and the repairs seldom restore them to their original state. The result is that there is an increased tendency for the sprayer operators to be contaminated by sprays.



*The BIRKY 286 - ULV and LV spinning disc sprayer
(Courtesy of Ciba-Geigy (M) Sdn. Bhd.)*

There is increasing appreciation on the need to improve the efficiency of spray operation through better spray equipments. For this purpose, "sprayer clinics" have been set up where farmers can obtain advice and training on pump operation and maintenance. With this, it is envisaged that there will be better use of knapsack sprayers by smallholder farmers.

Among the motorized applicators, the demand is not expected to increase substantially because of the high capital and operational cost. These equipments are mostly used by vegetable, cocoa and oil palm growers only because of higher returns from their farms. Any increase in the use of this type of sprayers is likely to come only from the public sector agencies, e.g. Department of Agriculture, FELDA, FELCRA, RISDA and other agricultural implementation agencies.

The spinning disc sprayers have potential to be adopted, both by smallholder farmers as well as by the estates. There is, however, still the need to reduce its operational cost especially in respect to the high demand for battery for power. Besides, the durability of the equipment also needs improvement and the range of pesticides with the appropriate formulations also needs to be expanded.

In the estates where more than 30% of the work force is used for weed control, the use of CDA applicator can be more cost effective if the necessary precautions are taken. This is brought about by a reduction in spray volume which means lesser labour requirement. Low volume spray or application also means fewer problems associated with collection and water transportation.

Pesticides will continue to be needed in crop protection. In the future, improvement on the efficiency of pesticide use should look beyond the efficacy of the chemicals *per se*. There will be the need to improve the use of lower volumes, particularly ultra low volume (ULV) sprays and the use of nozzles which will produce narrower range of droplet sizes. The provision of precise information on efficient pesticide use and the training of operators on this aspect will contribute significantly to improved pesticide efficacy. Pesticide application technology is an important issue for people involved in crop protection to address, both from the stand points of improving pesticide efficiency and reducing environmental pollution arising from it.

THE MAPA WAY

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HERBICIDES

TRADE NAME	COMMON NAME	A 1% W/W
MAPA Sodium Chlorate	Sodium Chlorate	99%
Multipion 850	Dalapon sodium salt	85%
Zidan D	2,4-D Butyl ester	45%
MAPA Diuron 800	Diuron	80%
Supermine 80	2,4-D Amine	48%
Supermine Extra	2,4-D Amine	60%
Delta-Quat 88	Paraquat dichloride	23%
Sangat-Kuat 88	Paraquat dichloride	23%
Multiquat 99	Paraquat dichloride	25.3%
Star-Quat 77	Paraquat dichloride	23%



INSECTICIDES

TRADE NAME	COMMON NAME	A 1% W/W
Multiphos 600	Methamidophos	50%
Endotox 555	Endosulfan	32.9%
Krotofos 60	Monocrotophos	55%
MAPA Malathion 84.3	Malathion	84.3%
Dimexion 400	Dimethoate	38.5%
Tritex 950	Trichlorfon	95%
Cameron 50EC	Phenthoate	50%
Lindane 20EC	Gamma BHC	20%
Carbacide 85	Carbaryl	85%
MAPA Diazinon 60	Diazinon	60%
Hoppergone	BPMC	50%
MAPA Malathion 57	Malathion	57%
Knockout M57	Malathion	57%
Kilsect 200	Permethrin	20%

FERTILIZERS

TRADE NAME	COMMON NAME
Foliar NPK	15-15-15 (For general purpose)
Super Nitro-K	20-6-20 + T.E. (For fruiting)
Super-Plus	18-32-18 + T.E. (For flowering)
Hurnid Acid	15% Liquid
Harvest PhosHi P + G.A.	3-17.5 + T.E + G.A.
CABY	Calcium, Boron
Micromate Boron 100	Boron (Granular form)
Micromate Special Mix	Ca, Mg, Zn, Fe, Mn, Cu, B, S.
Total 5-20-2 + T.E.	Special granulated compound
Zinc Starter	Zinc

FUNGICIDES

TRADE NAME	COMMON NAME	A 1% W/W
Pipterox 870	Copper oxychloride	87%
Wipeout M80	Maneb	80%
MAPA PCP	Sodium Pentachlorophenate	86%
MZ Special	Mancozeb	80%
Sulfio 5F	Sulfur flowable	52%
Topcide M70	Thiophanate-Methyl	70%

MISCELLANEOUS

TRADE NAME	COMMON NAME	A 1% W/W
MAPA Zinc phosphide	Zinc phosphide	80%
Sluggo M5	metaldehyde	5%
IBA Rootmone	IBA + Adjuvant	0.2%
Nature Oil	herbicide adjuvant	97%
Sprayboom	Insecticide adjuvant	85%



Ditaja Oleh
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Lot 10798, Leboh Raya Petas, Pandamaran Light Industrial Area,
42000 Port Klang, Selangor. Tel: 3694623 Fax: 3412171



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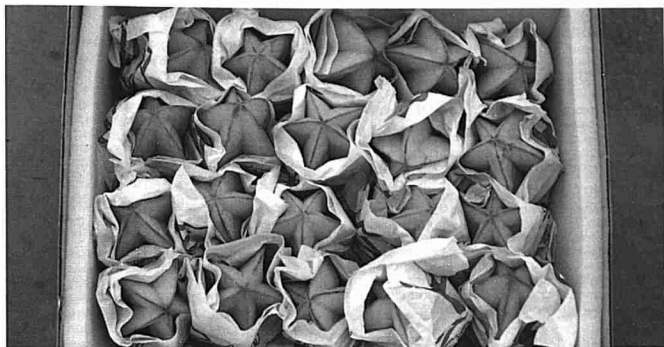
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Starfruit packed in corrugated fibreboard carton

In Malaysia there is increasing interest in export oriented production of fruits and vegetables. With this there is also the realization that inappropriate postharvest handling of such produce can result in huge losses. Thus, more emphasis should be given to improve postharvest crop handling. It has been reported that 25 to 80% of the fresh fruits and vegetables produced are lost through improper postharvest handling. In the developing countries, especially those in the tropical region, the postharvest crop losses can assume considerable socio-economic importance. In the developed countries, such losses are no exception and have been found to be as serious.

The prices of fruits and vegetables increase very significantly between the farm gate and the market place. In view of this, the economic consequences of wastage at any point along this chain can become very serious. Therefore, it is obvious that a reduction of postharvest losses will allow better quality farm produce to be made available more frequently and at reasonable prices. This will be most welcome by consumers and also be more profitable for the producers.

A proper appreciation of the etiology of postharvest losses of fruits and vegetables will form the basis for the formulation of the required

postharvest handling management of these produce. This mainly involve the slowing down of the rate of respiration of the produce, the control of diseases, packaging and storage.

Proper postharvest handling can reduce the rate of deterioration of the produce, thus extending the storage life of the crops. However, the inherent quality of the produce at harvest cannot be improved. There are a number of factors which affect the quality of fruits and vegetables before and after harvesting. As such, effective postharvest handling entails the understanding and integration of various technologies and areas of knowledge. These can best be elaborated under the preharvest and postharvest stages of the crops.

PREHARVEST MANAGEMENT

There are two major groups of preharvest factors affecting the quality of fruits and vegetables after harvest, viz., environment factors and cultural practices. The grower has little or no control over environmental factors except for the selection of the crop and the site. However, if hydroponics or soilless cultivation is used for crop production as in greenhouses, the environment factors can be regulated to a

certain extent. The more important environment factors are temperature, light, rainfall and wind.

Environmental factors

Temperature

The most favourable temperature for the growth of plants is between 5 and 40°C. The temperature of the environment in which a plant grows affects not only its crop yield but also its maturation rate and its quality at harvest.

The effect of temperature on accumulation of a particular chemical constituent in the crop depends on the optimum temperature required for its synthesis. Higher vitamin B content is found in cabbages at 10 to 15°C than at any other temperature. Vitamin C is higher in tomatoes grown at 26°C than at 17°C. At 35°C, tomatoes have higher acid and solid contents than those grown at lower temperatures.

In the lowlands, tomatoes do not develop a red colour properly because the optima temperature range for the colour development is between 16 to 21°C which can only be found in the highlands of Malaysia. Instead, beta-carotene accumulates and this gives the ripe fruits in the lowlands a yellow-orange colour.

Puffing of tomatoes (air spaces in locules) is attributed partly to high temperature during the growing season. Fruits and vegetables become soft, discoloured, collapsed and eventually dry. High temperatures promote high transpiration rates and fruits harvested during hot days are apt to be less turgid compared with those harvested during cool days. As such they are less subject to physical damages or even to attacks by microorganisms.

Light

Tomato fruits not exposed to light are generally deeper in colour and have more solids and less acids. The deeper colour of tomatoes is due to the fact that the temperatures in the shaded portions are lower and hence lycopene production proceeds normally. Fruits from less dense planting are generally sweeter than those from denser planting.

Wind

Wind velocity strong enough to rub fruits against twigs may result in scarring as in mango and guava. This occurs more often in young trees

planted in open fields. When the wind velocity is much stronger, leafy vegetables would have more physical damage.

Cultural practices

Irrigation

Almost every plant process is affected directly or indirectly by the water supply. Within limits, metabolic activity of the cells is related to their water content. Thus, reduction of water below some level is accompanied by changes in the anatomy and the composition of the plant.

Generally, when plants are adequately supplied with water during its growing season, the vegetables or fruits produced will be of superior quality. The edible plant parts are larger and may mature earlier. Maturation is the last stage of a chain of events occurring during the growth of the plant and water supply may affect the quality through its effects on some of the earlier growth stages. In fruits and vegetables where juiciness is not a desired characteristic, frequent irrigation especially towards the end of the growing season may result in poorer quality.

Fertilizer application

Nitrogen, phosphorus, potassium and calcium have important influences on fruit size and quality. Many of the physiological disorders apparent at harvest or soon after harvest are also associated with their deficiencies. In tomato, ripening disorder, ribbed and hollow fruits are due to a deficiency in potassium; blossom-end rot is due to a deficiency in calcium. In cabbages, "bursting" is due to excess nitrogen, and a deficiency in manganese causes lack of heading. In cucumber, under-developed fruit end is due to a deficiency in potassium and the bottle-neck shape of cucumber is due to a deficiency in nitrogen. Shrivelling of kernels in sweet corn is due to a deficiency in nitrogen. In papaya, bumpy fruits are caused by boron deficiency.

Pesticide application

Many of the chemicals applied to the plant before harvest affect the subsequent quality of the produce. Plants require regular sprays with the appropriate fungicides and insecticides to ensure that the produce is not infested with pests and diseases during the developmental stages. Produce infested by pests and diseases are of poor quality and have lower cosmetic appearance.

HARVESTING

Harvesting index

Two distinct terms can be distinguished in defining maturity, viz., physiological and commercial maturity. The first is related to a particular stage in the growth and development of a crop while the latter is concerned with the desired end use of the produce by the consumer. A papaya fruit for example is physiologically mature when it shows yellowing on the fruit surface. It can also be commercially mature and ready for harvest at the green stage if desired as a vegetable.

Physiological maturity

A fruit or vegetable passes through three major physiological stages after germination, namely growth, maturation and senescence. Their final size and volume are a result of cell division and enlargement during the growth phase. Accumulation of sugars, starch and other reserve materials become the predominant activities in climacteric-type fruits and storage organs during the maturation stage. A fruit is said to be of the climacteric type if it shows a sudden upsurge in the respiration rate and then a decline during ripening. If there is no respiratory peak then the fruit is said to be of the non-climacteric type. Senescence marks the end of the development in the life of a fruit or vegetable. In climacteric fruits, ripening signals the onset of the senescence process. Maximum desirability of the product is attained during the ripening phase which is accompanied by a development of flavour, odour, colour and textural characteristics. Some examples of local climacteric fruits are banana, chiku, papaya and mango.

Commercial maturity

This may signify any stage of a fruit or vegetable during development and senescence depending upon the intended use of the product. The various indices of maturity are more often based on commercial rather than physiological maturity. The physiological stage of the crop is more important as far as the storage life and quality of the fruits are concerned. Since the quality of fruits and vegetables can no longer be improved after harvest it is necessary that they should be picked at the proper stage of maturity. Harvesting too soon will give rise to fruits and vegetables of poor

quality and irregular ripening although they may keep longer in storage. On the other hand, picking beyond the optimum stage of maturity renders them unsuitable for long distance shipments due to rapid ripening change and increased susceptibility to decay. The following time frame are useful guides for determining the maturity indices of the following crops:

Emas banana	Seven to nine weeks after flower emergence
Golek mango	12 weeks after fruit set
Harumanis mango	13 weeks after fruit set
Malgoa mango	19 weeks after fruit set
Rambutan	15 to 18 weeks after fruit set
Taiwan guava	19 weeks after fruit set
Kampuchean guava	15 weeks after fruit set
Papaya	Trace of yellow appearing on the skin at the apical end
Asparagus	Spears at 20-25 cm above ground
Cabbage	When the head is firm with its colour changing into a lighter shade of green. Cracking of leaves and bulging indicate over-maturation
Sweet corn	When the kernels are in milk stage. This is determined by pushing the thumb nail into the kernel to test for milky exudates. Other indications are browning of the silk and plumpness of the core.



Banana packed in corrugated fibreboard carton

Fruits and vegetables are living things and they continue to be so after harvesting. Their metabolic activities progress and the physiological systems which were present when they were attached to the plants are also maintained. A characteristic feature of fruits and vegetables is that they respire by taking in oxygen and expire carbon dioxide and heat. At the same time they also transpire and in the process lose water.

When they were attached to the plants, these losses are replaced with water, photosynthates and minerals contained in the cell sap. Since respiration and transpiration continue in the fruits and vegetables after harvesting, the losses of water and respirable substrates have now got to come from the reserves of these produce. Since these losses are not replenished anymore, the deterioration of these produce will set in and their shelf-life will be reduced. The rate at which these produce will deteriorate will vary from fruit to fruit and vegetable to vegetable.

To extend the storage life of fruits and vegetables, the most common approach is to reduce the rate of respiration and transpiration of these produce. Fruits and vegetables are at ambient temperature which is about 30°C on the average. At this temperature, the respiration of the produce is very high and hence their storage life will be short. It is a good practice to harvest in the morning when the temperature is lower, hence a lower respiration rate of the produce. However, the morning harvesting may not be possible for large farms. In view of this, the most practical approach is to practise rapid cooling of the produce as soon as they are harvested.

Cooling

This refers to the cooling treatment before shipment, storage or processing. It includes cooling the produce rapidly and within 24 hours of harvest. Some of the common cooling methods are (a) shed cooling, (b) pressure cooling, (c) icing, (d) hydrocooling and (e) vacuum cooling.

Shed cooling

In Malaysia, it is still a common practice to harvest the produce early in the morning, e.g. leafy vegetables, or during the later part of the evening. The produce is then taken to a shed (preferably with atap roof) where it is left to cool

before despatching to the market. Unfortunately, it is also a common practice to see produce being left along farm roads, in the blazing tropical sun, while awaiting to be loaded for despatch to the market.

Pressure cooling

This method of cooling is carried out in an enclosed area where forced-air is used. It is commonly adopted in commercial cooling rooms in Malaysia. Produce meant for cooling is stacked on shelves in the cooling rooms after which it is shifted to cold rooms for storage. This is the most common method of cooling practised in Malaysia.

Icing

Vegetables are commonly cooled by this method. Flaked ice is arranged in layers and in between the vegetables are slotted in. Besides cooling the vegetables, the water from the melting ice also helps to maintain the turgidity of the produce.

Hydrocooling

This method makes use of cold water to cool the produce. Cold water is applied either as a spray or contained in a large vessel for the produce to be immersed. It is practised only on a small scale.

Vacuum cooling

It is used when fast cooling is required on leafy vegetables, e.g. lettuce. The method requires a large vacuum chamber and is expensive. It is not practised in Malaysia.

Waxing

Waxing of fruits is carried out for the purpose of reducing water loss, and therefore the rate of shrivelling and of improving the appearance. The rate of water loss can be reduced by 30-50% under commercial conditions, especially if the stem scar and other injuries are coated with wax. The wax formulation used also contains fungicides and inhibitors of senescence, superficial scald and sprouting. Following the application of wax, the produce is dried and polished. Examples of fruits and fruit-vegetables waxed are cucumber, tomato, passion fruit, banana, apple and oranges.

Postharvest diseases and their control

Some fresh fruits and vegetables are already visible with diseases when harvested. Examples of diseases that occur in the field and which adversely affect the marketability of the produce are canker and scab of citrus fruits. Other freshly harvested fruits and vegetables may appear healthy but actually carry latent infections that further develop after harvest and the characteristic disease symptoms may appear much later during storage or in the market. There are still other diseases that are initiated during or after harvest by certain fungi and bacteria which penetrate the produce at harvest times or soon after harvest.

The biggest single cause of postharvest loss is decay due to pathogenic fungi and bacteria. Bacterial soft rot caused primarily by *Erwinia* species accounts for approximately 30% of postharvest losses in vegetable crops. Several fungi or moulds cause decays and blemishes on a wide variety of horticultural crops. The common postharvest fungal pathogens belong to the genera *Alternaria*, *Aspergillus*, *Botrytis*, *Colletotrichum*, *Diplodia*, *Fusarium*, *Gloeosporium*, *Geotrichum*, *Penicillium*, *Phomopsis* and *Rhizopus*.

The control of a postharvest disease depends on the physiology of the particular host-pathogen interaction. With diseases that start in the field before harvest, spraying is done to reduce field inoculum. Other field practices such as sanitation are also recommended. In postharvest treatment the time of infection and subsequent development of the pathogen must be taken into consideration. Mango anthracnose and other diseases which have their

beginning in the field and carried as latent infections are not readily controlled by superficial fungicides. For these diseases the use of heat treatment or systematic fungicides is more effective. Infections caused by *Rhizopus*, *Aspergillus*, and *Penicillium* that appear during or after harvest can be controlled by the application of fungicide right after harvest.

Packaging

The term packaging refers to the operation of producing packages that are used to contain, protect, identify and sell a product. Packaging materials are made from wood and wood products, lumber, veneer, plywood, paper and paperboard, fibreboard, bamboo, rattan, burlap, jute bags and plastics. The most common packaging materials used at present are the plastics and corrugated fibreboard. The use of paper for packaging is relatively recent, only after waterproof paper has been developed. Some fruits and vegetables which used to be transported in wood containers are now being packed in paper boxes. These include banana, mango, papaya, citrus, avocado, pineapple, melon, peach, head lettuce, carrot, tomato and asparagus.



Bamboo baskets for fruit packaging

Fibreboard cartons are being used for citrus. The old heavy wooden crates are no longer used in international trade except for mandarin oranges from China. Cartons are favoured by most retailers because they have fewer problems of disposal. They can also be recycled.

Avocado and mango are packed in single layer fibreboard cartons of five kilogrammes net weight. It is important that sufficient ventilation



Different type of corrugated fibreboard carton

holes be provided in the carton to prevent overheating. Pineapples used to be shipped in wooden boxes. In recent years fibreboard cartons with internal division have been used. Watermelons are usually packed in fibreboard cartons with cardboard divisions between melons.

Fibreboards are becoming popular for shipping fruits and vegetables. Their light weight make them ideal for air-freighting. Cost of construction is cheap. Fibreboards are also versatile and can be made to various shapes and sizes. It is also easy to print on fibreboard cartons and this is a distinct advantage in the presentation of pictorial illustration of the product and brand names.



Papaya packed for export

The major disadvantages of fibreboard cartons are their poorer stacking strength (in comparison with wood) and their reduced resistance to rough handling. Stacking strength, however, may be increased by the use of extra liners and internal dividers.

Packinghouse operations

The packinghouse is a natural extension of the production process in preparing the produce for marketing. While proper care of fruit and vegetable quality begins in the orchard or field,

its success is mainly insured in the packinghouse. It may be simple or elaborate, depending on the size of operation of the farm.

A typical packinghouse in advanced countries usually comprises a large packing room unobstructed by columns. It may be just a shed with only a table or bench to facilitate sorting. The size is tailored to the maximum quantity of fruits or vegetables that need to be handled in a day. The flow area is usually calculated on the basis of 20 square metres per tonne of fruit for manual handling.



Packinghouse line for mango in Ayr, Australia



Traditional handling of vegetables

The operations inside a packinghouse vary with the produce. The general steps are unloading, pre-sorting, dumping, washing, curing, degreening, hot water treatment, sizing, grading, chemical treatment, drying, waxing, packaging and temporary storage. During these operations every care should be taken to avoid injuring the produce, e.g. bruising which will provide entry points for pathogen and subsequent postharvest disease infection.

Not all the operations listed are done in the packinghouse. Some may be done in the field. Handling is either manual or semi-mechanical. Manual handling is preferable for fragile fruits and vegetables such as strawberries. Semi-mechanical handling may consist of a mechanical unloader in the reception area, manual sorting, mechanical sizing and manual packing. Field packing is more economical as it would lessen handling of the produce and their exposure to high temperatures.

Storage

The primary reason for storing a produce is to be able to keep it for later use in a condition that is as close as possible to that immediately after harvest. There are various methods used in the storage of fruits and vegetables. Refrigeration is the most common and economic method of

storing this produce. By this method, the temperature of the produce is reduced to an appropriate level where the rate of respiration of the produce is reduced. For example, Cavendish banana can be stored at 10°C for one to two weeks, mango at 5-9°C for 2-3 weeks, cucumber at 5-9°C for 2-4 weeks and cabbage at -1 to 4°C for 4-8 weeks.

Modified atmosphere (MA), controlled atmosphere (CA) and hypobaric storage are used in combination with refrigeration. MA storage refers to storing under a condition in which the gases are altered, resulting in an atmospheric composition different from that of normal air. This method is commonly used for the storage of banana. The Pisang Emas is packed in a plastic film bag with sachets of potassium permanganate to absorb ethylene and stored at 14°C. CA storage refers to decreased oxygen and increased carbon dioxide concentrations and this implies precise control of these gases. This method is practised in the storage of pears and apples. Hypobaric storage is a form of CA storage in which the produce is stored in a partial vacuum. Fruit ripening is reduced due to the reduction in the partial pressure of oxygen and for some also to the reduction in ethylene levels. It is an expensive method of storage and is restricted to high value produce like cut flowers.

Transport

Fruits and vegetables for export are transported by land, air or sea. Air transportation is the best because it delivers the produce in a short time after harvest but it is expensive. Sea transport is advantageous because it is cheap but it takes a much longer time.

Fruits for air transport requires lesser packinghouse operations than those using sea transport. In sea transport, refrigeration is usually required. Because of the longer duration in this form of transportation, appropriate measures on postharvest disease management is necessary.

Similarly, land transportation is also cheap when the travelling time takes less than a day or two. Refrigeration may not be required if the transportation time is short. The cooling of the produce is provided by the ventilation around the packages. Transporting the produce during the night is suggested because of the lower ambient temperature.

Ripening of fruits

Edible fruits comprise an important item in human nutrition. Their acceptability becomes even more so when they have attained a state of ripeness. This ripe condition is the consequence of a complex series of biochemical and biophysical processes which transform an unpalatable fruit to one possessing aesthetic and edible qualities.

Ripening is accelerated with the application of 0.1 to 1,000 ppm ethylene at between 20 to 25°C and a relative humidity of 95 percent. The ripening treatment can be done before or after storage. Fruits are transported in the unripe stage and then ripened in the country of the importer as in the commercial ripening of bananas.

SOME CONCLUDING REMARKS

Any entrepreneur who plans to venture into agriculture should pay particular attention to the issues described and discussed in this chapter to ensure that the produce can be of export quality.

The best vegetables are grown and cultivated with the help of new, improved formula AMINA®



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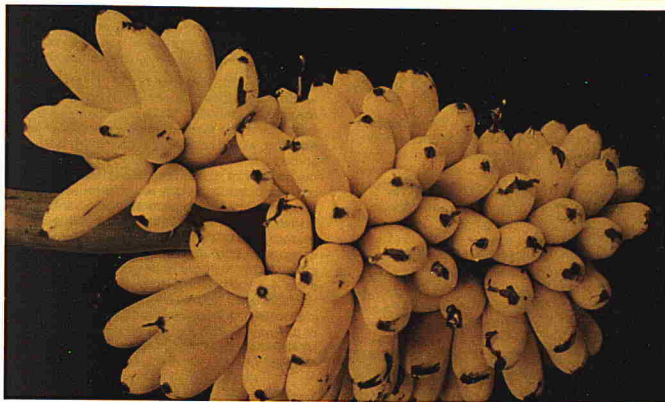
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6. It is absolutely free of unpleasant smell

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Banana (c.v. Emas)

Fruits have come into the limelight of Malaysian agriculture as a result of relatively lower commodity prices experienced by rubber, cocoa and palm oil in the preceding years. There is an increasing anxiety about our overdependency on these plantation crops, and hence suitable crop options are being examined. Traditional plantation agencies, such as Sime Darby Plantations Berhad, Harrisons Malaysia Plantations Berhad, Dunlop Plantations Berhad and Kumpulan Guthrie Berhad, have started pilot fruit planting on a commercial scale. This is in line with the National Agricultural Policy (NAP) which emphasizes the cultivation of food crops. Such a move will contribute to the reduction of our food bill which amounts to a staggering three billion ringgit annually. The fresh fruit component of this bill amounts to about 160 million ringgit.

Fruit production will not reach the status of the established plantation crops, both in terms of the priority accorded and the scale of their operation. However, it definitely has a positive role to play in the country's earning, indirectly through import substitution of temperate fruits, and directly as an export commodity.

The present fruit export value is rather small in comparison with those of rubber, palm oil and cocoa. It amounted to an average 68 million ringgit annually in the last three years. The major markets are Singapore, which accounts for 87% of our exports, and Hong Kong which takes another nine percent. Durian, valued at 31 million ringgit in 1986, was by far the highest fruit export earner, followed by banana (six and a half million ringgit), watermelon (four million ringgit) and papaya (three and a half million ringgit). The potential for fruit export is reflected in the dramatic increase in this trade in recent years. The fruit export value in 1986 was almost double the figure recorded two years before, and indications are that it will continue to increase.

Malaysia is bestowed with the perfect climate and soils for the cultivation of a wide range of tropical fruits, many of which are native to the land. However, among the wealth of fruit types, only a handful has immediate prospects for export. The success in developing a certain fruit species for export depends to a large extent on the preferences and interactions of three important groups involved in the fruit business, viz, the consumer, the exporter and the grower.

THE CONSUMER

This is the most important of the three groups as the acceptance or rejection of a particular fruit depends on this group. In other words, the consumer determines the market. The features of fruits that would attract consumers, in order of importance, are their appearance, price, identity, taste and nutritive value.

Appearance

A fruit meant for export should be unique in appearance, have excellent cosmetic appeal and attractive market presentation. Tropical fruits with such features are the starfruit and mangosteen. Those that have poor appearance, especially on storage, are the rambutan, whose hairs appear dried and singed, and the bulky cempedak and jackfruit which are often smeared with sticky latex. These are unlikely candidates for the export market.



Starfruits

Price

Price of the commodity is of course an important consideration for the consumer. The price tag is the sum of all the costs and profits incurred by the grower, middleman, exporter and retailer. As a general rule, for the fruit to be acceptable, the price tag must be within the budget of the

consumer and this calls for efforts, at every level of production and marketing, to minimize costs.

Identity

Customers often turn their backs on items of which they seldom hear or which do not have established identities. This is particularly so in the case of tropical fruits where few people, at first meeting, would be willing to give them a try. Some fruits like pineapple, banana, papaya and melon are not so alien because a fairly large amount of trade already exists for these, but for some others like mangosteen, starfruit and guava, problems of identity will arise. In this respect, public awareness through extensive campaigns and consumer education to promote the fruits are necessary. A case in point is the Kiwi fruit, which was relatively unknown a decade ago. Now it has made a tremendous impact on the international fruit market because of the very effective sales promotion programme by New Zealand.

Taste

Taste and flavour of the fruit become important after the consumer has been won over by the appearance (and price) and begins to eat it. There are taste preferences between people of different countries. Japanese and Arabs, for example, like fruits which are sweet to very sweet. The Caucasians, on the other hand, like them with a delicate balance of sweetness and acidity with a fruity flavour. In this respect, the mangosteen is rated as excellent in prospects for export. The others that are palatable to most are the banana (c.v. Emas), papaya, starfruit, chiku and guava. Fruits with strong, uncustomary flavours like the jackfruit, durian, bacang and kiwini mango are generally unacceptable, although there may be some potential for export to countries where there are fairly large Asian migrant populations who are familiar with them.

Nutritive value

Many consumers, particularly those from developed countries, have health-conscious eating habits. Some of the tropical fruits like the guava, papaya, mango, pineapple and starfruit are very high in vitamins A and C, and are many times better than those of temperate origin like the apple and pear. This is a very good selling point for Malaysian fruits.

THE EXPORTER

Exporters are viewed generally as the middlemen who bring fruits from the growers to the con-sumers in the foreign market. They are profit-oriented, and to them the more important considerations of an export fruit are the market competition, consistency of supply, and good shelf-life with strong backup in postharvest technology.

Market Competition

Many of our neighbouring countries have been very successful in fruit cultivation and in the related export trade. The Philippines, for example, is one of the world's leading supplier of banana, accounting for 13% of the total exports (806,000 tonnes). Backed by American technology, the multinationals like Del Monte and Dole have long established their names as leading producers of banana, as well as fresh and processed pineapple. Therefore, export of the Cavendish banana, which is the standard cultivar in the Philippines, and also fresh pineapple should be viewed with caution by this country because of the highly competitive market. Mango exports from Malaysia will also face stiff competition from Pakistan, India, Thailand, Philippines and Taiwan. Our present principal variety, Harumanis, with its poor cosmetic appeal and insidious fruit rot (soft nose disorder), would have to overcome these problems before it can compete satisfactorily with mangoes such as the Alfonso, Carabou, Tong Dam and Nang Klang Wan from other countries which already have a high reputation.

Fruits with less competition in the world market are the starfruit (c.v. B10) and papaya (c.v. Eksotika). Both are good varieties, well-accepted as being export quality fruits and are not yet cultivated on a commercial scale in other countries.

Consistency of Supply

Consistency of supply of good quality fruits is an important consideration for exporters because it affects contract commitment, planning and booking of cargo space and regularity of income. Hence, non-seasonal fruits like the starfruit, papaya, banana and guava are popular among local exporters. On the other hand, the mangosteen, durian, duku langsung

and rambutan, which bear once a year around June to August, are usually not favoured by exporters because their seasons unfortunately coincide with that of the summer fruits of the Northern Hemisphere.

Good Shelf-life

Tropical fruits, in general, have very poor shelf-life. Under ambient, tropical conditions, most will spoil after one week. Fruits that can keep well under modified environments for six weeks or more have a definite advantage because they can be transported cheaply by sea to distant markets. Papaya and starfruit are usually sent by air to the Hong Kong market but the costs of air transport and the limitation of cargo space are posing severe constraints in this mode of transportation. Papaya and guava under refrigeration can have their shelf-life extended to four weeks. Under these conditions, they can be transported to Hong Kong by sea, while starfruit, with a nine-week shelf-life, can go as far as Europe. However, containerized sea transport requires bulk handling of not less than 15 tonnes at a time. Getting sufficient quality fruits in a single harvest to fill a container is a problem at present.

Postharvest technology

Availability of advanced postharvest technology for fruit handling, storage, packaging and transport gives the exporter more confidence in the trade. Postharvest technologies for the export of the banana (c.v. Mas), papaya (c.v. Eksotika), guava and starfruit appear adequate particularly for export to nearby markets. Some information and experience have also been gathered on the export of frozen mangosteen to Japan, but for a host of other fruit types, notably the chiku, jackfruit, cempedak and duku langsung, their postharvest requirements during storage and transport are relatively unknown.

THE GROWER

The third and often forgotten clientele is the grower. The choice and decision to cultivate a certain fruit type generally depends on its capability to generate high and steady income in the shortest possible time from planting. The fruit that growers prefer is one that has a short juvenile period, has good technology support and is easy to care for.

Juvenility

Watermelon, papaya and banana are examples of fruits with very short juvenile periods. The greatest advantage of these crops is their extremely short gestation periods which allow the grower more flexibility in changing from one crop to another during adverse economic situations. As a matter of fact, many of these are treated as transient cash crops to 'catch' the good prices and make a quick profit.

Fruits with medium-length juvenility are the guava, starfruit and chiku, and usually bear economic crops after 18 months from planting. Besides, they are popular too because they do not tie up capital over extended periods, and allow some flexibility in decision-making even after establishment of the crop. The short- and medium-term maturing crops are also considered non-seasonal in bearing, and this is an added advantage to the growers. Weighed against these two groups, fruits with long juvenile phases like the durian, rambutan, mangosteen and duku langsung will definitely lose favour with the growers. Some of them, like the mangosteen and duku langsung, take about 10 to 12 years to attain economic production.

Technology support

New, high-yielding and good quality varieties, improved cultural practices, viz., optimum fertilization, irrigation and effective control of pests and diseases, give confidence to growers to cultivate the fruit. The technologies for cultivation of the banana (c.v. Mas), papaya (c.v. Eksotika), starfruit (c.v. B10) and the diploid seeded guava (c.v. Kampuchean), and Klomsali, the triploid seedless guava are fairly complete. Growers face little difficulties in the management and production of these fruits. The technology for many other fruit types are reported to be at various stages of development.

Ease of management

This is an important consideration for the grower who has to take into account the limited resources that he has. Fruits like the watermelon, banana and papaya are less fastidious in their management requirements, but for the production of export quality fresh starfruit and guava, the fruits have to be individually wrapped

to keep away pests and diseases. This tedious, labour-intensive operation may hinder the development of large-scale commercial orchards of guava and starfruit for the fresh fruit market.

In the early establishment phase of indigenous fruit species like the durian and mangosteen, special care is required in terms of water and shade, and mortality rates are high during the first two years of planting. Furthermore, the mangosteen faces problems in harvesting. The mango which requires a period of drought for flowering and fruit set, is not popular with growers, especially in the wetter south of Peninsular Malaysia where intensive and often uneconomic control measures against pests and diseases have to be carried out before yields can be obtained.

FRUITS WITH EXPORT POTENTIAL

After considering the needs of the consumer, exporter and grower, five fruit types have been selected for further discussion based on their potential for development as export fruits. These are the papaya, banana (c.v. Mas), starfruit, mangosteen and guava.

The fruit types

Papaya

Papaya is a vigorous-growing tree cultivated commonly as a cash crop. It is a semi-intensive crop, grown at densities of 1,500 to 2,000 trees per hectare, or sometimes intercropped with rubber or oil palm during their early establishment. It starts to bear fruit usually after nine months from planting and continues to do so for several years. Under commercial planting, however, its economic life is restricted to about two years only because of the increasing difficulty in harvesting when the trees are older and taller. Old trees under intensive cultivation will also show declining vigour because of soil compaction and the onset of diseases.

The major selling point of the papaya to overseas markets is that the fruits are highly nutritious in terms of vitamins A and C, which amount to 600 IU and 50 mg/100g of fruit, respectively. The mild, pleasant flavour and sweet, juicy flesh are also compatible with most palates.

Banana

The banana has its origin in Malaysia and for this reason a large number of varieties are commonly found here. It is a fast-growing, semi-intensive crop grown at densities of 1,700 to 2,200 trees per hectare. Sometimes it is grown as an intercrop between the plantation crops during the early establishment. It usually starts to bear within a year from planting, and may be economically ratooned for another year or two if suckers are properly maintained.

Starfruit

Starfruit, also known as belimbing besi or carambola, bears attractive and unique five-angled fruits. It is a small tree which can be planted at fairly close spacings of about 300 to 500 trees per hectare with proper pruning and training. The trees are usually grafted, and begin to give an economic yield at about 18 months from planting. With proper management, particularly pruning, the trees can be cropped for 15 years or more.

Its strong feature as an export fruit is its long shelf-life and attractive, unique appearance. Its mild flavour and sweet juicy flesh with crisp texture is delectable and enjoyed by many. Transverse slices make attractive servings and decorations for salads and desserts.

Mangosteen

Mangosteen is an extremely slow-growing tree. Usually grown from seeds, it starts to bear only after ten years or more. This long juvenile period deters many entrepreneurs from investment in this crop. The fruit, however, is extremely likeable once one gets to taste it. The white, attractive frosty pulp, contained in a unique contrasting purple-coloured shell has a delicate acid and sweet taste with a pleasant flavour. It has earned the reputation of being the 'Queen of Tropical Fruits'.

Guava

Guava is a non-fastidious crop and can thrive even on tin-tallings which are considered marginal soils for many other crops. It is a fairly intensive crop, usually planted at densities of 600 to 800 trees per hectare. It starts to bear fruits during the first year, and continues giving economic harvests for eight years or more. Older trees may show some yield deterioration and rejuvenation by pruning may be necessary.

The main selling points of the guava are its fruity fragrance, especially when fully ripe, and its extremely high vitamin C content, in the region of 80 to 100 mg/100 g of fruit. The fruit of the triploid seedless varieties in many ways resembles that of the apple and pear and may be readily accepted upon introduction.



Guava

Cultivar

The most suitable cultivar for the fresh papaya fruit export markets is the Eksotika developed and released by MARDI in 1987. Developed by repeated backcrosses of the Subang 6 variety to the popular Hawaiian Sunrise Solo, this cultivar has similar features and qualities as the Solo, but the fruit is twice as large. Each fruit weighs about 600-800 g and has an orangey red colour sweet, aromatic flesh. Two different shapes of fruits, depending on the sex of the trees, are produced. Pear-shaped or elongated fruits produced by the hermaphrodite trees are generally preferred over the round female fruits. The smaller fruit cavities of the hermaphrodites and their normally thicker flesh are reasons for their preference. There is, however, no difference in other fruit qualities between the two sexes.

Of the numerous types of banana, the Pisang Mas is the most popular and most suitable for the export market. Its uniqueness in fruit size, and sweet aromatic taste separates it from the Giant Cavendish banana which is extremely competitive in international trade. It is also easily cultivated, resistant to Panama wilt disease, and has a short juvenile period of nine to ten months.

Among the Pisang Mas group, there exists many different accessions. The best in terms of yield stability and percent of Grade A fruits are the Air Kuning and Belanja. Their average bunch weight under good management is about 13 kg and more than 80% of the yield are of premium grade for export.

By far, the most popularly grown clone of starfruit for export is the B10. It bears large fruits (300-400 g) which are deep yellow to golden red colour when ripe. The flesh is sweet (TSS 10 - 12%), juicy and low in fibre content. Recently, another new clone with export potential was registered with the Department of Agriculture. This is the B17 which is very prolific, with fruits of high quality. They are orangey-yellow in colour, more elongated in shape with narrower, stout wings, giving it a more cylindrical appearance. The flesh is juicy and very sweet (TSS 18 - 20%) and has a very low fibre content. This clone can be trained for an overhead trellis system which greatly facilitates management and harvesting of fruits.

There are no known mangosteen varieties, but apomitic seedlings do not show much difference in fruit quality. Grafted plants are now increasingly

used, not so much for quality improvement, but for reduction in juvenility. Grafted mangosteen trees have been reported to bear fruit after four or five years from planting.

The most widely grown guava cultivar in Malaysia is the large-fruited Kampuchean variety. Introduced into this country in the early eighties, it soon became very popular because of its large attractive fruits, weighing around 300 to 500 g each, and having small, seed cavity and white, thick and crispy flesh. Its yield is very high, in the region of 40-50 tonnes/ha/year during peak harvesting. Another popular cultivar is the Klomsall which has globe-shaped fruits with a stronger but pleasant fragrance and flavour.

The other variety that is gradually becoming more popular is the triploid Thai Seedless. It does not have a central seed core and the whole fruit can be eaten. The flesh is very sweet, tender and crispy. The eating quality is better than the Kampuchean guava, but the fruit is not symmetrical. It can be malformed and its yield is only about 30 to 40% that of the Kampuchean cultivar. Its local retail price is five to six ringgit per kilogramme compared with one ringgit twenty cents to four ringgit per kilogramme for the Kampuchean fruits.

Areas of cultivation in Peninsular Malaysia

The total area grown with papaya in the Peninsula is about 1,300 hectares. The Ministry of Agriculture has projected an increase in papaya cultivation to about 3,000 hectares by the year 2000 to provide fruits to meet local demand.

The most suitable areas for papaya are those with fairly deep, well-drained loam and an even, annual distribution of rainfall. In this respect, the best districts for papaya cultivation are in Muar, Batu Pahat, Pontian and Kota Tinggi in Johore. Prolonged droughts of over a month which frequently occur in states like Kedah, Perlis and the east coast states preclude its cultivation there unless irrigation is provided.

At present there are about 500 hectares planted with the Eksotika papaya. This is rapidly increasing because of high overseas demand, particularly in Hong Kong and Singapore. For this cultivar the biggest areas are found around Kota Tinggi. Smallholdings planted with the Eksotika papaya ranging in size from five to twenty hectares, are also common around Kajang.

Kapar and Shah Alam in Selangor, Jelebu and Seremban in Negeri Sembilan and Bidor, Kampar, Tanjung Malim and Ipoh areas in Perak. A definite shift from the large-fruited local varieties to the cultivation of the Eksotika papaya is quite evident at present.

There are about 25,000 hectares of banana. About 50% of this area is estimated to be planted with the Pisang Mas type. The Ministry of Agriculture has projected an increase in banana area to 54,000 hectares by the year 2000 in order to produce enough banana to meet local demand.

The most suitable areas for banana cultivation are those with fairly deep, well-drained loam and an even distribution of rainfall. Certain parts of Segamat, Muar, Batu Pahat, Pontian and Kota Tinggi in Johore fall into the suitable zones. Currently, however, the distribution of banana planting is governed more by socio-economic factors rather than by agro-climatic suitability. Considerable areas are found in Hilir Perak, Kuala Kangsar, Jasin, Ulu Kelantan, Ulu Trengganu, Raub and Pekan.

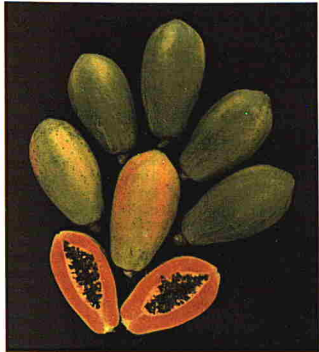
The total area under starfruit is about 450 hectares. About 60% of this is located in Sungai Besi, Serdang and Petaling in Selangor. The other important areas of cultivation are in Muar and Batu Pahat in Johore, Raub and Bentong in Pahang, Kerling and Kampar in Perak and Mantin in Negeri Sembilan.

The total area of mangosteen in this country is only about 1,800 hectares. Mangosteen cultivation is widely scattered in distribution in the Peninsula and this presents immense problems in collection and marketing of the fruits. Plans are afoot, however, to grow commercial orchards in Perak for export.

There are currently about 1,200 hectares of guava in Peninsular Malaysia, concentrated mainly around Bidor, Tanjung Malim and Pantan Remis in Perak, Kerling and Semenyih in Selangor, and Muar, Batu Pahat, Kota Tinggi and Johor Bahru districts in Johore.

Seasonality

Although the papaya is considered a non-seasonal crop, there are three or four peak harvest seasons in a year. This means that the exporters have to be careful before committing



Eksotika papaya

themselves to the buyers with regard to the regularity of fruit supply. The harvesting periods usually go on for about two months after which a lean month would follow. The occurrence of peak periods depends on favourable weather conditions and cannot be totally controlled, regulated or adjusted by staggered planting. Even under the best management system, with irrigation and good fertilizer scheduling, skips of bearing are bound to happen. The duration of skips occurring can, however, be shortened with good agronomic practices.

Banana is a non-seasonal fruit and can be harvested throughout the year by judiciously staggering the time of planting. However, under rainfed conditions, time of planting is restricted to when water is available. Planting is usually carried out before or during the rainy seasons so that the plants can establish well during periods of adequate moisture. With irrigation, however, the restriction on time of planting is removed and fruit availability can be accurately planned and timed. This is extremely important in the export trade which demands regularity and consistency in fruit supply.

Starfruit production is non-seasonal, but peaks of production occur during certain months because of the more favourable weather conditions for fruit set and development. The most productive months for farms in Sungai Besi and Petaling areas are around March to May. During the other months, production may be

very lean because of poor flower development and fruit set caused by high temperature, drought or excessive rainfall.

There is usually one major mangosteen season in a year, from June to August, and a minor season may occur around December. This is probably the greatest disadvantage for the mangosteen as an export fruit because of the restriction in supply. Also, its major season coincides with the fruiting season of most temperate fruits in the Northern Hemisphere. This irregularity in supply is very damaging in efforts to promote the fruits through campaigns and consumer education. As one experienced exporter puts it, 'overseas customers, once trained to accept a product, will be lost if they do not find the product in the store on their next visit'.

Guava is considered non-seasonal in bearing but two or three peaks of harvesting usually occur in a year. These are distributed quite evenly over the year so that in every four months or so, a bumper harvest will occur. The peaks of harvesting are affected by weather conditions and are quite location-specific so that when one area enjoys a bumper harvest another may be having a lean period. In this context, guava is available all year round.

Export quality - preharvest considerations

Export-quality of papaya (c.v. Eksotika) should have fairly clear, unblemished skin. The most common diseases that mark the fruits and make them unattractive are fruit rot caused by *Colletotrichum* and fruit freckles caused by *Cladosporium*. During fruit development, alternate monthly sprays of mancozeb plus benomyl are important preharvest treatments for good fruit cosmetics.

With regard to sweetness and flesh colour, application of potassium during development is extremely important for improving these two traits. Another agronomic consideration for obtaining uniform fruit grades in terms of shape is to establish a high percentage of hermaphrodite trees whose fruits are preferred. The way to do it is to plant two or three trees at one point, spaced about 40 to 50 cm from each other. At flowering, the female trees are culled, leaving an almost pure stand of hermaphrodite trees.

Pisang Mas for export should have good, even sized fingers with clean, unblemished peel. Peel

blemishes may result from abrasion by the foliage, and fruit bunch, from sunburn, insect damages and 'watermarks' left by water collected between fingers. To reduce blemishes, leaves surrounding the fruit bunch must be removed at regular intervals, and the bunches should be covered with polythene bags with ventilation holes and secured with string at the peduncle end. The best stage to put on the bag is after the last female hand has emerged. The bag remains on the bunch until harvest.

The most serious pest of starfruit is the oriental fruit fly. The flies cause unsightly puncture marks on the skin of the fruits where they deposit their eggs. Although chemical protection using protein baits may control infestation to a certain extent, fruit bagging remains the most effective and widely used method. Bottom-sealed, newspaper-folded bags about 20 x 30 cm in size are used to cover two to three-weeks old fruits. To ensure that fruits are well-formed with good symmetry, odd-shaped fruitlets should be removed during bagging. To get uniform fruit size, usually not more than two fruits to an inflorescence are allowed to develop.

Guava is very susceptible to fruit fly infestations also and diseases like anthracnose, styler end ring rot and scab. For production of quality fruits, those at six weeks old must be bagged. Usually newspaper bags are used but recently fabric bags impregnated with pesticides, at acceptable levels, are being used. The bagged fruits ripen with better colour and are blemish-free.

Export quality - postharvest considerations

Harvesting papaya (c.v. Eksotika) must be carried out at the Stage II index when only a slight show of yellow is on the fruit skin. This stage is best for maximum shelf-life without sacrifice on fruit quality. Immediately after picking, the papaya is brought into the packing house. Here they are examined and graded. For the Eksotika cultivar, fruits less than 250 g and over 1.0 kg are usually rejected. Overripe fruits, carpeloid ones, and those with freckles or damaged by thrips and mites are also rejected. Generally, under good farm management, the rejection rate is below five percent.

The fruits are washed in large tanks to rid them of dirt and papain latex. Excess length of the fruit stalk is cut back at this stage. The fruits are then transferred in to tanks containing water at 42 to

49 °C where they remain for about 30 minutes for disinfestation of fungal spores and fruit fly eggs in the fruit skin. Another 20 minutes cooling in an ambient solution of benomyl (0.5%) is required before the fruits are stacked and dried.

Before packaging, the fruits are sorted according to size and shape because there is a price difference between the hermaphrodite and female fruits. The price for hermaphrodite fruits is usually 50% higher. The fruits are wrapped individually in tissue paper to prevent bruising, and placed, basal end first, into fibreboard cartons with adequate ventilation holes. Each carton usually consists of nine cells packed to a standard weight of six kilogrammes. To delay ripening before transportation to overseas markets, the fruits should be stored at 10 °C. It is possible to store them for at least two weeks under this condition.

Pisang Mas is harvested at the stage when the fingers on the bunch are full and round. Most of the stylar ends are either dried and brittle or completely detached. This optimum stage is reached after seven to nine weeks from "shooting" of the inflorescence.

After harvesting, the bunch is deheaded and washed. The hands are dipped in 500 ppm benomyl to control postharvest diseases like anthracnose and black end rot. After drying, the hands are graded and packed. Fibreboard cartons with adequate ventilation and of various designs and dimensions are now widely used by local exporters. Under refrigeration at 14 °C and a relative humidity of 85 - 90%, the banana remains green for 10 days or more. For longer storage and further destinations, storage under refrigeration and modified atmosphere is required. The bananas are placed in polythene bags and most of the air in them is sucked out by a vacuum cleaner. The ethylene gas produced by the fruits is removed by potassium permanganate "scrubber" blocks placed in the bags before they are sealed. Under such conditions, the bananas can be kept fresh for 4-6 weeks. It is ripened at 25-34 °C (ambient conditions) or with 50 ppm ethylene for one day at 24 °C, and subsequently at 22 °C, 20 °C and 15 °C. It is then stored at 15 °C. If this handling is not strictly followed, then green ripening can occur in which the ripened banana is soft but the skin is still green. The banana will turn black after removal from the bag because of the high carbon dioxide level in it during storage.

The right stage to pick the starfruit is when it changes colour from pale green to light yellow. This stage occurs about 45 days from fruit set and is the optimum time to harvest in terms of maximizing shelf-life of the fruits without sacrifice to quality. Earlier picking would result in fruits being lower in juice content and sugars, and more astringent in taste.

Immediately after picking, the fruits must be transported to the packing house where the paper bags covering the fruits are removed, and the fruits wiped clean with a moist cloth. They are placed, basal end first, in single layers, in fibreboard cartons lined at the bottom with shredded paper. Usually 30 or more fruits can be packed into each carton, and more paper is packed on top to prevent fruit abrasion and bruising. Starfruit (B10) can be exported to Hong Kong by sea in refrigerated containers maintained at 8 °C. At 5 °C, the fruits can be stored for nine weeks, and at 10-15 °C for five weeks.

Harvesting fruits from mature mangosteen trees presents one of the biggest problems in its production. The fruits are individually picked, sometimes with the aid of bamboo poles manoeuvred within the canopy, and the process is very tedious. Bruising and insect infestations are the most common causes of unattractive fruit cosmetics. Both may cause exudation of yellow resin on the unripe fruits which damages the quality. In many instances, the damage is not apparent from the outside and escapes detection during grading. For this reason, and also for disinfestation of fruit flies, the Japanese market requires mangosteen fruits to be slit open for detection of disorders before taping back the halves for immediate deep freezing to -17.8 °C for export.

Care in handling during harvesting and transport of guava is important because the fruit skin is easily bruised. During harvesting, the fruit stalk is cut and the fruits, together with the covering bags, are placed in baskets lined with foam or newspaper. The fruits should not be stacked more than four or five layers high to minimize bruising. At the packing house, the paperbags are removed, and fruits washed and sorted. Packaging involves wrapping the fruits in tissue paper, and placing them in two or three layers in fibreboard boxes usually to net weights of 10 to 20 kilogrammes. Refrigeration at 10 °C is required to keep the fruits fresh for two to three weeks.

Table 1. Imports of papaya into selected European countries, 1982-1986 (tonnes)

Destination	Year				
	1982	1983	1984	1985	1986
West Germany	130	340	570	588	876
United Kingdom	300	485	642	565	681
Netherlands	66	99	236	283	476
France	217	236	274	319	461
Belgium-Luxemburg	81	81	101	97	309
Denmark	3	8	12	13	54
Total	797	1,249	1,835	1,865	2,857

Source: *Market study on tropical and off-season fresh fruits and vegetables. International Trade Centre, UNCTAD/ GATT, 1987*

Markets and outlook

Imports of papaya into the Western European market amounted to about 3,000 tonnes in 1986, three tonnes higher than in 1982 (Table 1). Brazil, the dominant supplier, has a market share of about seventy percent. Malaysia exports regularly to Hong Kong and Singapore. Elsewhere, in the U.S., the domestic demand is taken care of by production in Hawaii. About 4,000 tonnes of papaya, mainly the Solo variety, are also exported to Japan.

The export value of papaya in Malaysia was about 3.5 million ringgit in 1987. This ranks fourth in importance as an export fruit, following durian, banana and watermelon. About 90% of these fruits are exported to Singapore. Of late, the Eksotika papaya has received very good response from Hong Kong, and is gradually getting a better share of the market. Prices in Hong Kong are the highest from March to June. They are particularly low during the Chinese New Year festival when very few of the melon-like fruits are consumed. The prices are also unpredictable and generally low during the winter months. Japan is another nearby potential market, but the major constraint is gaining entry into Japan is its stringent quarantine regulations which effectively bar

entry of many of our soft-skinned fruits because of fruit fly infestations. Exporting to more distant markets such as the Middle Eastern countries (which are largely untapped) and the European markets is not a very attractive proposition now because of the high costs of air transport and limitations in cargo space. Refrigerated and containerized sea transport cannot be used just yet because the shelf-life of the fruits is not long enough to last the journey. Technology for keeping fruits fresh for at least six weeks must be available before sea transport can become a reality.

The trend in international banana trade shows production by developing countries for export to developed countries like North America, Western Europe and Japan. The trade is fiercely competitive and centres around the Cavendish cultivar. It is estimated that export availability in 1987 amounted to 7.9 million tonnes or about 12.4% above actual exports in 1980. This represents an annual supply growth of 1.7% for exports. In contrast, it is estimated that the import demand for banana in 1987 was 7.0 million tonnes, only 1.3% higher than that in 1980, representing an annual growth of only 0.2%. This meagre growth in import demand weighed against the growth of supply of 1.7% annually

puts the banana trade in a bleak scenario. There is little scope for new suppliers to enter the market, especially for the Cavendish banana. This is very true for Malaysia whose ASEAN neighbour, the Philippines, currently supplies about 13% of the world's imports for this type of banana. Backed by the American-based multinationals, the Philippines will continue to dominate in the production of the Cavendish banana. However, less competition is expected in the marketing of the smaller fingered Pisang Mas.

Malaysia's export client for banana has traditionally been Singapore, and the main cultivar exported is Pisang Mas. The export value was 5.8 million ringgit in 1985, and has been climbing steadily at about 3% annually. About one million ringgit worth of banana, mostly Pisang Mas, was also exported to Hong Kong in 1986, and this market appears to be very promising for the future too. Other markets that have good potential include Japan, South Korea, Germany and the Middle Eastern countries. The greatest constraint in export of the Pisang Mas currently is the difficulty in obtaining sufficient and regular fruit supplies of high quality and uniform grades.

At present, there is little international trade in starfruit. The current production from about 450 hectares in Peninsular Malaysia is estimated at about 10,800 tonnes annually. It was reported that about 80% of this production was exported, giving rise to an export value of about 11 million ringgit in 1987, based on the wholesale price of one ringgit per kilogramme. The two main markets are Singapore and Hong Kong, and currently the starfruit from Malaysia is reputed to be of the best quality. This is very important as this identity will form an invaluable asset for the expansion in export of this fruit to other countries. There is good potential for exports to more distant countries because starfruit can withstand storage up to nine weeks at 5°C, and this allows cheap transportation by ship to many parts of the world. There is a need, however, to promote the starfruit and educate consumers on how to serve the fruit.

The world trade for mangosteen is very limited and not separately reported. France, United Kingdom and the Netherlands appear to be the main European importers. The major suppliers to the world market are Indonesia, Sri Lanka and Malaysia. Malaysia exported about 2,600 tonnes in 1985, valued at 1.3 million ringgit. About 90% went to Singapore, while the rest went to Hong

Kong and Japan. Japan's imports are mainly through the KGN-SEADC Sdn. Bhd., a joint Malaysian-Japanese venture which started exports of this fruit in 1984. The possibility of increasing exports to the present markets appears good, while potential markets in Europe and the Middle East seem very promising as well. However, the major concern of exporters is the difficulty in getting sufficient supply from a large integrated source. For this reason, commercial-scale plantings are being developed for the anticipated increase in export demand.

World trade statistics for fresh guava are not available but the volume of fruits traded is expected to increase. Europe, particularly the United Kingdom, imports some guava for its migrant population during the winter months from October to March, the main suppliers being South Africa and Brazil. The United States imports from Central America, but the volume is less than 1,000 tonnes annually. More guava is imported as puree, paste and other processed forms. In 1987, Malaysia exported more than 6,000 tonnes of guava to Singapore, Hong Kong, Netherlands, United Kingdom and West Germany valued at 2.4 million ringgit. This is 12 times the export value for this fruit recorded in 1985 and the trend appears to be on the increase. There is an apparent shift in demand from the Kampuchean type to the Thai Seedless. Although highly priced, many exporters still prefer to deal with the seedless guava because of its ready market. The major obstacle in the development of this cultivar for export is the difficulty in getting enough supply at present.

During a UNCTAD/GATT survey on the marketing tropical fruits and vegetables in the European countries for the period, 1982-1986, it was shown that the consumption pattern of tropical fruits and vegetables has changed significantly. The current emphasis on health food and the premium placed on freshness have contributed to the rise in demand for tropical fruits and vegetables. In the European markets, the demand for tropical fruits has expanded considerably. For example, the import of papaya into Europe increased from 797 tonnes in 1982 to 2,857 tonnes in 1986, an increase of 260 percent.

Only a few years ago, tropical fruits were still considered luxury items, to be imported in small quantities and sold at high prices in better restaurants and speciality shops. This scenario is changing fast. More tropical fruits are being

imported into Europe and consumed by ordinary people. This has been brought about by the development of refrigerated sea transport, which brought about a reduction in transport cost; the growing number of Europeans travelling overseas and thus becoming familiar with new food; and the effects of advertising campaigns undertaken by the major suppliers of these items.

According to the UNCTAD/GATT study, the main obstacle to further increase in sales of

tropical fruits, in general is the consumers' lack of knowledge about these items. However, interest is growing in most European countries and, if prices can be reduced by improved organization of production and marketing and the development of sea and air freight, well-planned promotion campaigns should lead to an increase consumption in tropical fruits. Malaysians should take note of these in their quest to export tropical fruits to the world.

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Telex: 2223192 TOICHI J

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Telex: J 24882 UNIFRUIT

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Animal production in Malaysia into the next century

Chapter 10

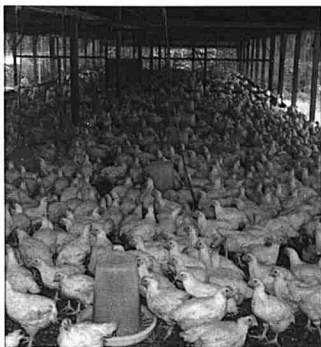
The livestock sector is an important aspect of Malaysian agriculture. The main types of animals reared in Malaysia are cattle, buffalo, goat, sheep, poultry and swine. The number of these, except for buffalo, is increasing especially poultry and swine. Currently, this sector contributes 3% to the GDP, 15% to the overall agriculture production and 33-35%, to the value of food produced in the country (Figure 1). In 1987, the ex-farm value of livestock products was estimated at 2,000.6 million ringgit. The production of poultry meat and eggs accounted for 59% of this value while that of pork made up 31% (Figure 2).

about 15% of broiler chicken and 10% of egg produced, mainly to Singapore. The export value of eggs and broilers in 1987 was estimated at 76 million ringgit. The common breeds used for egg and broiler production are Arbor Shaver Acre, Peterson, Anak, Hubbard, Tegel and Local.

POULTRY SUBSECTOR

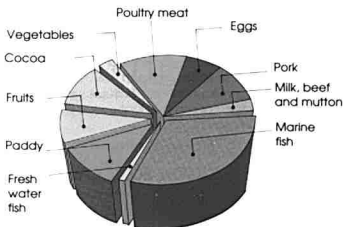
The poultry subsector is made up of eggs, broiler chicken, and meat duck producers, breeders and hatcheries, and related activities such as processing, farm equipment manufacturers and traders. Although more than a million people keep poultry of one type or another, there are only 6,500 - 7,000 commercial farms in the country employing some 40,000 people directly and 15,000 indirectly.

Egg and broiler production continue to increase (Tables 1 and 2). Currently, Malaysia exports



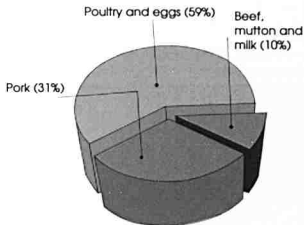
Intensive broiler production

Figure 1. Value of farm products in Peninsular Malaysia (1987)



Source: Department of Veterinary Services

Figure 2. Value of livestock products, Peninsular Malaysia (1987)



* This chapter is contributed by Datuk Dr. Ahmad Mustafa bin Haji Babjee, Director General of Department of Veterinary Services, Malaysia.

Table 1. Production and consumption of poultry meat (1980-1987)

Year	Population (million)	Poultry Meat**		Per capita consumption (kg)
		Production (tonne)	Local consumption (tonne)	
1980	11.85	114,500	117,200	9.89
1981	12.15	130,100	128,500	10.58
1982	12.43	142,000	143,700	11.56
1983	12.72	160,000	156,240	12.28
1984	13.03	180,000	177,466	13.62
1985	13.31	221,400	212,200	15.94
1986	13.66	248,800	234,150	17.14
1987*	13.98	264,000	244,000	17.5

* Provisional

** Poultry meat to include all meat from chicken, ducks and other poultry

Source : Department of Veterinary Services

Table 2. Production and consumption of poultry egg (1980-1987)

Year	Population (million)	Poultry Egg		Per capita consumption
		Production (million)	Local consumption (million)	
1980	11.85	2,311	2,311	195
1981	12.15	2,270	2,269	187
1982	12.43	2,373	2,373	191
1983	12.72	2,686	2,685	211
1984	13.03	2,892	2,814	216
1985	13.31	3,098	2,948	221
1986	13.66	3,267	3,087	226
1987*	13.98	3,431	3,231	231

* Provisional

Source: Department of Veterinary Services

Before 1982, most of the salted and preserved duck eggs were imported into Malaysia from China. However, with encouragement from the Government and regulatory measures, duck egg and meat production has increased dramatically. The output in 1987 was estimated at 11.5 million birds and 150 million eggs respectively.

SWINE SUBSECTOR

Production of pork progressed rapidly in the sixties reaching self-sufficiency by 1963. By 1981, Malaysia became a net exporter of pork. In 1987, pork production in the Peninsula was estimated at about 173,000 tonnes. About 10% of the output was exported to Singapore valued at 54 million ringgit. There are approximately 5,000

commercial farms operating in the country currently. Figure 3 shows the distribution of farms and their sizes in the major producing states.

The major problem of pig farming is waste disposal. Due to restricted land size, high cost of waste control measures and cultural sensitivities, future expansion of pig production will be restricted.

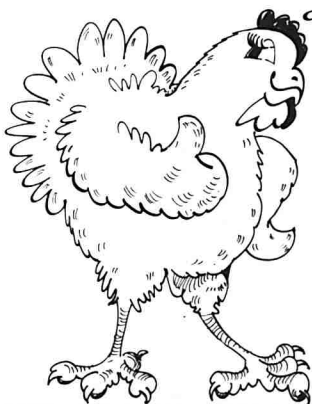
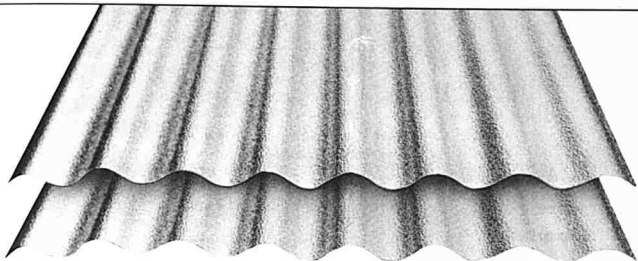
BEEF AND MUTTON SUBSECTOR

Beef and mutton subsector is relatively less developed than the poultry and swine subsectors. The production of beef and mutton is mainly by small farmers who own a few animals. In spite of the increase in combined population of cattle, buffalo, goat and sheep, the



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Figure 3. Distribution of farm size in major producing states (1982 as compared with 1985/86)

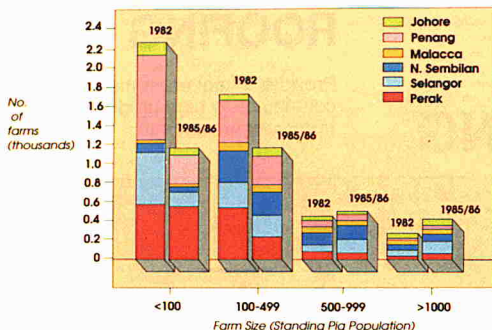
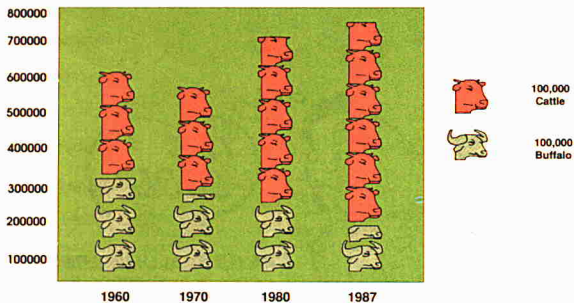


Figure 4. Population of cattle and buffalo in Peninsular Malaysia 1960-1987

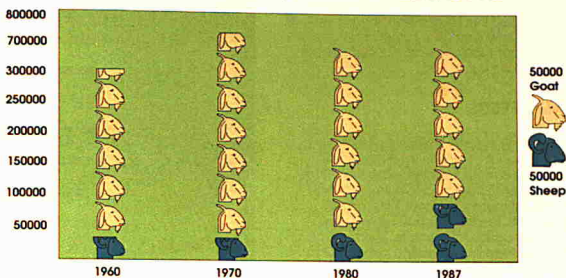


production of beef and mutton has remained relatively static, mainly due to the availability of cheaper imports. In 1986, beef production was estimated at 12,500 tonnes and mutton 580 tonnes, equivalent to about 37% and 9% self-sufficiency, respectively. The cattle population has increased from 301,220 in 1975 to over 700,000 in 1987. However, the buffalo production is declining. Figures 4 and 5 show the growth of ruminant population since 1960.

DAIRY SUBSECTOR

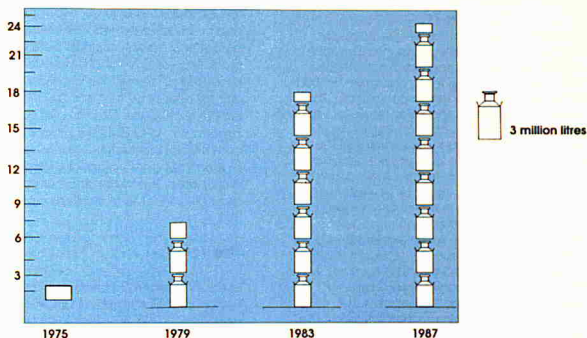
Malaysia has a small dairy industry which is growing steadily. The demand for fresh milk is small and can be met by local production. The fresh milk demand, however, forms only 4.5% of total demand for all forms of milk. Figure 6 shows the production of fresh milk since 1975. Malaysia's import bill for milk powder, butter fat and other milk products amounts to \$605.26 million in 1985.

Figure 5. Population of goat and sheep in Peninsular Malaysia, 1960-1987



Source and Graphics: Department of Veterinary Services

Figure 6. Milk production (million litres) in Peninsular Malaysia, 1975-1987



Source and Graphics: Department of Veterinary Services

Marked changes have occurred in the quality of dairy cattle and milk since the introduction of better crossbreds and milk collecting centres. The production level of the old dairy cows of the Local Indian Dairy cattle averaged only 800 litres per lactation. Today, crossbreds are producing at an average of 1,500 litres of milk or more with many producing 2,000 - 2,500 litres of milk per lactation.

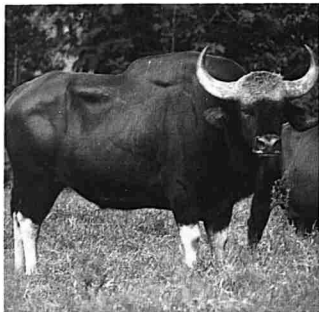
OTHER SPECIES

Horses, quails, rabbits, deer, pet birds, dogs and cats are the other animal species that contribute to the national economy. The race-horse industry alone contributes over 100 million ringgit a year, in the form of gaming taxes. Other species are also receiving attention and their

potential for expansion ranges from fair to good. The pet bird and companion animals subsector could be turned into multi-million ringgit business for importers and exporters. For example, imports of dog and cat food alone amounted to eight million ringgit a year in 1987.

ANIMAL FEEDS

The feedmilling industry is highly competitive, producing about 2.6 million tonnes of feed annually. This is more than twice the size of the rice industry of Malaysia. The value of animal feeds was estimated at about 1,500 million ringgit in 1985. The feeds produced are mainly for the poultry and pig industries. There are 38 commercial feedmills operating in the country, with capacity varying from 20,000 to 100,000 tonnes per annum.



Seladang breeds

FACTORS AFFECTING THE LIVESTOCK INDUSTRY

The present system of farming is gradually changing from subsistence to intensive farms and even to larger integrated agri-business complexes. Presently, there are some 200,000 small farmers rearing cattle and buffalo. These will eventually be replaced by fewer farmers with larger herds. For this change to take place, farmers will have to adopt professional farming techniques to remain in business. Specialization in farm operation may have to be adopted, namely as fatteners, cow-calf operators and even calf rearers, as in the poultry subsector where there is specialization in egg, broiler and breeders production. Some bigger farmers will become specialist breeders of quality cattle, sheep, goat studs and contract farmers. Sheep and goat will be managed, by larger corporations, in integrated systems. These corporations will contract out smaller farming units to farmers. The emerging farmers will need to be better educated and trained. Dairy, beef and goat/sheep farmers' associations will emerge too.

The animal

More defined breeds for beef, dairy and mutton, as well as new hybrids for poultry and pig will emerge. Faster growing and bigger animals will be developed for the beef and dairy farmers. New crossbreeds of goat and sheep will also

emerge as demand for local mutton increases and export become possible. Importation of foreign breeding animals, especially sheep, goat and cattle is envisaged to increase. Local grandparent and parent stocks of poultry, used in the production of layer and broiler stocks, are expected to be less. The productivity per animal unit will double by the year 2000. New beef breeds such as the Selembu will gain importance. Wild deer will be domesticated for commercial production. Expansion of the quail, pigeon, rabbit and crocodile farming can be anticipated. The importance of the buffalo rearing will decline in the Peninsula.

The feed

Feeds and system of feeding for ruminants will become more scientific and will reach the standards for poultry and pigs. Commercialized ruminant feed preparation will replace self-prepared unbalanced feeds. Large farms will have their own feed formulation and mixed in their own feed mills. Regulation of feed quality and formulation will come into force to protect farmers. The use of bulk feed in silos and automatic feeding by chain, augers or belts will become essential to reduce costs of production. Locally produced ingredients especially palm kernel cake, palm oil sludge and fronds will be utilized more and more for feeding. Maize growing for fodder on idle land is also envisaged.

Farming system

Intensive rearing such as in feedlots, calf rearing in large numbers on special flooring, integrated sheep farming, cow-calf operations and intensive stall-fed goats will be common in less than ten years from now. Sheep, goat and cattle integration with plantation crops to produce cheap mutton and beef is expected to be widely adopted. Modern herring bone milking parlours will also be adopted by farmers with 50 or more cows. All farms will have some form of waste control and disposal systems to minimize pollution, bacterial and viral contamination. Greater emphasis on management and economics will be in the forefront of all livestock activities. The poultry and pig subsectors will move towards vertical integration and expand the export of the products.

Animal health

Emphasis on eradication of diseases such as Brucellosis, TB, Pullorum, CLA, and more effective control of Newcastle, HS, Swine Fever and prevention of entry of FMD, Rabies, African Swine Fever will dominate the animal health activities. Herd health programmes particularly Mastitis control, Colibacillosis and metabolic diseases will be intensified. The level of expertise in the field of health services will be upgraded into subject matter specialist services by species.

Consumer

The consumers of livestock produce will become more discerning. In response to this, the livestock farmers are envisaged to have to pay more attention to the issue of quality of the produce and the consistency of supply. Quality of the produce will cover the tenderness of meat, freshness of milk and colour of egg yolk. In this respect, inspection of the livestock produce will be intensified by the regulatory authority. This inspection will also be extended to cover testing for residues of antibiotics, hormones and pesticides in meat, milk and egg.

New technology

New techniques that will give rise to more rapid answers in the diagnosis of diseases and detection of oestrus and pregnancy will become available to the ordinary farmers. Cow-side tests

for pregnancy and non-pregnancy will be more widely used to improve artificial insemination and conception rate. Elisa-based test kits for rapid field diagnosis of diseases and identification of more specific causative organisms will become routine. In other words, the diagnostic laboratory will be taken to the cow instead of the samples being taken to the laboratory.

The use of embryo transfer technology for increasing the numbers of more productive animals will become as routine as the artificial insemination technique. Embryo splitting to produce identical animals will further reduce generation intervals and progeny testing procedures. Embryo sexing, 'in-vitro' fertilization and possibly whole organ culture of ovary to produce ova 'in-vitro' will change animal production methods. The use of natural hormones to induce, control and increase lactation would alter dairy management.

TRENDS OF THE LIVESTOCK INDUSTRY IN THE 21st CENTURY

Changes in the scenario of the livestock industry and application of animal health techniques are occurring rapidly and are expected to gain further momentum by 1998. Beyond the year 2000, the scenario will be one of modern intensive commercial farms providing the bulk of livestock products. However, there will still be thousands of small farmers with mixed farming practices but their contribution to food production such as poultry meat and eggs, milk and beef will be reduced when compared with their present production. To these farmers the few animals they own will still contribute significant to their income.

Disease patterns of livestock will change with the intensification and greater emphasis placed on preventive medicine, public health and environmental sanitation. The emergence of new diseases will also have to be anticipated and dealt with accordingly.

Emphasis on food quality and food inspection will necessitate upgrading of abattoirs and processing plants and the inspection services.

Beef

Production of beef will change drastically from pasture and fodder type production to intensive

concentrate feeding in the form of medium to large scale feedlots. The use of palm kernel cake (PKC), palm oil sludge, palm fronds, sago, pineapple waste and leucaena as feeds will pave the way for economic beef production. With the availability of 800,000 tonnes of PKC, some 800,000 heads of cattle can be fattened for beef production annually. The additional impact of feedlotting is the production of high quality beef which has export potential, especially to Singapore. Currently about 102,200 heads of cattle and buffalo are slaughtered annually to provide for about 40% of our beef demand. The balance is met through imports of frozen and chilled beef from abroad. Through the feedlot system, the imports of beef can be reduced by another 25% in the short-term. This means 65 - 75% self-sufficiency in beef is envisaged. In the long-term, 100% self-sufficiency and excess for export are also envisaged in the next century. The feedlot produced beef will contribute to about 60% of the country's beef supply by the year 2000 (Table 3).

Integrated feedmill, fattening, abattoir and meat processing operations will be developed to produce the high quality beef for home consumption and for export. These operations will probably be located in Johore, Selangor and Seberang Perai.

The use of silos, conveyor belt feeding, systematic waste disposal system and natural hormones in beef production farms will become necessary. The control of feeds used in the industry and feedlot production will be given

Table 3. Projected changes in source of local beef supply

Year	Beef supply (%)	
	Range	Feedlot
1984	99.5	0.5
1985	97	3.0
1988	90	10
1990	75	25
1995	50	50
2000	40	60

emphasis. The use of feedlot waste as fertilizer is also expected to come under control.

Per capita consumption of beef is expected to increase from the present level of 3.6 kg (compared with 36 kg in USA) to at least 4.4 kg per capita by the year 2000 (Table 4). The current demand of about 33,000 tonnes will increase to at least 50,000 tonnes by the year 2000.

Table 4. Per capita consumption of beef and veal (kg)

	1960	1970	1983	1985	2000
US	31.5	39.2	35.7	36.3	n.a.
Malaysia	2.0	2.5	3.2	3.6	4.4

Beef retailing will change from the unhygienic exposed system to closed refrigerated specialist shops and supermarkets. The selling of beef in special cuts will become more common.

Dairy

Current trends in dairy farming indicates preference for bigger units. Individual small dairy farmers will venture into commercial size units. Bigger dairy farms will be established by entrepreneurs or grouping of farmers. The number of small dairy farmers will decrease and they are envisaged to form cooperatives in order to allow for economy of scale operation and more organized management.

It is envisaged that more people will drink fresh milk than at the present time. The per capita consumption of liquid milk would increase from the present 38 litres to 69 litres by the year 2000. With the expansion and improvement of processing facilities at the milk collecting centres, distribution of milk will be greatly improved.

Modernizing the dairy farm through better designed sheds, use of machine milking, on farm cooling and storage, and bulk transport by tankers direct to processing plants is expected to take place. Computerized feeding of cows and milk recording would be adopted by progressive farms. Price paid on quality will be imposed in stages and completed by 1990.



Pasteurised and sterilized local milk

Private milk processing plants of medium capacity are expected to be set up in Melaka, Seberang Perai, Ipoh, Johor Bahru, Seremban and Kuantan. Packaging of milk will undergo changes from plastic bags and hand capped bottles to tetrapaks and automatic machine-capped food-quality bottles. Quality control will be mandatory. Dates of processing and expiry will have to be printed on all milk and milk products packagings. Production of dairy products such as dadeh, ghee, butter and ice-cream are envisaged to gain momentum and more local flavoured dairy products will also emerge.

Dairy cows now averaging 1,500 kg in weight will reach 1,800 kg by 1990 and 2,500 kg by year 2000 and correspondingly their production of milk will also increase. Farmers will make greater use of progeny tested bulls and pay for animals according to their characteristics and production capabilities. Such a trend is already taking place in Melaka. Imports of Friesian/Sahiwal would continue at the rate of about 2,000 animals per year until about 1995. After 1995 local supply of dairy cows will be sufficient

to provide the need for a stabilized population of high quality dairy cows.

Mutton

The consumption of mutton in Malaysia is low. This is in part due to the high price of the product. Malaysians consume about 6,000 tonnes of mutton a year of which 90% of it is imported. The consumption of mutton will increase if the price of mutton can be reduced and this would happen when the sheep and goat integration programme with plantation crops is expanded. The rubber and oil palm estates have the potential of producing several million sheep a year, much more than the national requirements. More and more estates are envisaged to practise integration with sheep and goat, not only for mutton production but also to use the animals as "weeders".

With increased production of sheep through the above mentioned integration programme, there

is a strong likelihood that a rug and carpet industry will emerge.

Poultry

Broiler production on large commercial scale will be expanded into integrated systems from hatchery to processing plants. Foreign participation in production and marketing of this produce is expected to increase further.

With increased production of broilers and modernization of the operations, mechanization of feed storage and delivery systems will become necessary to reduce wastage from spoilage, spillage and thus the cost of production. Emphasis on the production of quality and uniform birds must be emphasized to capture a more sophisticated market. Waste utilization and disposal systems in line with environmental requirements will have to be instituted.

Stricter control on the use of antibiotics and antioxiacids with appropriate withdrawal time will be imposed to ensure that their residues in meat and eggs are at internationally acceptable levels.

Centralized slaughtering in the major towns would be made compulsory through the regulation on meat inspection of poultry. Processing and chicken parts production must come on line to cater for the new market demands. Small drum processing units will be regulated and their numbers will decline.

Packaging of products in approved packages and storage at recommended temperatures will be regulated. Specialized poultry market with approved standards of sanitation will be enforced in phases throughout the country.



Intensive duck production

Per capita consumption of poultry meat will increase to 25.5 kg by the year 2000 (Table 5). Export value of poultry meat and eggs is expected to increase to 170 million ringgit by then.

The layer

The per capita consumption of eggs in Malaysia is estimated at 230 as compared with about 280 eggs in the USA. The industry will stabilize and cater for increasing demand through greater productivity. Expansion and modernization will take place with larger farms taking over production. Better handling, grading and packaging of eggs will be developed rapidly with the change in the direction of retailing through supermarket chains.

Table 5. Projected local demand for poultry meat (1990-2000)

Year	Population	Annual Chicken Meat (million)	Demand (tonnes) Duck Meat	Total	Per capita consumption (kg)
1990	15.02	276,000	29,000	305,000	20.3
1995	16.91	355,000	34,000	389,000	23.0
2000	19.04	445,500	40,000	485,500	25.5

Table 6. Projected local demand for poultry eggs (1990-2000)

Year	Population (million)	Annual Demand (million eggs)		Total	Per capita consumption
		Chicken egg	Duck egg		
1990	15.02	3,490	205	3,695	246
1995	16.91	4,055	274	4,329	256
2000	19.04	4,714	351	5,065	266

Source : Department of Veterinary Services

Production per hen will continue to improve through better management and availability of better genetic material. Further improvement would be directed not only at the number of eggs produced but also the quality of shell, yolk and albumen.

The export of eggs to Singapore will continue to increase and in the long-term all the egg requirements of Singapore can be met by efficient Malaysian producers if they can compete effectively. Locally, the demand for eggs is projected to increase to 5.065 million by the year 2000 (Table 6).

Pork

Major changes in housing and waste disposal systems will take place to satisfy the requirements of environmental laws. Controlled expansion enforced by enactments will ensure a more

systematic development of the pig industry in defined areas. Relocation of pig farms to designated areas, with modern facilities, will become necessary as cities and towns expand outwards. Production efficiency will improve through better management and availability of better genetic materials.

Export of pork and live-porkers to Singapore, estimated at 20 million ringgit in 1985, is expected to increase further. Demand for products such as sausages and bacon will also increase for home and overseas markets. The self-sufficiency rate in pork in 1985 was estimated at 103.4%. The projected demand for pork is 256,000 tonnes by the turn of the century.

Animal feed

The output of compounded feed for swine and poultry by the local animal feeds industry is

Table 7. Projected demand for compound feeds in Peninsular Malaysia (1987-2000)

Type of feeds	Projected demand (100 tonnes)													
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1999	1997	1998	1999	2000
Poultry feeds	1540	1700	1860	2030	2170	2300	2420	2530	2630	2720	2800	2860	2920	2980
Pig feeds	900	940	980	1020	1060	1100	1140	1180	1210	1240	1270	1300	1330	1360
Total	2440	2640	2840	3050	3230	3400	3560	3710	3840	3960	4070	4160	4250	4340

Source : Department of Veterinary Services.

The above are the latest revised estimates of the Dept. of Veterinary Services. Calculations on demand are based on feeding requirements of projected annual population of poultry and pigs.

about 2.6 million tonnes. This is produced by 38 commercial and 200 small feedmills. Quality control and monitoring of feed production will be intensified. Government legislation will be required to ensure compliance of feed production to standards that will be upgraded in the near future. There will be fewer feedmills, and the larger mills will go upstream and strive towards total integration within the industry. Production of feeds is projected to increase to over four million tonnes by the year 2000 (Table 7).

Competition in the production of commercial poultry and pig feeds will be intensified. Better formulation in respect of nutrient quality, keeping quality under humid conditions and lower costs will be expected by the more sophisticated farmers. Bulk transport, storage using silos and automatic feeding systems will help to ease the labour shortage in the farming sector. New development in ruminant feeds using local ingredients will grow to become a big industry with export potential. The 800,000 tonnes of palm kernel cake exported to Europe is expected to be converted locally into formulated feeds and then exported.

Analytical methods for rapid forage quality evaluation would be commonly practised to help farmers utilize a wider range of local feeds including undergrowth in plantations.

Animal health

Malaysia can boast of an excellent animal health. Through systematic and sustained efforts, many diseases of economic importance have been eradicated or brought under control. The country is free of contagious bovine pleropneumonia, rinderpest, anthrax, glanders, foot-and-mouth disease and rabies. Outbreaks of African swine fever, African horse sickness, fowl plague and duck plague have been successfully controlled. Brucellosis and tuberculosis from cattle are now in the process of being completely eliminated. Pullorum from breeder flocks is at zero level and tests will continue to monitor its presence.

Various factors such as more productive animals, intensive systems, crossbreeds, new animal introductions from overseas, changes in feeds and farming systems will no doubt have an impact on the disease patterns. Respiratory disease complex, diarrhoeal complexes, toxicity and stress will dominate the animal health scene. The classical infectious diseases will become less common but when they do occur, they will be

explosive in nature and losses could be heavy. Nutritional, metabolic and toxic problems may occur initially but these will become less common as quality of feeds improves. Salmonellosis could emerge as a major problem in all intensive systems and will pose challenges to the industry, particularly from the public health aspects. Mastitis especially subclinical mastitis will require routine detection and preventive measures.

Diseases such as brucellosis, tuberculosis, pullorum and caseous lymphadenitis will be totally eliminated and the difficult task of remaining free from these diseases will occupy a great deal of the industry efforts. Stricter quarantine procedures and efficient testing methods would be imposed.

Special surveillance of new diseases such as caprine arthritis encephalitis, infectious bursal disease, duck hepatitis, duck plagues, 'peste des petite' ruminants, poultry pasteurellosis and clostridial diseases of sheep would be stepped up.

The methods of controlling diseases such as coccidiosis in poultry, tick fever in cattle, swine fever in pigs and gastro-intestinal parasites in goat and sheep will be reviewed and new methods are expected to be introduced to reduce costs of treatment. In the area of fish diseases, veterinarians would be called upon to play an active role in preventive fish medicine, diagnosis and therapeutics.

The use of laser, radio-frequency induced-hyperthermia, and ultra-sound scanning for diagnosis and treatment of animal diseases will become accessible. The use of loops to control mastitis, intra-uterine devices for inducing oestrus, sexing of semen and embryos, splitting of embryos by microsurgery, non-surgical embryo transfer and hybridization are envisaged to be increasingly used.

Rapid and cheap diagnosis will become an urgent matter as livestock farming becomes highly intensified. New techniques of diagnosis using fractionated antigens, monoclonal antibodies in serological procedures such as enzyme-linked immunosorbent assays (ELISA), radioimmuno assay, electro-focussing, polyacrylamide gel electrophoresis, finger printing and allergic tests will become available.

The use of sophisticated microelectronic instruments for greater accuracy and mass sampling and testing of serum, blood and tissues

would be expanded to regional laboratories of the Department of Veterinary Services to provide for the needs of more progressive livestock farmers.

In response to this new scenario, the industry is expected to demand for more of the following services and actions, viz., (i) preventive veterinary medicine, (ii) minimal or disease free flocks or herds, (iii) control on veterinary drugs and chemicals, (iv) control in the use of antibiotics and additives in animal feeds, (v) rapid cow-side diagnostic services, (vi) research on flock or herd medicine and zoonosis, (vii) zoonotic disease-free food and companion animals, (viii) veterinary inspection of all animal products, (ix) quality control of beef, mutton, milk, eggs, pork and poultry meat, and environmental sanitation of the producing and processing centres.

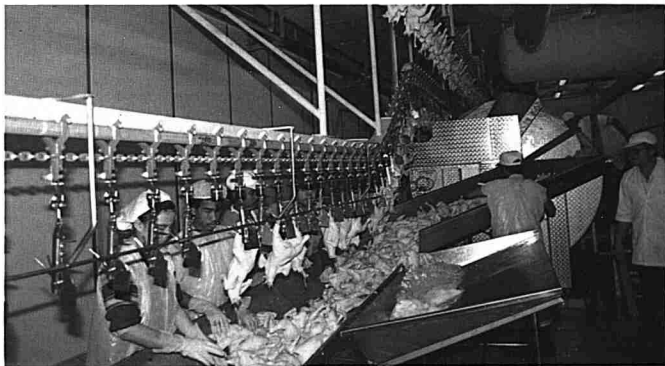
Marketing

Animal sales will become more organized and specific livestock market will emerge. Meat sales will be through franchised markets or supermarkets and temperature controlled retail shops. Consumer demands will eliminate non-hygienic meat stalls, illegal slaughtering, dirty abattoirs and open transport systems for carcasses and meat. Retailing will not only have

to be cost effective but also on quality of the produce. Quality standards for meat, milk, eggs and their products will be established and maintained. Regulations to enforce quality and hygiene of livestock produce will be more stringent. Meat, milk and eggs of the future would be free of harmful residues such as pesticides, antibiotics and hormones and would be labelled so. Control and monitoring of drugs used in animal production and therapeutics will become necessary as part of the early marketing process.

CONCLUSION

Rapid economic development in Malaysia has brought about changes in the economic structure with the non-agriculture sector overtaking the development of the agriculture sector. Within the agriculture sector, marked changes have taken place, namely the contribution of palm oil and cocoa has changed very substantially *vis-a-vis* the contribution of rubber. Further changes in the agriculture sector can be expected and livestock is predicted to contribute more to the overall growth of the agriculture economy in the next few years. The projected change would be fueled by the increased demand for livestock products which will gain more momentum in the 21st century. This



Modern poultry processing plant



Improved dairy cows

projection is very real, taking into consideration the expected increase in population and per capita consumption of the various livestock products as people gain in buying power and become more aware of the need for more protein. The encouragement of the government in generating industries that are export oriented will contribute further to these changes.

Major changes in the livestock sector in the 21st century are expected to cover three areas, viz., (i) feedlot beef production, (ii) integration of sheep production with plantation crops and (iii) vertical diversification in the poultry and swine industries.

Feedlot beef Production

With increasing land and labour costs and the possibility of labour shortage, the intensive system of beef production based on concentrate feeding using PKC present an excellent prospect for profitable ruminant farming. This system could reduce the fattening period of beef cattle from 36 to 18 months is an ideal livestock production system where land is limited.

Integration of sheep with plantation crops

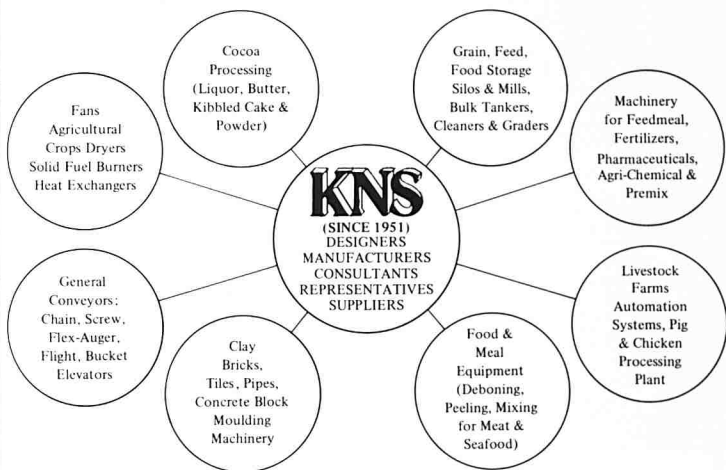
The growing of sheep in integration with plantation crops is a viable proposition to be considered in view of the vast tracks of plantations available in the country. Besides the production of mutton, the sheep can function as 'weeders' in the plantations. Another possible spin-off from the venture is a rug and carpet industry.

Vertical diversification of the poultry and swine industries

The poultry and swine industries are relatively advanced. Further development of these industries would be in the direction of greater intensification and efficiency, reduction in production cost and dependence on imported feeds, control and prevention of diseases and pollution. The establishment of a fully integrated swine enterprise inclusive of a breeder, porker, feedmill, slaughter house and processing will

become necessary to maximize the utilization of limited land and to take advantage of savings in transportation and fuller utilization of all byproducts. This needed trend has already been set in motion as exemplified by an integrated

farm in Muar which is producing three million day-old chicks, 400 - 600 thousand broilers and about 2,000 pigs a month. This farm is also involved in animal feed production with a capacity of 6 - 8 thousand tonnes.



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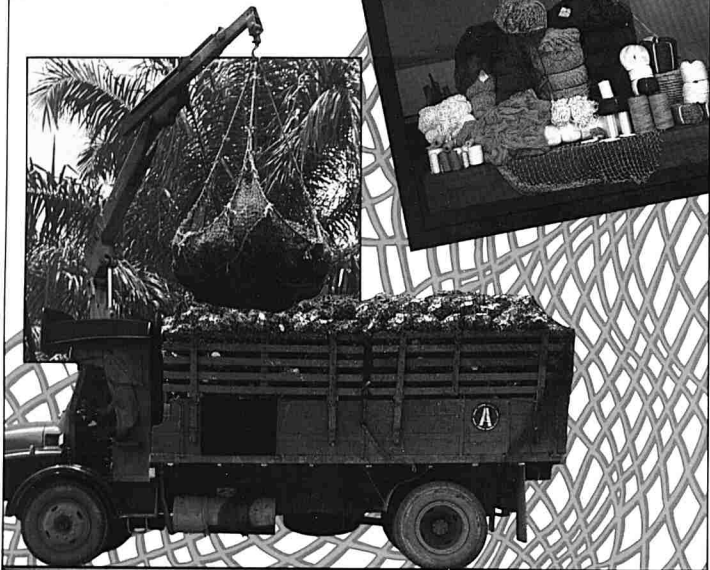
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The aquaculture industry in Malaysia is relatively small. It constitutes about 10% of the total fish production in the country. In 1986, the total production through aquaculture was 51,644 tonnes valued at M\$42.6 million. Cockle culture constituted the main bulk (88.4%) of this production. A breakdown of the production figures for 1986 is given in Table 1. Marine landings in 1986 decreased by 2.1% to 565,347 tonnes compared with 577,524 tonnes in 1985 and 757,358 tonnes in 1981 (Table 2).

Table 1. Production of fish, prawn and cockle in 1986 (tonnes)

	Ponds and disused mining pools	Cage	Cockles	Total
Brackishwater	303	955	45,664	46,922
Freshwater	4,709	12	-	4,721
Total	5,012	967	45,664	51,643

Table 2. Annual fish production in Malaysia (in tonnes)

Year	Peninsular Malaysia	Sarawak	Sabah
1969	302,885	14,006	25,603
1970	299,103	14,302	27,025
1971	323,107	14,399	27,737
1972	311,211	16,465	28,143
1973	371,351	38,356	32,208
1974	439,719	51,916	33,325
1975	375,234	63,939	34,036
1976	410,968	73,347	31,700
1977	497,952	83,295	36,200
1978	564,898	77,511	41,600
1979	570,905	82,293	41,900
1980	623,898	77,069	34,500
1981	649,315	68,043	40,000
1982	566,422	69,339	42,000
1983	609,055	70,438	48,000
1985	462,861	62,893	51,500
1986	446,376	67,971	51,000

Source: Annual Fisheries Statistics, 1987, Ministry of Agriculture Malaysia

In view of the decline in marine fish landings, the Government has identified aquaculture as a priority area for rapid development to augment the local fish supply and for export. The number of freshwater fish ponds, brackishwater ponds, number of cages, and the number of culturists in this business in 1986 are given in Table 3. The growth rate of the productive assets of the aquaculture industry shows that it has made good progress during the last few years. Cockle culture areas grew by 10% from 4,000 hectares to 4,446 hectares during the period 1980 to 1986.

There were 15,388 freshwater ponds and 563 brackishwater ponds with a total area of 2,594 and 476 hectares, respectively. The number and area of freshwater ponds were reduced by 11.7% and 12.4%, respectively, while that of brackishwater ponds increased by 17% and 4.6%, respectively. The reduction in number and area of freshwater ponds was due to cessation of operation of a number of the older ponds.

Table 3. The number of ponds, cages, area and number of culturists in Peninsular Malaysia, 1986

	Number	Area (ha)	No. of culturists
Brackishwater			
Ponds	563	475.8	168
Cages	8,740	82,256.8 sq.m	457
On-bottom Culture (cockle)	80	4,445.7	210
Freshwater			
Ponds	15,388	2,594.3	11,497
Cages	596	8,101.2 sq.m	71
Disused mining pools	841	1,296.2	625

Source: Annual Fisheries Statistics, 1987, Ministry of Agriculture

The numbers of culturists in Peninsular Malaysia and Sarawak in 1986 were 13,028 and 1,126, respectively. The breakdown of culturists in the Peninsula according to culture systems is as follows: constructed and old mining ponds 12,290 (94.3%), cages 528 (4.1%) and cockle culture 210 (1.6%). The number of culturists operating constructed/old mining ponds and cages decreased by 7.3% and 18.8%, respectively in 1987. The number of cockle culturists increased by 5.5 percent.

From a total number of 9,336 cages (90,360 square metres) in the Peninsula in 1986, 8,740 units (93.6%) were in brackishwater, and the remainder were under freshwater condition. The number and area of freshwater cages declined by 5.6% and 61.8%, respectively. However, the number and area of brackishwater cages increased by 59.5% and 34.6%, respectively. There were also an increase in the number and area of old mining ponds by 26.8% to 841 and by 4.8% to 1,296 hectares, respectively, in 1986.

The contribution of freshwater production decreased by 25.8% while that of brackishwater aquaculture increased by 3.5% during the same period. The most significant increase was in the production of cage culture by 137% while the increase was only 2% for cockle culture. Freshwater pond culture was reduced by 23.4% in 1986. The four major species, in terms of production, were cockles (*Anadara granosa*), grass carp (*Ctenopharyngodon idellus*), Indonesian carp (*Puntius gonionotus*) and siakap (*Lates calcarifer*). The species which have high wholesale values were cockles, siakap, grass carp and tiger prawn in order of decreasing importance. In 1986 together they formed about 72.3% of the total aquaculture value.

VARIOUS SYSTEMS OF AQUACULTURE

Coastal aquaculture

Cockle culture

The culture of cockles (*Anadara granosa*) depends on natural spats for its seed stocks, which are located in the mudflats of the coast of Selangor and Perak. During spat fall, the cockle seeds are collected by fishermen who sell them to buyers who in turn transport them to culture sites.

Cockle spats are spread over the nursery areas of cockle farms at various densities depending upon seed size. Farmers carry out culling regularly and harvest the cockles about six to seven months after initial stocking. To date, cockle culture is a profitable activity.

Mussel culture

The culture of the green mussel (*Perna viridis*) requires rafts with hanging ropes of jute or polyethylene as a substrate for spat settlement. Culling is also done to ensure even growth. The culture of the green mussel is in the Straits of Johore. One of the main constraints to the further development of the industry is the marketability of the cockles and mussels in the export market which demands that they meet specific quality standards through depuration. Pollution in the Johore Straits and along the west coast of Peninsular Malaysia is a major constraint in the culture of these bivalves.

Crab culture

The culture of the mangrove crab (*Scylla serrata*) is carried out mainly in the State of Johore. The availability of wild young crabs is not reliable. Some culturists in Johore use thin crabs in fattening crab ponds, feeding them with trash fish for a period of only a few weeks and then sell them live to restaurants where they command good price.

Marine fish culture

The culture of marine fish includes siakap (*Lates calcarifer*), grouper (*Epinephalus sp.*) and snapper (*Lutjanus johni*). Farming of marine fish is usually carried out in floating net-cages and, to a limited extent, in ponds in the East Coast of Peninsular Malaysia where suitable sites for cages are limited due to rough sea conditions, especially during the monsoon seasons.

Cage culture sites are limited to protected coastal waters where appropriate water quality prevails. Each floating cage system consists of the net-cage and a frame to support it. The frame is kept afloat by plastic drums or styrofoam blocks coated with fibreglass. The system is held in position by anchors. The net-cages can be of different sizes and mesh-sizes (Table 4). Each cage system can be a single unit or a maximum of 15 units. Usually each unit is made up of four cages. In the case of pond culture, both tidal and levee ponds are used for finfish culture. Normally, each pond is about 0.4 hectare in area.

Table 4. Number of culturists in Peninsular Malaysia

	Number	%
Constructed and old mining ponds	12,290	94.3
Cages	528	4.1
Cockle culture	210	1.6

In cage culture, rearing is divided into three phases:- the hapa phase, nursery and grow-out phases. This method of culture reduces the problem of cannibalism among the fish. In pond culture, the nursery phase is normally carried out in smaller ponds and the fish are subsequently transferred into larger ponds for growout. The grading is thus done only once. Since this is effective in reducing cannibalism, stocking rate is much less.

50 cm deep and fertilized with triple superphosphate and urea or chicken dung to induce plankton bloom. A day or two before stocking with fry, the water in the pond is topped up to a metre in depth.

Stocking is normally done early in the morning after the fry have received prophylactic treatment against diseases. Stocking densities vary with the type of culture system practised. The fry are first acclimatized to the local conditions before stocking.

The stocking density in the nursery cages is about 300 to 350 per square metre initially. They are then gradually thinned out in order to reduce the stocking density, and also to separate the different sizes to reduce cannibalism. When the fish are transferred to the rearing cages or growout cages in about three months time and weigh 300 grams each, the stocking density, would be reduced to about 100 fish per square metre.



Floating net-cage culture in lakes and mining pools

The net-cages are usually cleaned of bio-foulants by using strong water jets after every culture cycle. Repair and replacement of torn nets are usually done during the inter-culture period. In the case of pond culture, during the inter-culture cycle the ponds are flushed daily to remove sediments and waste from the last culture. Before starting the next culture, the pond is drained and dried and then teaseed cake is applied to kill potential predators or competitors. After the application of lime, the pond is filled with water to about

In pond culture, the fish fry are stocked at 25 fish per square metre and then reduced to one to three fish per square metre when they are transferred to the growout ponds after about two months' culture period. Grading is done only during the transfer from the nursery pond to the growout ponds.

The normal feed offered to the fish at present is trash fish. Feeding is done once or twice a day and the fish are fed to satiation, and this varies from three to ten percent body weight.

High mortality usually occurs during the early stages, especially a few days after they are stocked. This could be due to stress as a result of transportation and handling.

Diseases that are normally encountered during the culture are finrots, white spot, and cotton-wool disease. Parasites that commonly infect cultured fish are gill-flukes.

The fish attain marketable size of about 500 grammes after a period of six to eight months. Average survival rate in cage culture is about 50 to 60% while it is between 30 to 70% in pond culture. The expected production from cage culture is about 600 kilogrammes per cage as compared with an average of 500 kilogrammes per hectare in ponds.

The main areas for cage culture of marine fish are in Penang, Pulau Ketam, Selangor; Kukup, Johore; and Kuala Setiu, Terengganu.

POND CULTURE OF MARINE PRAWN

Like marine finfish culture, prawn culture in ponds use both tidal and levee ponds. Pond sizes vary

from very small to as big as five hectares each. The majority are between 0.5 and 1.0 hectare. There are three main types of culture systems in existence. They are the extensive, semi-intensive and intensive culture systems. The main differences between these systems are in their stocking densities, management techniques and expected production.

The three culture systems are summarized in Table 5. Pond preparation is similar to that for the finfish except that minimal water exchange is done within the first month in order to retain the natural productivity of the pond and to avoid injury to the still fragile postlarvae.

After culturing for about a month, water exchange is done practically every day with the semi-intensive and intensive systems. In case of extensive culture, the food supply comes from natural pond productivity and this is enhanced by regular fertilizer application through out the culture period. In semi-intensive and intensive culture, the shrimps are given specially formulated pellets either manufactured locally or imported from overseas.

Table 5. Various systems of prawn culture

Culture system	Stocking rate (No./m)	Management techniques	Expected harvest (tonnes/ha/culture)
Extensive	5	Ponds preparation include fertilization minimal water change and no supplementary feeding.	0.3 - 0.5
Semi-intensive	10 - 15	Pond preparation fertilization only for the first month, water change minimal during this period. 30% water change everyday and supplementary feeding needed. Mechanical aeration needed during the later stages.	1.0 - 2.5
Intensive	20 - 30	Pond fertilization includes fertilization only for the first month, 30% water change needed daily and fed with pellets necessary from the start of culture.	3.0 - 6.0

Normally after one month, the amount of supplementary feed is increased and further increments will be readjusted at regular intervals of every seven days or so as the prawn gains weight. Feeding frequency varies from three to five times daily, depending on the stocking density and the amount of feed given.

The period of culture varies from system to system. Lower stocking rates will result in faster growth rate and the prawns can reach marketable size as early as 60 days. However, in semi-intensive and intensive culture, the harvest is carried out after three or four months. If partial harvest is practised, the first crop can be harvested from the second month.

The present yields with extensive culture are around 300 to 500 kg/hectare/culture while yields of 1 to 2.5 tonnes/hectare/culture with semi-intensive appear to be attainable. In the case of intensive culture, a production of 3.0 to 6.0 tonnes/hectare/culture can be achieved.

diversify their production in order to face the high fluctuations in the price of finfish and thus limit their financial risks. Floating cages are not the common way to farm prawns since they are essentially benthic in habits. This results in extremely low production standards such as high mortalities, and low feed conversion ratios. However, this activity may be profitable due to the very high price of the product in the Singapore market.

One of the main problems faced by shrimp culturists is ponds built in acid sulphate soils. Correction measures require several years by which time the culturist may face acute cash flow problems. Though the technology is in existence, there is still lack of skill and experienced manpower to run the farm successfully. Disease is one of the greatest threats in shrimp farming and to date very little information on disease management is available.



Tiger prawn pond (Levee pond)

Prawn culture in floating net-cages

This activity is very limited and has been reported to be confined to Johore where production (essentially *Penaeus monodon*) does not exceed a few tonnes per year. The prawns are sold alive to the Singapore market. The production cages are similar with those used for finfish culture. This activity is carried out by operators who wish to

FRESHWATER AQUACULTURE

Freshwater fish farming at present can be considered as small-scale activities for self-consumption rather than for commercial purpose. Most freshwater ponds are run as a secondary activity. Each farmer may have one or two ponds of sizes varying between 0.14 and 0.17 hectare.

Production is mainly concentrated on the big-head carp (*Aristichthys nobilis*), grass carp (*Ctenopharyngodon idellus*), common carp (*Cyprinus carpio*), Indonesian carp (*Puntius gonionotus*), the catfish (*Clarias macrocephalus* and *Pangasius sp.*), snake-skin gourami (*Trichogaster pectoralis*) and tilapia (mainly *Oreochromis niloticus*).

At present, two kinds of ponds are used for freshwater fish culture, viz., excavated ponds and disused mining pools.

Excavated ponds

They are located all over Malaysia, especially in the states of Perak and Negeri Sembilan. Ponds are built at any site which has a sufficient supply of quality water. All these ponds are earthmade and are partially excavated. Usually the water supply is provided by gravity flow, or sometimes pumps are used. The pond is small, especially older ones (0.17 hectare), but newer ponds are bigger (0.22 hectare).

Two culture systems are usually used, viz., either the farmer produces fish through polyculture method or monoculture. In polyculture, a few compatible species are cultured under the semi-intensive system. The species used are Indonesian carp, common carp, jelawat, grass carp and big-head carp. Sometimes polyculture of fish with freshwater prawn is also practised. A stocking density of 1,000 to 8,000 fish per hectare in various combinations is a common practice. The stocking density can be increased to 18,000 fish/prawn per hectare in the polyculture of *Macrobrachium rosenbergii* and finfish.

Fertilizers (chicken manure or cow dung) are usually applied to the ponds. Supplementary feeds in the form of chicken intestines, broiler mash with ground nut meal and grass are given to the fish. Mortality of fry is usually high between 30 and 40 percent. The duration of the culture is between six to twelve months, and the yield is usually low between 0.9 to 2.5 tonnes per year. Harvested fishes have an average of 0.6 kg for common carp and Indonesian carp, while the grass carp and big-head carp may be over 1.2 kilogrammes.

In monoculture, freshwater prawns, grass carp, jelawat, tilapia or catfish may be used. The stocking rate may vary from 1,250 - 2,500 per hectare for grass carp, 50,000 to 250,000 for freshwater prawn, 10,000 to 40,000 for tilapia and 40,000 to 500,000 for catfish.

The rearing period may be as short as four months for the freshwater prawn and tilapia, and may be as long as six to ten months for the carps. In all cases supplementary feeds in the form of wet feeds or pellets are given. Production is usually high, between three and seven tonnes per hectare per year.

Mining pools

The mining pools used for fish culture are largely concentrated in Perak, Negeri Sembilan and Selangor. These pools are the result of excavation of the ground during mining operations, mainly by dredge and gravel pump. They range in size from about 0.3 to 10 hectares. The species cultured are limited to grass carp, big-head carp and tilapia. Stocking density of cultured fish is about 1,500 to 2,000 grass carp and about 500 to 600 big-head carp per hectare. Mining pool culture is undertaken with complementary agriculture and animal husbandary activities. The three-commodities integrated farming consisting of crops (vegetable, banana, papaya), livestock (pigs, cows, chicken, ducks) and freshwater fish which is a major feature of Malaysian freshwater aquaculture.

The mortality is comparable with that observed in excavated ponds (20-30%) except for the big-head carp which is lower (0-10%). The production period is between 10 and 14 months. The production is low and usually around 1 to 2.5 tonnes/hectare/year. Harvested fish have an average weight of two kilogrammes for grass carp, 3.5 kg for big-head carp and 0.6 to 1.0 kg for tilapia.

Floating cage culture of fresh water fish

The production of freshwater fish in cages is still very limited in comparison with brackishwater cage culture or with the production in ponds. Floating cage culture of freshwater fish is undertaken in large disused mining pools, in impoundments such as Chenderoh and Durian Tunggal. The culture is intensive and centre around the monoculture of grass carp, catfish (*Pangasius sp.*) (both at about 12 fish per square metre), and Indonesian carp and tilapia (36 fish per square metre). Utilization of valuable species such as marble-goby (*Oxyeleotris marmoratus*) is facing a problem of fry availability. Harvesting of marketable fish is usually carried out by the fish buyer who supplies nets and manpower during harvesting.

Harvested fish are transported live in containers with aeration.

MARKET

Most of our aquaculture products find ready domestic markets or export markets. Freshwater fish is usually sold in the local market, although some is exported to Singapore or Hong Kong. In the urban areas, for example, the Chinese carps, grass carp, big-head carp and the common carp are sold in the fresh fish market while tilapia, marble-goby, catfish and freshwater prawn are marketed directly to restaurants. Outside the major urban areas and in the country-side, the demand for fresh Indonesia carp, catfish and tilapia is high, but there is a very small live fish market. The marine finfish aquaculture industry also caters to the live fish trade. The fish, mainly the siakap, is sold live to restaurants in the major towns in Malaysia or Singapore. Cockles and mussels are sold in wet markets throughout the country.



Harvesting of freshwater fish

Most cultured prawns, mainly the tiger prawn, are exported to Japan in the frozen form. Live prawns are also exported to Singapore. Some of the small farms sell their live or fresh prawns in local markets. Due to the huge demand overseas, prawns will find ready markets in consumer countries such as Japan and U.S.A. which are willing to pay fairly high prices. The world harvest of warm and cold water marine shrimps and freshwater prawns is now well over two million tonnes a year, and it supports a trade of some 600,000 tonnes of products with an estimated value of M\$10,280 million. Demand

has increased by some 200,000 tonnes in the last five years and continues to increase and it will be increasingly met by farming in the future.

The phenomenal growth in world production of prawns is largely due to improved technology in both hatchery and grow-out ponds. The traditional source of prawns was the sea which accounted for over 95% of the world production in the 1970s. However, a continuous downward trend has been noted owing to decreasing harvest from natural stocks and increasing cost of fishing. By the end of 1990, aquaculture is expected to supply at least 25% of the world's shrimp requirement. This contrasts with the 1% share of farmed shrimp in the 1970s and the current share of about 6% of world production. With so many shrimp-producing countries competing to capture this lucrative market, farmed prawns will continue to grow in market share compared with prawn caught from the sea. Taiwan, Indonesia, China, Thailand and India are the major producers in the Asia Pacific region, while Ecuador and Mexico are the major producers in the Latin American region. The major markets for shrimps are Japan, United States and Europe, with Japan having the highest per capita consumption of shrimp in the world at three kilogrammes per person. At present, domestic production accounts for less than 10% of its requirement.

With the exception of Taiwan and perhaps China, shrimps from the above-mentioned countries come mainly from the sea. The major shrimp producing countries are presented in Table 6.

Table 6. Major shrimp producing countries

Country	Production '000 tonnes	%
Taiwan	50.1	18.8
China	40.3	15.2
India	31.7	11.9
Indonesia	26.5	10.0
Thailand	15.8	6.0
Australia	13.9	5.3
Philippines	13.8	5.2
Bangladesh	13.1	4.9
Vietnam	12.3	4.6
Greenland	10.2	3.8
Mexico	5.4	2.0
Malaysia	4.8	1.8
Pakistan	3.7	1.4
Canada	3.6	1.3
Iceland	3.3	1.2

The U.S. shrimp consumption has increased by over 30% since 1982. At least 60% of the shrimp supply of the U.S. is imported mainly from Mexico and Ecuador. Recently, Asia has also become an important supplier. The demand for Asian shrimp is expected to continue to rise. Recent changes in the American eating habits reflect a significant shift from meat products to seafood products. Per capita consumption of shrimps has increased by 28% from 1980 to 1985 (1.2 kg/year). Shrimps are high in protein and cholesterol but low in saturated fat, sodium and calories.

In general, the U.S. market is more price-conscious than Japan. Unlike the Japanese importer, the U.S. food wholesaler/trader is generally quite conservative. Furthermore, stringent U.S. Food and Drug Administration (FDA) regulations have somewhat hampered the free flow of Asian shrimps into America. However, the overall potential of the U.S. market remains good. Further efforts on promotion and product diversification will be instrumental to the future expansion of the market.

Due to the natural abundance of cold-water shrimps in Europe, the European consumers are accustomed to eating the cold-water species of shrimps. Despite the growing availability of tropical shrimps, cold-water species are strongly preferred. Over 50% of the EEC's import consists of cold-water shrimps from the northern areas such as Greenland. The market for tropical species is mostly in Belgium, United Kingdom, West Germany, Italy and France.

The European market is characterized by low per capita consumption since shrimps are still considered a luxury food. As the supply of cold-water shrimps is predicted to be more limited in the future, the future of tropical shrimps in the EEC market is promising. This is likely to be boosted by an improvement of the region's economy.

It is evident from the above discussion that Malaysia's share in this lucrative shrimp export market is very small. In 1987 its share in the Japanese frozen shrimp import market was only 1.8 percent. However, with encouragement from the Government, ideal climatic conditions, the abundance and availability of natural resources, relatively lower costs than the highly industrialised economies, Malaysia can effectively compete for a bigger share of the shrimp export market. Every effort should also be made to develop and market other species of aquaculture products as Malaysia has several species of aquatic organisms which are currently being cultured or have the potential for culture (Table 7).

Table 7. List of cultured species of aquatic organisms in Malaysia

Freshwater species
Javanese carp, <i>Puntius gonionotus</i> .
Common carp, <i>Cyprinus carpio</i> .
Grass carp, <i>Ctenopharyngodon idellus</i> .
Bighead carp, <i>Aristichthys nobilis</i> .
Silver carp, <i>Hypophthalmichthys molitrix</i> .
Jelawat, <i>Leptobarbus hoevenii</i> .
Snake-skin gourami, <i>Trichogaster pectoralis</i> .
Tilapia, <i>Oreochromis niloticus</i> .
Red Tilapia hybrid, <i>Oreochromis sp.</i>
River catfish, <i>Pangasius sutchi</i> .
Marble-goby, <i>Oxyeleotris marmoratus</i> .
Catfish, <i>Clarias batrachus</i> , and <i>C. macrocephalus</i> .
Giant freshwater prawn, <i>Macrobrachium rosenbergii</i>
Brackishwater/marine species
Groupers, <i>Epinephelus tauvina</i> .
Sea Bass, <i>Lates calcarifer</i> .
Snapper, <i>Lutjanus johni</i> .
Rabbit fish, <i>Signaus sp.</i>
Tiger prawn, <i>Penaeus monodon</i> .
Banana prawn, <i>P. merguensis</i> .
Mangrove crab, <i>Scylla serrate</i> .
Cockle, <i>Anadara granosa</i> .
Mussel, <i>Perna viridis</i>

DEVELOPMENT AND INVESTMENT

Malaysia has over 570,000 hectares of mangrove swamps, 113,000 hectares in Peninsular Malaysia, 284,000 hectares in Sabah and 173,000 in Sarawak. Assuming that at least 10% of this area can be developed for aquaculture, a production of between 171,000 tonnes to 342,000 tonnes of fishery products can be expected. There is also an estimated 40,000 hectares of freshwater bodies suitable for freshwater farming. There is an immense potential for aquaculture development particularly for cage culture in man-made water bodies. By the year 2,000, irrigation and hydroelectric dams would have created impoundment with a water surface area of 206,000 hectares. Another 57,182 hectares of ex-mining land can be developed into freshwater fish culture. Besides, numerous lagoons, protected coasts, bays and relatively calm straits are suitable for cage and raft culture of finfish and molluscs. There are also extensive unutilised mudflats in Sarawak and Sabah which can be used for cockle farming. Considering all the above mentioned potential sites and the availability of indigenous species in the country, an estimated production of between 420,000 and 900,000 tonnes of finfish and molluscs can be achieved.

Production of fishery products is projected to

POTENTIAL FOR AQUACULTURE



Oyster culture in an estuary

reach at least 206,070 tonnes by the year 2,000. As has been pointed out earlier, 88.4% of the present aquaculture production comes from cockle culture. It has been estimated that it is possible to increase cockle production to 84,480 tonnes by the turn of this century. An increase of about 121,590 tonnes would come from finfish, prawn and mussel culture. In order to meet this target, an annual increase of 10,000 tonnes per year is envisaged.

Today, a lot of interest has been shown in the

culture of the marine prawn, especially the tiger prawn (*Penaeus monodon*). A recent survey indicates that within the next five years close to M\$300 million is expected to be invested for large-scale prawn farmings by large corporations and multinationals. It is heartening to know that so much interest is being shown on prawn farming. Cost of labour in prawn production is still relatively low compared with that in the industrialized economies. But, Malaysia is not a low cost producer of prawn when compared with Indonesia, Thailand, Philippines and India (Table 8).

Table 8. Production cost per kilogramme of cultured prawns from various countries (1986)

Country	Cost per kg (US\$)
Japan	17 - 20
Taiwan	5 - 7
Indonesia	3 - 4
Malaysia	4 - 5
Thailand	3 - 5
Philippines	2 - 3
Ecuador	3 - 4
India	2 - 3

Malaysia has the potential to achieve the targetted production, given her abundance natural resources and equatorial climate which allow year-round production. Malaysian investments in shrimp farming have to date been estimated to reach M\$100 million. However, the returns have been absent or poor. A recent survey of 20 commercial prawn farms shows that about 30% of these farms were in severe financial troubles within three years of operation. About 60% of these farms were not able to realise their planned or anticipated yields even after five years of operation. Yet there are other prawn farms which have reported a gross profit of between 25 to 30% after two years of operation.

Sources: Malaysian Business, December 1986
 Bay of Bengal News, March 1987
 SEAFDEC, Extension Manual No. 5, 1983

CONSTRAINTS TO AQUACULTURE DEVELOPMENT

There is a lack of economy of scale in the setting up of shrimp farms. Projects have sprung up independent of each other on sites scattered throughout the country. Many of these farms were poorly sited. Many projects were large scale but based on short-term loans which matured way before any production was possible. In a haste to develop, many operators overlooked commonsense that foreign technology has to be adapted to local conditions, both ecologically and socio-economically. To some extent, a number of projects failed because they were badly planned and managed. Some of the other problems are presented in the following paragraphs.

Seed supply

For both shrimp and fish, the supply of seeds is still unreliable in terms of quantity, quality and consistency. The bottle-neck is also in the larval rearing which faces high mortality. In the case of tiger prawn, the brood stock supply has to come from the sea, though there is some success in the eye-stock ablation technique of spawning.

Feeds

Feed cost constitutes about 40 to 60% of production cost. Every effort should be made to reduce feed cost such as through the use of cheaper protein sources. There is a need to develop a cost-effective feed with a high conversion ratio and good stability.

Improvement of culture methods/ systems

Although the culture technologies of shrimp, fish and mollusc are known, there is still room for productivity improvement. There are still problems at the nursery stage when very often a high mortality is encountered.

Management

Most of the project manager are either not well-trained or lack the necessary experience to manage aquaculture projects properly.

Market

The main limiting factor for the development of finfish culture is the uncertainty of the market. As in the case with prawn, outlet for export market should be expanded.

Problems of aquatic pollution

Both marine and freshwater organisms are increasingly exposed to aquatic pollution. This includes industrial effluents, sewage discharge into rivers, lakes and the sea. All these affect the cultured organisms. Water quality standards have to be set and strictly enforced to ensure the success of the aquaculture industry.

CONCLUSION

It is evident from the above that Malaysia has the potential and capacity to develop aquaculture for her own needs and also for the export market. However, in order to achieve this target, judicious planning, hard work, a lot of support from the Government and a special breed of aquaculturists who are dedicated and devoted to the business are required.

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List of Regulations and Acts relating to agriculture

Chapter 12

The primary objective of providing this list is to acquaint entrepreneurs, investors and clients involved in agriculture and its related activities with some of the more important regulations and acts governing them. Only a brief summary of these regulations and acts are presented and readers are advised to refer to the full text for more details.

The information contained in this chapter should be read together with that in Chapter 13. The latter chapter contains information on public sector agencies involved with Malaysian agriculture. A list of the principal officers administering these agencies and the addresses of their offices is also presented.

For the ease of reference, the regulations and acts are presented in alphabetical and then chronological order.

AGRICULTURAL PESTS AND NOXIOUS PLANTS ACT, 1976

This Act is to amend and consolidate the laws relating to the eradication of agricultural pests and noxious plants and to provide for the control and prevention of plant diseases and for matters connected therewith. The Crop Protection Branch of the Department of Agriculture is responsible for the implementation of this Act.

This Act contains the power of the Director and the appointment of Inspecting Officers. The Inspecting Officers have the power to inspect and examine such land and any plant thereon to ascertain whether any noxious plant or pest is present on such land or whether such land or any plant thereon is in a condition favourable to the introduction or spread of any noxious plant or pest; and to remove in any way such portions of any such plant as he may deem necessary for purposes of examination or investigation. Also included is the power to direct destruction or treatment of plants and pests or treatment of land.

ANIMALS ORDINANCE, 1953

This is one of the most important legislations on veterinary matters in the country. The Animals Ordinance, 1953 contains provisions for the

control, prevention and treatment of animal diseases. It regulates the movement, imports, exports and quarantine of animals. It empowers the Minister to make regulations regarding all aspects of animal health and some aspects of animal production. The main section of the Ordinance covers imports and exports of animals and birds, prevention of the spread of animal diseases, prevention of cruelty to animals, conservation of livestock, improvement of livestock and powers to make rules.

ANIMAL (IMPORTATION) ORDER, 1962

This Order is also made under the provision of the Animals Ordinance 1953. It specifies the prohibition of imports of carcasses except with written permission. First and Second Schedules of this Order specify the product, the country from which import can be made and the purpose and restrictions imposed on these imports.

ANIMALS RULES, 1962

These Rules are made under the provision of the Animals Ordinance 1953 and prescribe the landing places, quarantine fees, licences and certificates and penalty, when importation/exportation of animals take place.

BANK PERTANIAN MALAYSIA ACT, 1969

This is an Act to incorporate the Bank Pertanian Malaysia to organize, provide, supervise and co-ordinate the grant of credit for agricultural purposes in Malaysia.

The term agriculture includes any activity in agriculture, horticultural or forestry production, fisheries and the use of land for any purpose of husbandry. This Act contains the functions of this Bank and the authorized business of the Bank.

CATTLE REGISTRATION ENACTMENTS

This is a State Enactment passed by the Legislative Assembly of the State. In Kedah it was

passed on 29th December, 1965 and requires the registration of all cattle in the State with the Penghulu of the Mukim. It also requires that all births, transfers, movements, deaths and slaughters be reported to the Penghulu who will submit monthly returns to the State Director of Veterinary Services. The State Director shall then compile an annual return to determine the increase or decrease of the cattle population in the State. Similar enactments are also in force in the States of Kelantan and Perlis.

CONTROL OF PIG REARING ENACTMENTS

These are State Enactments passed by the State Legislative Assemblies of each State. So far four States have passed these Enactments. These were effective on 1st September, 1975 in Johor; 21st August, 1976 in Terengganu; 1st January, 1980 in Malacca and 1st January, 1981 in Negeri Sembilan. Under these Enactments, all pig farms in these four States are required to be licensed by the Director of the Veterinary Services Department of each state who may impose conditions necessary to control pollution from pig wastes. In the State of Kedah, Enactment No. 5 (Animal Trespass) (Amendment 1974, Kedah) is in force which requires all pigs to be kept in properly fenced enclosures. In the State of Selangor, the Control of Cattle Enactment, 1971, provides for the control of livestock rearing including pigs in a Municipal Council of District Council areas. Written permission from the proper authority is required for keeping of livestock within such areas.

CONTROL OF SLAUGHTER RULES, 1975

Control of Slaughter Rules, 1975 provide for the slaughter of animals only in approved abattoirs. Other provisions included in the Rules are the application and fees payable by an operator, permits to slaughter outside the abattoir, emergency slaughter and the establishment of abattoirs. They also state the powers of inspection, offences and penalty, revocation, suspension of registration and also delegation. Since 1975, abattoirs at Shah Alam, Seremban (Senawang), Johor Bahru, Ipoh, Taiping, Kuantan, Malacca (Air Keroh) and Alor Setar (Mergong) have been approved to date.

ENVIRONMENTAL QUALITY ACT, 1974

This is an Act related to the prevention, abatement, control of pollution and

enhancement of the environment. For the purpose of this Act, the Environmental Quality Council was established. The term environment refers to the physical factors of the surroundings of the human beings including land, water, atmosphere, climate, sound, odour, taste, the biological factors of animals and plants and the social factor of aesthetics.

An application for a licence or for any renewal or transfer thereof shall be made to the Director General in such form as may be prescribed and shall unless the Director General allows payment by instalments be accompanied by the prescribed fee. A licence specified under this regulation remains in force for a period of one year from the date of its issue and may be renewed upon application made within the time stipulated. This Act also contains the prohibition and control of pollution and the regulations of the Council.

FEDERAL AGRICULTURE MARKETING AUTHORITY ACT, 1965 (Revised - 1974)

This is an Act which empowers the Federal Agricultural Marketing Authority (FAMA) to supervise, co-ordinate and improve the marketing of agricultural produce in Malaysia, to provide credit facilities for such marketing and for matters connected therewith. Agricultural produce refers to any agricultural or horticultural produce, whether processed or otherwise, and any such other produce as may be prescribed by the Yang di-Pertuan Agong, but shall not include pineapple, rubber, paddy and rice.

Besides these functions, the Authority has powers to regulate the marketing of any agricultural produce, particularly through licensing of wholesalers, retailers, processors, importers and exporters; to prohibit, regulate or control the movement of any agricultural produce; to prescribe the grading, packing and sealing of any agricultural produce and to issue certificates in respect thereof; to deal in agricultural industry equipments; to require persons engaged in the processing or marketing of any agricultural produce to register and to give, in such manner as the Authority may specify, such information with respect to such produce as the Authority may deem necessary; to impose fees or any other charges it deems fit for giving effect to any of its powers of functions; and to exercise all functions and powers and perform all duties which under or by virtue of any other written law may be vested or delegated to it.

FISHERMEN'S ASSOCIATIONS ACT, 1971

This Act provides for the establishment of Fishermen's Associations in Malaysia whose objectives are to manage and operate a financial aid scheme to provide credit and capital resources to members; to promote member education and training, including circulation of information on matters of interest to members; to organize exhibitions, fairs and displays; to organize fishing operations or aquaculture; to organize the assembling, storage, processing, distribution and disposal of members' products; and to provide health centres, nurseries, thrift institutions, insurance, mutual aid and other welfare programmes. The other objectives of the associations are to assist in investigations and collection of statistics on the fishing industry; to provide buoys and other navigation aids and fishing harbour facilities; to mediate in disputes involving a member or members arising in the fishing industry; and to organize member participation in any conservation programmes directed by the Director General of Fisheries. This Act provides for the registration and list the categories of people who are eligible to be members of the associations.

FISHERIES ACT, 1985

This Act is related to fisheries, including the conservation, management and development of maritime and estuarine fishing and fisheries in Malaysian fisheries waters, and to turtles and riverine fishing in Malaysia. Fish in this Act means any aquatic animal or plant life, sedentary or otherwise, and includes all species of finfish, crustacea, mollusca, aquatic mammals, or their eggs or spawn, fry, fingerling, spat or young, but does not include any species of otters, turtles or their eggs. This Act outlines general licensing provisions, offences and enforcement procedures.

FOOD ACT, 1983

This is an Act that protect the public against health hazards and fraud in the preparation, sale and use of food, and for matters incidental thereto. By the powers conferred by the Act, the Minister of Health has made the Food Regulations of 1985. The term food refers to every article manufactured, sold or represented for use as food or drink for human consumption or which enters into or is used in the composition,

preparation, preservation of any food or drink and includes confectionery, chewing substances and any ingredient of such food, drink, confectionery or chewing substances.

The Minister may appoint authorized officers as he may consider necessary for the purposes of this Act. This Act contains the powers of authorized officer and also includes the offences and evidence. This Act also contains the provision for importation, warranty and defences of this industry.

LEMBAGA KEMAJUAN IKAN MALAYSIA ACT, 1971 (Amendment - 1977)

This Act provides for the establishment and incorporation of Lembaga Kemajuan Ikan Malaysia (LKIM) whose functions are to promote and develop efficient and effective management of fisheries enterprises, and to provide and supervise credit facilities for fish production, ensuring that these facilities are put to maximum use. Beside these functions, the Lembaga has the power to make such rules as to regulate the control and management of any assistance (whether financial or otherwise) which may be accorded to fishing enterprises; and to control the marketing and distribution of fish belonging and assigned to the Lembaga. The term fish includes any of the varieties of marine, brackish-water or fresh-water fishes, crustaceans, aquatic mollusca, marine sponges, trepang and other aquatic life and the products therefrom, but does not include turtles or their eggs.

LEMBAGA PADI DAN BERAS NEGARA ACT, 1971 (Amendment - 1974)

This Act provides for the establishment of the Lembaga Padi dan Beras Negara (LPN) whose functions are to ensure a fair and stable price of rice for all consumers and farmers and also to ensure sufficient supplies of rice to meet any emergencies. This Act also contains the enforcement regulations and penalties for all offences related to activities in connection with this commodity.

MEAT INSPECTION RULES, 1985

The Meat Inspection Rules, 1985 are established under the provisions of the Animals Ordinance,

1953. The Rules stipulate the sanitary requirements of slaughter houses and provide for inspection services. They also stipulate the inspection fees and requirements for labelling, marking, sampling, laboratory examination and impose penalty. The Rules include four Schedules detailing the sanitary requirements of slaughter house, inspection services, inspection and judgement of livestock/ carcasses and inspection fees.

NATIONAL TOBACCO BOARD (INCORPORATION) ACT, 1973 (Amendment - 1975)

This Act provides the establishment of the National Tobacco Board for betterment and proper conduct of the tobacco-producing industry, and to make provisions respecting the Board and the industry. The duties of the Board are to regulate, control and co-ordinate all activities related to the growing, curing, selling, purchasing, storing and the movement of the tobacco; to consider and promote some measures for improving those activities; to consider, promote and take some measures to prevent the occurrence and spread of diseases affecting tobacco; and generally to do everything for the betterment and proper conduct of the tobacco-producing industry. This Act also contains the regulations imposed on this industry and the control of the Board. The Board has the power to produce or to cancel/refuse a licence. This Act also contains the enforcement regulations and penalties related to all the activities in connection with the tobacco industry.

PESTICIDES ACT, 1974

For the purpose of controlling pesticides, the Pesticides Board was established under this Act. The Act includes the control of importation and manufacture of pesticides by registration and permits. A person desiring to import or manufacture a pesticide may apply to the Board in the prescribed manner for registration of the pesticide. It also controls the manufacture, sale and storage of pesticides by licensing. A person desiring to manufacture a pesticide may apply to the Board in the prescribed manner for a licence to manufacture the pesticide. The control of the presence of pesticides in food and death and

injury occasioned by pesticides, come under the jurisdiction of the Act. Besides these, the enforcement, rules and regulations are stated in order to provide a person who is interested in dealing with pesticides some guidelines.

POISONS ACT, 1952 AND POISONS REGULATIONS, 1952

This Act provides for the regulation of all drugs and chemicals that are classed as poisons. The Act controls import, storage, transport, labelling, supply (importation, possession, manufacture, compounding, storage, transport, sale and use of poison) including veterinary drugs.

PALM OIL REGISTRATION AND LICENSING AUTHORITY (INCORPORATION) ACT, 1976 (Amendment - 1982)

This Act provides for the establishment of the Palm Oil Registration and Licensing Authority (PORLA) for the betterment and proper conduct of the palm oil industry and to make provision in respect to the Authority and the industry. Besides the functions are included the powers of the Authority which include making regulations such as the requirement of registration and licensing of persons in respect to any or all activities that fall within the scope of the functions of the Authority; providing for matters relating to registration and licensing, including the manner of applying for registration and licences, the fee payable for licences, the matter to be considered in granting or refusing a licence, and the imposition and variation of conditions and restrictions.

VETERINARY SURGEONS ACT, 1974

This Act makes provision for the registration and practice of veterinary surgeons. It also contains provisions with regard to a period of public service by veterinary surgeons after registration. This Act regulates the conduct of the veterinary profession.

The Ministry of Agriculture is an organization involved in agriculture. It functions as a policy-maker, identifying, co-ordinating and implementing agricultural projects.

ACTIVITIES

The activities of the Ministry are undertaken through four departments and seven agencies, viz-a-viz :

- Department of Agriculture
- Department of Fisheries
- Department of Veterinary Services
- Department of Drainage and Irrigation
- Fisheries Development Authority of Malaysia (LKIM)
- Malaysian Agricultural Research and Development Institute (MARDI)
- Federal Agricultural Marketing Authority (FAMA)
- Muda Agricultural Development Authority (MADA)
- Kemubu Agricultural Development Authority (KADA)
- Bank Pertanian Malaysia
- Farmers' Organization Authority

KEY PERSONNEL

Minister of Agriculture

Y.B. Datuk Seri Sanusi Junid

Deputy Minister of Agriculture I

Y.B. Kassim Ahmed

Deputy Minister of Agriculture II

Y.B. Dato* Alexander Lee Yu Lung

Political Secretary to Minister of Agriculture

Bahador Shah bin Md. Isa

Secretary General

Dato* Ahmad Badri bin Mohamed Basir

Deputy Secretary General I

Abu Bakar bin Mohd. Noor

Deputy Secretary General II

Datuk T. Puvanarajah

Under Secretary Finance Division

Tuan Hj. Mohd. Noor Mohd. Ali

Under Secretary Planning and Policy Division

Shaik Ahmad Sukarno bin Shaik Md. Hussein

Under Secretary Agricultural Economics Division

Wan Ibrahim Wan Daud

Under Secretary Monitoring and Evaluation Division

Lim Heng Boon

Head of Public Relations Unit

Hamdan bin Sulaiman

MINISTRY OF AGRICULTURE

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Bank Pertanian Malaysia (BPM)

Bank Pertanian Malaysia or the Agricultural Bank of Malaysia is an agricultural credit institution fully owned by the Government. It was established by an Act of Parliament on 1st September 1969.

OBJECTIVES

Its objectives as stated in the Bank Pertanian Malaysia Act, 1969 are as follows :

- To promote sound agricultural development in Malaysia or any part thereof.
- To co-ordinate and supervise the grant of credit from public funds for agricultural purposes by various programmes or bodies of persons, whether incorporate or otherwise.
- To provide loans, advances and other credit facilities for the development of agriculture, including production and marketing.
- To mobilize savings with particular regard to the agricultural sector and in furtherance of this objective, to accept savings and time deposits.

The objectives stipulated above allow broad areas of coverage by the Bank ranging from agricultural production to processing and marketing activities not only in the food sector but also in non-food sectors like forestry, rubber, oil palm and tobacco.

BPM as a general rule finances only direct agricultural activities or facilities directly related to agriculture and rural development.

FUTURE PLAN

For the future, BPM will continue to stress its role as the premier development bank for the agricultural sector. Towards this end, BPM will continue to enhance its varied services to the sector and where required initiate new programmes in response to the needs of it.

In response to the preferences of its customers who are predominantly Muslims, BPM intends to

introduce the rules of Syariah in its loan and banking operations in the future. A working committee was formed in 1986 to study BPM's operation with a view to accommodating transactions in accordance with Islamic principles, rules and practices.

In keeping with its modernization efforts, BPM plans to move aggressively to computerize its operations and provide a better service to its clients. To date the Bank has computerized the operation of several departments and branches. A network linking all the systems in the Head Office and all the branches will be implemented next in order to establish an integrated management information system in the Bank. More personnel will be sent for computer training and more funds will be allocated for this modernization programme.

Lastly, as the only development bank in the country devoted exclusively to agriculture, BPM has the opportunity of developing expertise in agriculture financing. The Bank will be embarking on a programme to pool the knowledge and expertise gained within the Bank to produce authoritative reports on agriculture development and agriculture financing in Malaysia. These reports will be made available to the public in the near future.

KEY PERSONNEL

Chairman

Y.B. Datuk Haji Mohd. Abu Bakar Rautin Ibrahim

General Manager

Abu Bakar Yusof

Deputy General Manager I

Hashim Othman

Deputy General Manager II

Zulkifli M. Noor

Manager, Supervision Division

Tuan Hj. Wan Lokman Datuk Wan Ibrahim

Manager, Loan Appraisal Division

Mohd. Rosli Abdul Aziz

Manager, Administration Division

Tuan Hj. Ahmad Hj. Mohd. Alim

Manager, Planning and Development Division

Tuan Hj. Abdul Rahman Ramli

Manager, Banking Division

Tuan Hj. Abdul Aziz Ibrahim

Manager, Human Resource Development
Division
Puasa Osman

BANK PERTANIAN MALAYSIA
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Department of Agriculture (DOA), Peninsular Malaysia

The Department of Agriculture has come a long way since its formation in 1905. It has expanded tremendously to meet the rising demands of the smallholders sector and today, its main thrust is on agricultural extension.

OBJECTIVES

In consonance with the Government's New Economic Policy (NEP), and the National Agricultural Policy (NAP), the DOA addresses itself to the following objectives :

- To increase productivity of the farm through effective transfer of farm technology.
- To effect changes in the attitudes of farmers to be more willing to adopt new technology as well as to participate more actively in agricultural development.
- To increase the contribution of the agricultural sector to the national economy by encouraging and promoting the cultivation of specific crops.

STRATEGIES

In order to meet the aforementioned objectives, the following strategies have been formulated.

- Identification of the target groups in order to formulate appropriate programmes to meet their needs.
- Strengthening the extension services for effective transfer of modern technology by providing adequate facilities.
- To intensify social and institutional development activities for farmers in order to expedite changes in their attitudes to be more self reliant; and to participate actively in commercial agricultural activities.
- Implement programmes to encourage farmers to cultivate specific crops collectively (group

farming) in order to increase productivity and income.

- Provide technical support services in crop production, crop protection, soils management and agricultural mechanization.
- Conduct pre-service training programmes for future agricultural operatives; in-service training programmes for officers in all categories; and specially designed programmes for potential entrepreneurs.
- Provide services for planning, co-ordination, monitoring and evaluation of Department's programmes/activities, and implementing the agricultural information system.
- Enforcement of the Pesticide Act 1974, and the Plant Quarantine Act 1976.

FUTURE PLAN/PROGRAMMES

The DOA will continue to assume its role as a lead agency in agricultural development right up to year 2000. The DOA will intensify its efforts to ensure that 7,720 farmer groups embracing 488,100 farm families will be serviced by the T & V System.

The thrust of DOA's programmes will be towards inculcating in the farmers a spirit of self-help and group effort to uplift their standard of living. Towards this end, farming activities of farmers will go beyond merely subsistence level; it will take the form of a commercialized venture, through group farming.

With the launching of the NAP, and the FMP (1986-1990), all efforts at agriculture development will be concentrated towards achieving the objectives of the Policy and the Plan.

KEY PERSONNEL

Director General

Dato' Abu Bakar Mahmud

Deputy Director General

Tuan Hj. Khairi bin Hj. Mohamed

Assistant Director General (Planning & Development)

Abdul Wahid Jalil

Assistant Director General (Extension)

Tuan Hj. Harun bin Mohd. Arabee

Director of Farm Institutions Development

Abdullah Ujang

Director of Commodity Development

Talib bin Majid

Director of Crop Protection

Nik Abdul Halim bin Nik Yusoff

Director of Soil Management

Abdul Jamil bin Mohd. Ali

Director of Training and Career Development

Kammaruzzaman bin Hj. Alias

Director of Administration and Finance

Rukiah Sham

Director of Cartography and Agricultural Information

Mohamad Noh bin Samik

Assistant Director of Coconut Area Rehabilitation

M. Sivanaser

Assistant Director of Agricultural Mechanization

Zainol Rashid bin Mohd. Daud

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Key Personnel in the implementation of important projects and programmes of DOA**Foreign Technical Aid Programme**

Sofian Mohd. Salleh

Mustafar Muda

International Relations (ASEAN)

Sofian Mohd. Salleh

Seed Project

Chin Chen Chiang

Fruit Programme

Ramli Burhanuddin

Cocoa/Coconut Programme

M. Sivanaser

Vegetable Programme

Chua Lee Kiang

Farm Management and Statistics Programme

Dr. I. Azmi bin Mat Akhir

Extension Training Programme

Ahmad bin Hj. Othman

Enforcement of Pesticides Act 1974

Dr. A. Balasubramaniam

Enforcement of Plant Quarantine Act 1976

Ding Siew Ming

Public Relations

Khamsiah Hj. Muhammad

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Hassan bin Harun

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Lundang

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Abdul Aziz Dollah

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Tuan Hj. Wan Zulkifli Wan Hassan
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Nordin bin Othman
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Department of Fisheries, Peninsular Malaysia

The Department of Fisheries is under the Ministry of Agriculture. Its responsibilities are to maintain, manage, conserve, protect and develop the fishing sector in Malaysia.

OBJECTIVES

The main objectives of the Department are :

- To plan and implement management policies and to protect fisheries resources by way of intensive supervision and enforcement.
- To accelerate the development of deep sea fishing.
- To promote higher yields of fish, prawn and the like.
- To plan and implement fisheries development projects and to ensure that they are in line with the country's New Economic Policy and National Agriculture Policy.
- To assist fishermen and also fish "culturists" in the use of new technologies to increase their farm income.
- To provide the fishing industry enough manpower with the technical know-how and new technology of deep sea fishing.

ACTIVITIES

The activities of the Department are :

- Programme administration
- Planning and development
- Fisheries extension
- Management and conservation
- Fisheries Research
- Training and technology development

KEY PERSONNEL

Director General
Shahrom bin Hj. Abdul Majid

Deputy Director General
Mazlan bin Jusoh

Director Finance and Administration
Ahmad Kamal bin Mohd. Sahaja

Director Planning and Development
Cheah Eng Kean

Director Extension
Tan Cheng Kiat

Director Technology
Chen Shih Hsie

Director Management and Conservation
Hashim bin Ahmad

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Mohd. Yusof bin Othman
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Ali bin Ismail
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Teo Chee Kwang
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Salehan bin Lamin
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Joseph Wong Tong Sang
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Research centre

Ong Kah Sin
Director Fisheries Research Institute
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Tel : 04-881777

Training centre

B. Balachandran
Director Fisheries Institute
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Department of Veterinary Services (DVS)

Over the years, the Department of Veterinary Services has evolved dramatically from a horse and small animal practice to an agency responsible for national livestock development and animal health. It is an important arm of the Ministry of Agriculture and plays a significant role in the uplift of rural farmers, the production of food to meet national requirements, and the development of livestock and animal based industries.

OBJECTIVES

The primary objective of the Department is to develop the livestock sector towards an economic level of self-sufficiency in beef, mutton, pork, poultry meat, eggs, milk and milk products and for export. It also aims to control and eradicate diseases. Through various development projects, the Department strives to increase the income of livestock farmers and employment opportunity by this sector especially in the rural areas.

FUNCTIONS/ACTIVITIES

The functions and activities are geared towards providing technical services, together with regulatory, supervisory, administrative and other appropriate measures to stimulate the production of livestock and food of livestock origin. The formulation of departmental strategies for future purposes are guided by the main Government policies, such as the New Economic Policy (NEP) and the National Agriculture Policy (NAP). The Animals Ordinance 1953, and other Acts or Regulations thus established, provide the necessary authority to the Department with respect to animal disease eradication, conservation and improvement of health and production status of livestock, as well as matters related to veterinary public health.

KEY PERSONNEL

Director General

Datuk Dr. Ahmad Mustafa bin Hj. Babjee

Deputy Director General

Dr. Nik Mahmood bin Nik Mohamed

Administrative Officer

Abdullah bin Mohd. Taha

Director (Planning)

Dr. Anwar bin Hassan

Research Officer (Planning)

Ahmad Burhan bin Zainal Mokhtar

Data Bank

Dr. Sofian bin Johar

Chang Kum Wah

Asst. Director General (Production)

Dr. Hadi bin Dato' Hashim

Director (Farm Unit)

Dr. Cheah Pin Fook

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Veterinary Officer (Farm Unit)

Dr. V. Logeswaran

Senior Research Officer (Feeds and Nutrition Unit)

Chin Fook Yuen

Research Officer (Feeds and Nutrition Unit)

Hong Kok Sing

Makmal Diagnosa

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Research Officer (Feeds and Nutrition Unit)

Yusof bin Sudin

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Director (Breeding Unit)

Dr. Hawari bin Hussein

Veterinary Officer (Breeding Unit)

Dr. Rosini binti Alias

Director (Dairy Unit)

Dr. Hawari bin Hussein

Veterinary Officer (Dairy Unit)

Dr. Zainal bin Hassan

Veterinary Officer (Dairy Unit)

Dr. Kamaruddin bin Md. Isa

Director (Beef and Mutton Unit)

-vacant-

Veterinary Officer (Beef and Mutton Unit)

Dr. Mohd. Zairi bin Hj. Serlan

Veterinary Officer (Beef and Mutton Unit)

Dr. Ibrahim bin Che Embong

Director (Poultry and Pig Unit)

Dr. Chee Yee Song

Veterinary Officer (Poultry and Pig Unit)

Dr. Mohd. Aziz bin Taib

Veterinary Officer (Poultry and Pig Unit)

Dr. Khoo Kay Hup

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Dr. Krishnalingam
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Drainage and Irrigation Department (DID)

The Drainage and Irrigation Department (DID) of the Ministry of Agriculture is responsible for the implementation of water resources development projects which include the provision of irrigation and drainage facilities in agricultural areas and flood mitigation works. The operations of the Department cover water resources assessment, engineering planning and design, construction and the operation and maintenance of the completed drainage and irrigation projects. In addition to these, the Department is also engaged in engineering hydrological investigations, hydraulic investigations, coastal erosion investigations and protection, technical training and the purchase and maintenance of engineering plant and equipment.

OBJECTIVES

The main objective of the department are the provision of drainage, irrigation and flood mitigation for the socio-economic development of the rural areas.

FUNCTIONS

The functions of the DID are:

- Provision of irrigation facilities for the cultivation of paddy and other crops.
- Provision of drainage facilities for the development of agricultural crops other than paddy.
- Implementation of rural and urban flood mitigation works.
- Establishment, operation and maintenance of flood forecasting and warning system.
- Maintenance and improvement of natural river channels, such as river clearing, training, desilting and deviation.
- Collection, processing and dissemination of hydrological data and undertaking hydrological studies for water resources development and management.

- Monitoring and dissemination of information on coastal erosion activities and implementation of protection works for eroding coast lines affecting agriculture lands.

FUTURE PLAN/PROGRAMMES

The main thrust of the DID programme in the remaining period of the Fifth Malaysia Plan would be to complete many of the on-going projects, which are in an advanced stage of implementation. About 8,300 hectares of paddy land will be provided with new irrigation facilities. In addition, the existing irrigation facilities for 97,462 hectares will be improved and upgraded for double-cropping of paddy. New or improved drainage facilities to increase productivity will be provided to about 167,100 hectares of existing agricultural land.

In general, the Department will continue to provide irrigation, drainage and flood mitigation infrastructure facilities in support of agricultural development, especially for the development of the smallholder agricultural sector. From the standpoint of conservation and utilization of natural resources, the Department will continue to provide the basic services for the assessment of water resources and undertake of major works to control and utilize these resources.

KEY PERSONNEL

Director General

Tuan Hj. Shahrzaila bin Abdullah

Deputy Director General

David N. Welch

Assistant Director General North

Joseph Yeoh Hoh Hoh

Assistant Director General Technical

Quah Tek Hoe

Assistant Director General South

Tan Hoe Tim

Assistant Director General Project

S. Kandiah

Director of Administration and Finance

Tuan Hj. Faizal bin Abdul Rahim

Director of Planning

Sardar Ali bin Raunkee

Director of Coastal Engineering

Steh Kok Chee

Director of Design

Chan Gak Kok

Director of Hydrology

Lau Kim Paik

Director of Research

Dr. Hiew Kim Loi

DRAINAGE AND IRRIGATION DEPARTMENT

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Farmers' Organization Authority (FOA)

The Farmers' Organization Authority (FOA) was formed under an Act of Parliament in 1973. The promulgation of the Farmers' Organization Act, 1973, therefore, allows for the restructuring and reorganization of the functions and activities which were previously carried out by the Farmers' Associations under the Department of Agriculture. The restructured functions and activities are integrated with that of the Department of Cooperative Development into the Farmers' Organization Authority.

OBJECTIVE

The main objective of FOA is to set up the Farmers' Organization as a strong and viable rural institution responsible for uplifting the economic and social status of its members.

FUNCTIONS

The functions of FOA are :

- To promote, stimulate, facilitate and undertake economic and social development of Farmers' Organizations.
- To register, control and supervise Farmers' Organizations and to provide for matters related thereto.
- Where a declaration by notification has been made under section 10, to plan and undertake such agricultural development within such Farmers' Development Area.
- To control and coordinate the performance of the aforesaid activities.

FUTURE PLAN

In 1986, the Corporate Plan of FOA (1986 - 1990) was launched. It aims at strengthening the Farmers' Organizations into viable organizations. The plan outlined four major strategies of development, they being,

- Strategy of implementing new programmes
- Emphasizes on training of both farmers and staff increasing the social and economic activities of the area farmer organizations and National farmer organization; and strengthening the financial standing of Farmers' Organizations through the establishment of a special financial corporation.
- Strategy of standardizing the operational activities of FOA and Farmers' Organizations.
- Through the use of models, manuals and guidelines.
- Strategy of communication
- Emphasizes on systematic communication between all levels and feedback through an effective monitoring and evaluation system.
- Strategy of segmentation
- The development of selected progressive Farmers' Organizations into viable organizations which are able to stand on their own. For a start, 27 Farmers' Organizations are selected.
- Outside the above Farmers' organizations areas, areas will be selected for integrated planning and development. Eighteen areas have been selected for their development. Each area normally covers four to five farmer organizations.

KEY PERSONNEL

Chairman

Dato Hj. Mustafa bin Hj. Abdul Jabar

Deputy Chairman

Dato' Hj. Ahmad bin Hj. Arshad

Director General

Khalid bin Hj. Husin

Members of the Board

Y.B. Tuan Hj. Khalid bin Yunus

Wan Ibrahim bin Wan Daud

Abidin bin Hj. Arshad

Y.B. En. Abdul Rahman bin Sulaiman

Y.B. Dato' Hj. Abdul Rashid bin Abdul Rahman

Tuan Hj. Khalil bin Hj. Hussein

FARMERS' ORGANIZATION AUTHORITY
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Federal Agricultural Marketing Authority (FAMA)

The Federal Agricultural Marketing Authority (FAMA) is a statutory body under the Ministry of Agriculture, established in September 1965.

OBJECTIVES

The main objective of the Authority is to improve the marketing of agricultural produce in Malaysia. The commodities under its purview includes almost all agricultural produce except paddy and rice, rubber, palm oil, tobacco, pineapples and marine fish.

FUNCTIONS

Its main functions in accordance with the Act are :

- To coordinate marketing activities of agricultural produce.
- To promote and develop markets and market outlets.
- To promote the management of agricultural enterprises.

KEY PERSONNEL

Chairman

Y.B. Tuan Hj. Hashim bin Safin

Director General

Tuan Hj. Ahmad bin Tokimin

Deputy Director General (Marketing Supporting Services)

Tuan Hj. Abu Bakar bin Abdul Hamid

Deputy Director General (Management)

Tuan Hj. Abdul Majid Hussein

Senior General Manager (Trading Services)

Ragavan Nair

Marketing Director (Fruits, Vegetables, Coffee and Cereals)

Low Wan Kim

Marketing Director (Cocoa, Coconuts and Livestock)

Tang Loon Boon

Director (Corporate Planning)

C. Mahendran

Assistant Director (Finance)

Puan Hajjah Ramliah Jalaluddin

Assistant Director (Corporate Affairs)

Khafiah Rose

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Zawadi bin Hj. Abdul Rahman
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Fisheries Development Authority of Malaysia (LKIM)

The Fisheries Development Authority of Malaysia or Lembaga Kemajuan Ikan Malaysia (LKIM) was established on 1st November, 1971 under Act 49, Lembaga Kemajuan Ikan Malaysia Act 1971.

OBJECTIVES

The objectives of LKIM are :

- To upgrade the socio-economic status of the fishermen.
- To develop and improve the nation's fishing industry.

FUNCTIONS

In accordance to Section 4 of Lembaga Kemajuan Ikan Malaysia Act, 1971, the functions of LKIM are as follows :

- To provide and supervise all necessary facilities for the production of fishery resource in the hope of increasing fishermen's production and income.
- To initiate good marketing practices.
- To encourage orderly formation and development of the fishing industry.
- To participate in fishery enterprises for the benefit of the fishing industry/economy of the nation.
- To encourage Bumiputra participation in the fishing industry.
- To register, control and supervise all Fishermen's Societies.
- To strengthen Fishermen's Co-operatives so as to ensure viable/effective fishing enterprise that could provide effective services to its members.

KEY PERSONNEL

Director General

Tuan Hj. Abdul Wahab bin Hj. Adam

Deputy Director General (Development)

- vacant -

Deputy Director General (Service)

Jamilah bte. Harun

Director, Technical Division

Ir. Rosli bin Daud

Director, Marine Fishing Development Division

Mohamed bin Ismail

Director, Aquaculture Division

Khatijah bte Mohd. Sa'aid

Director, Fishermen Community Development Division

Mohd. Nor bin Hassan

Director, Administration Division

Mahmud Ismail (Acting)

Director, Finance Division

Nadzley bte. Hj. Noordin

Director, Marketing Division

Shaya'a bin Hj. Othman

Director, Planning Division

Eddy Ong Kee Heng

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Tan Cheng Eng

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Kemubu Agricultural Development Authority (KADA)

KADA or Kemubu Agricultural Development Authority was established by Act 69, Laws of Malaysia, on 31st March, 1972.

The KADA area covers a total of 60,438 hectares within five districts in Kelantan (Kota Bharu, Bachok, Pasir Puteh, Pasir Mas and Tumpat), out of which 31,480 hectares comprise paddy land suitable for double-cropping.

OBJECTIVE

To uplift the economic and social well-being of the farmers within the KADA area.

FUNCTIONS

The main functions of KADA are :

- To promote, stimulate, facilitate and undertake economic and social development in the Kemubu Area.
- To plan and undertake within the Kemubu Area such agricultural development as may be assigned to it by the State.

FUTURE PLAN

The future programmes of KADA, as listed under the Fifth Malaysia Plan, (1986-1990) encompass 11 projects which would cost approximately 51.6 million ringgit in development expenditure, and 102.9 million ringgit in operating expenditure.

The projects include training of staff and farmers, socio-economic studies, construction of farm roads, irrigation infrastructure, rehabilitation of pump houses, plant protection, and production of high-yield variety seeds.

KEY PERSONNEL

General Manager

Dr. Nik Hassani Mohamed

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Nik Mohd. Yusoff bin Nik Ismail

Head, Mechanical and Workshop Division

Wan Abdul Aziz bin Ahmad

Head, Civil Engineering Division

Ahmad bin Ismail

Head, Extension and Training Division

Che Kob @ Abdul Ghaffar bin Abdul Rahman

Head, Administration and Finance Division

Tuan Hj. Abdullah bin Sulaiman

KEMUBU AGRICULTURAL DEVELOPMENT AUTHORITY

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Malaysian Agricultural Research and Development Institute (MARDI)

The Government of Malaysia passed the MARDI Act in 1969 which paved the way for the establishment of the Malaysian Agricultural Research and Development Institute (MARDI). However, MARDI began its operations only in 1971. The Institute functions as a central, integrated organization to undertake agricultural research (except rubber and oil palm) geared towards the development of locally adapted technology to serve the farming community.

OBJECTIVE

The overall objective of MARDI is to develop and promote new and improved appropriate agricultural technologies capable of increasing productivity and efficiency towards modernization of the agricultural sector as well as maximizing income from agriculture in line with the National Agricultural Policy.

FUNCTIONS

The functions of MARDI are :

- To conduct scientific, technical, economic and sociological research in Malaysia with respect to the production, utilization and processing of all crops (except rubber and palm oil) and livestock.
- To serve as a centre for the collection and dissemination of information and advice on scientific, technical and economic matters concerning agricultural industry including the publication of reports, periodicals and papers relating thereto.
- To serve as a centre for specialist extension service in the agricultural industry.
- To advice on the training of workers for scientific and technical research and extension.
- To provide grants in aid for the purpose of pure and applied scientific, technical and

- economic research concerning the agricultural industry.

To maintain liaison with other organizations both public and private, indigenous and foreign which are engaged in scientific, technical, economic and sociological research concerning the agricultural industry.

KEY PERSONNEL

Director General

Dato' Dr. Hj. Mohd. Yusof bin Hashim

Deputy Director General, Administration

Ahmad Shafri bin Man

Deputy Director General, Commodity Research

Dr. Hj. Hashim bin Abdul Wahab

Deputy Director General, Research Support & Development

Dr. Mohd. Sharif bin Ahmad

Director, Finance Division

Adnan bin Mohd. Saad

Director, Administration Division

Mad Nor bin Ismail

Director, Paddy Research

Dr. Hj. Supaad bin Mohd. Amin

Deputy Director, Paddy Research

Dr. Mohamad bin Osman

Director, Cocoa/Coconut Research Division

Dr. Musa bin Mohd. Jamil

Deputy Director, Cocoa/Coconut Research Division

Jamadon bin Bahari

Director, Tobacco Research Division

Zulkifly bin Mohd. Zin

Director, Miscellaneous Crop Research Division

Dr. Saharan bin Hj. Anang

Deputy Director, Miscellaneous Crop Research Division

Lim Heng Jong

Director, Fruit Research Division

Dr. Abdul Wahab bin Ngah

Deputy Director, Fruit Research Division

Dr. Abdul Razak Shaari

Director, Livestock Research Division

Ahmad Tajuddin bin Zainuddin

Deputy Director, Livestock Research Division

Dr. Mohd. Arif bin Omar

Director, Central Research Laboratories Division

Dr. Ahmad Zamzam bin Mohamad

Deputy Directors, Central Research Laboratories Division

Dr. Aminuddin bin Yusof
Ramadasan a/I Krishnan

Director, Techno Economic and Social Division

Dr. Hj. Mohd. Hashim bin Mohd. Noor

Director, Technical Services Division

Berahim bin Ithnin

Director, Technical Services Division

Dr. Tay Tian Hock

Director, Food Technology Division

Adinan bin Husin

Deputy Directors, Food Technology Division

Zaharah Bee Merican
Othman bin Hassan

Director, Technology Promotion Division

Dr. Ibrahim bin Abdullah

Deputy Director, Technology Promotion Division

Dr. Jalaludin bin Jepilus

Director, Water Management and Agricultural Engineering Division

Tuan Hj. Embi bin Yusoff

Chief Accountant

Ranjit Singh

Chief Engineer

Ir. Muhammad bin Mohd. Nuruddin

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Yahaya bin Awang
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Abdul Rahman bin Daud
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Azmi bin Ibrahim
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Azhar bin Ismail
c/o Cocoa Research Station
Bukit Quoin
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91007 Tawau, Sabah
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Yusof bin Sobeng
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Dr. Hj. Ali bin Hj. Hamod
Head, MARDI Research Station Project
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14, Parcelle, Baalabougou-est
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Republic Mali

Heads of Research Stations

Alias bin Ismail
MARDI Research Station Alor Setar
P.O. Box 105
15400 Alor Setar, Kedah
Tel : 04-929482, 725354, 720650

Ibni Hajar bin Hj. Rukunuddin
MARDI Research Station Bukit Raya
(Memproses Paadi dan Beras)
06700 Pendang, Kedah
Tel : 04-746213

Omar bin Mohd. Isa
MARDI Research Station Gajah Mati
06400 Pokok Sena, Kedah
Tel : 04-781200

Station Head
MARDI Research Station Bukit Tinggi
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06050 Bukit Kayu Hitam, Kedah
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Station Head
MARDI Research Station Seberang Perai
Locked Bag No. 203
Pejabat Pos Kepala Batas
13200 Seberang Perai, Pulau Pinang
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Bertam : 04-893632, 893352

Malip bin Mujib
MARDI Research Station Kuala Kangsar
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33007 Kuala Kangsar, Perak
Tel : 05-851254

Zulkifli bin Mohd. Shah
MARDI Research Station Parit
32800 Parit, Perak
Tel : 05-37114

Station Head
MARDI Research Station Hilir Perak
P.O. Box 25
Pejabat Pos Sungai Sumun
36307 Hutan Melintang, Perak
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Dr. Abdul Wahab bin Hamid
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d/a Persatuan Pertubuhan Peladang
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Tuan Hj. Salleh bin Hassan
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Wahab bin Ismail
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Rokian bte. Mohamad
MARDI Research Station
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Station Head
MARDI Research Station
Bahagian Tembakau
Telong
16300 Bachok, Kelantan
Tel : 09-938577, 939057

Abdul Ghani bin Senik
MARDI Research Station
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Mohd. Azmi bin Hj. Ibrahim
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154 Kubang Keranji
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Syed Mohamad bin Syed Ibrahim
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Ting Chaong Chaong
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Development units

Unit Projek Pembangunan MARDI
Chenderong Balai
36600 Teluk Intan, Perak
Tel : 05-691924

Pejabat Projek Negeri Sembilan Timur
Jalan Melang
72000 Kuala Pilah, Negeri Sembilan
Tel : 06-811800

Unit Projek Pembangunan MARDI
Pusat Pembangunan Pertanian Bersepadu
Peserei
83020 Batu Pahat, Johore
Tel : 07-444664

Unit Pembangunan MARDI
257 Sungai Marong
28700 Bentong, Pahang
Tel : 09-221798

Unit MARDI Besut
Gera
22000 Jerth, Pahang
Tel : 09-971311

Unit Tembakau MARDI
Rantau Abang
Wakil Pos Rantau Abang
23000 Dungun, Pahang
Tel : 09-841599

Muda Agricultural Development Authority (MADA)

The Muda Agricultural Development Authority (MADA) was established by the Government to manage and administer the whole area under the Muda Irrigation Programme. The establishment of MADA was passed by Parliament under Act 70, The Muda Agricultural Development Authority Act, 1972.

FUNCTIONS

The functions of MADA are :

- To promote, encourage, aid and activate the economic and social development in the Muda area.
- To plan and activate any agricultural development in the Muda area, as delegated to it by the State Authorities for the states of Kedah and Perlis.

FUTURE PLAN

- To further expand the provision of tertiary facilities with the aim of reducing field problems faced by the farmers.
- To intensify programmes and activities on irrigation and extension with a view to further increase the average paddy yields throughout the project area.
- To facilitate the growth of 27 Pertubuhan Peladang Kawasan in the project area, as strong and viable economic, commercial and social institutions for the farmers.

KEY PERSONNEL

General Manager

Dato' Syed Ahmad Almahdali

Administrator

Dato' Abu Bakar bin Taib

Head of Planning and Evaluation

S. Jegatheesan

Head of Engineering Division

Dato' Teoh Tiaw Seang

Deputy Head of Engineering Division

Neoh Chee Boo

Head of Agricultural Division

Syed Azizan bin Syed Mohamad Al-Hidrus

Deputy Head of Agricultural Division

Tuan Hj. Mohd. Mahadzir bin Hj. Abdul Rashid

MUDA AGRICULTURAL DEVELOPMENT AUTHORITY

MADA Headquarters

Ampang Jajar

05990 Alor Setar, KEDAH

Tel : 04-728255 (12 lines)

Telex : MA 42106

Cable : MADA ALORSETAR

Officers - in - Charge of Muda District Offices

Low Kim Mon

District Engineer

MADA District I

Muda Agricultural Development Authority

Behor Temak

01000 Kangar, Perlis

Tel : 04-762601, 762611

Shuib bin Hashim

District Agricultural Officer

MADA District I

Muda Agricultural Development Authority

Behor Temak

01000 Kangar, Perlis

Tel : 04-762601, 762611

Teoh Weng Chaw

District Engineer

MADA District II

Muda Agricultural Development Authority

06000 Jitra, Kedah

Tel : 04-771280, 772467

Shafie bin Abdul Ghani

District Agricultural Officer

MADA District II

Muda Agricultural Development Authority

06000 Jitra, Kedah

Tel : 04-771280, 772467

Cheang Kam Yuen

District Engineer

MADA District III

Muda Agricultural Development Authority

06700 Pendang, Kedah

Tel : 04-746089, 746250

Roslee bin Baharom
District Agricultural Officer
MADA District III
Muda Agricultural Development Authority
06700 Pendang, Kedah
Tel : 04-746089, 746250

Tan Choo Kew
Senior Mechanical Engineer
MADA Workshop
Muda Agricultural Development Authority
06007 Jitra, Kedah
Tel : 04-771216, 771212

Lau Eng Lim
District Engineer
MADA District IV
Muda Agricultural Development Authority
Kota Sarang Semut
06800 Alor Setar, Kedah
Tel : 04-791107, 791237

National Paddy and Rice Authority (LPN)

The National Paddy and Rice Authority or Lembaga Padi dan Beras Negara (LPN) was established in September 1971 in accordance with the Parliamentary Act No. 47.

OBJECTIVES

Its main objectives are :

- To conserve and maintain an adequate supply of paddy and rice.
- To ensure a fair and stable price of paddy and rice for farmers and consumers.
- To ensure sufficient supply of rice to meet consumption at all times.
- To recommend to the Government on policies to promote the development of the paddy and rice industry as well as to coordinate and assist in the implementation of these policies.

FUTURE PLANS

Major projects/programmes under consideration, under implementation or to be carried out in 1988 are as follows :

- Development of paddy husks units energy and consumer products.
- Increase period of storage of paddy and rice.
- Bulk handling of paddy.
- Additional facilities for drying, milling and storage of paddy/rice.

KEY PERSONNEL

Chairman

Dato' Hj. Mohammad Nor bin Mohamad

Director General

Dr. Abdul Kuddus bin Ahmad

Deputy Director General (Development)

Ahmad Annuar bin Ibrahim

Deputy Director General (Operation)

Tuan Hj. Wan Mustafa bin Ahmad

Director of Administration

Tuan Hj. Zainuri bin Hj. Kurmain

Director of Finance

Shamsuddin bin Osman

Director of Marketing

Lani bin Keling

Director of Legal Affairs

Ridzuan bin Abdullah

Director of Engineering

Loo Kau Fa

Director of Planning and Research

Ahmad Iliham bin Abdul Samad

Director of Licensing

Lim Boon Ka

NATIONAL PADDY AND RICE AUTHORITY

13 - 17th and 20th Floors, Bangunan PERKIM

Jalan Ipoh

P.O. Box 10108

50903 KUALA LUMPUR

Tel : 03-4424122

Telex : PARAS MA 30992

Telegram : "PADIBERAS" Kuala Lumpur

State Office's telephone numbers

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03-7563266

Alor Setar, Kedah
04-744202

Kangar, Perlis
04-761462

Ipoh, Perak
05-260081

Prai, Penang
04-308463

Kota Bharu, Kelantan/Terengganu
09-747644

Pasir Gudang, Johore
07-512311

Melaka/Negeri Sembilan

Kuching, Sarawak
082-34422

Kota Kinabalu, Sabah
088-34262

The Ministry of Primary Industries is responsible for the development of various facets of Malaysia's primary commodity sector comprising R & D, production, processing as well as marketing of various products such as rubber, palm oil, palm kernel oil, coconut oil, tobacco, pepper, pineapple, cocoa, timber, tin, copper and other minerals. This is aimed at achieving increased benefits for the country in terms of income to producers, particularly the smallholders, contributions to Gross National Product (GNP), and employment as well as enhancement of Malaysia's foreign exchange earnings.

ACTIVITIES/FUNCTIONS

The functions carried out by the Ministry include, inter alia, the planning and management of the various commodity sector such as rubber, oil palm, cocoa, pepper, pineapple, tobacco, forestry and timber, tin and other minerals; the maintenance of an information data base on primary commodities and the deliberation of international commodity issues and problems; as well as the administration of financial and development performance of the Ministry and its departments and agencies.

In discharging its responsibilities, the Ministry is assisted by three departments, ten statutory bodies and a corporation. They are as follows:

- Departments
 - Federal Department of Forestry
 - Department of Mines
 - Department of Geological Survey
- Statutory Bodies
 - Malaysian Rubber Exchange and Licence Board (MRELB)
 - Malaysian Rubber Research and Development Board (MRRDB)
 - Rubber Research Institute of Malaysia (RRIM)
 - Palm Oil Registration and Licensing Authority (PORLA)
 - Palm Oil Research Institute of Malaysia (PORIM)
 - Malaysian Pineapple Industry Board (MPIB)
 - National Tobacco Board (LTN)
 - Malaysian Timber Industry Board (MTIB)
 - Tin Industry (Research and Development) Board
 - Commodities Trading Commission

- Corporation
 - Malaysian Rubber Development Corporation (MARDEC)

Malaysian Primary Commodity Sector

The Malaysian primary commodity sector performed satisfactorily in terms of its contribution to the country's total export earnings in 1987 as compared to 1986. Notwithstanding this, the Government will continue with its efforts to make the primary commodity sector more competitive and resilient in a world economic environment that has become less hospitable due to protectionism, excessive subsidies and trade wars, apart from uncertainties and slowdown in economic growth, foreign exchange difficulties, debt problems and other structural imbalances. Whilst it is sound economic strategy for Malaysia to become less dependent on the fortunes of primary commodities, this should not mean that the primary commodity sector should be deemphasized. Rather, the growth of the commodity sector is essential in generating surpluses and savings within the economy which can help in providing investible resources for other sectors of the economy as well. It is also recognised that the well-being and further development of the commodity sector would be translated into better living standards and progress particularly of the rural sectors of the country. Even for highly industrialised and advanced countries, the commodity sector has been nurtured to become an important dimension of economic growth. This is even more so for developing countries like Malaysia which can still take advantage of the immense opportunities in commodities, based on efficient production backed by technological advances from R & D upgrades into further processing and sold to a wide spectrum of international customers which takes into account changing market structures and requirements. Indeed, Malaysia's industrialization has been to a significant extent due to the further processing and manufacturing activities based on the country's supply of commodities, be they rubber, palm oil, timber, cocoa, tin or other minerals. Under the Industrial Master Plan, further demand is expected from the commodity sector to provide the spring board for expanding industrial opportunities in the country. In this context, the commodity sector can no longer be viewed as a primary production activity. Even as raw

materials, they are being tailor made into industrial raw materials and in many instances having being semi-processed to suit the technical requirements of specific buyers and users. In short, the development of the commodity sector engenders a host of other economic activities in the forms of secondary and tertiary processing, storage and transportation, trading and marketing, with direct and indirect spin-off effects.

Whilst it is important for Malaysia to revitalise other sectors of the economy, it is no less important that sustained efforts be made to bring about the further development of the primary commodity sector to ensure economic stability and further growth of the country. In this regard, Malaysia has to cope with domestic, regional and international commodity issues that would impinge on its future development. On the domestic front, Malaysia has to continue with the process of transforming the commodity sector to become more dynamic and adaptable in interfacing with external opportunities on the one hand and competition and constraints on the other. Some significant process has been made in this direction after having gone through the worst international recession in recent times so that the commodity sector is now better placed to cope with the vicissitudes of fluctuating fortunes which are virtually unavoidable.

Malaysia will continue to press ahead for the export of commodities within the uncertain global commodity trade through our pragmatic policies, close attention to consumers' taste and preferences, maintaining highest quality standard and diversified markets. We have made considerable strides in technological development through R & D which has improved efficiencies in production, processing and product presentation and improved infrastructural and organizational support including shipping, transportation, storage, financial and insurance facilities. In line with the National Agricultural Policy, growth in the agricultural sector is being accentuated through the opening of more land, based on a diversified pattern of agriculture and other economic activities and through replanting to upgrade and increase productivity of existing areas. Tin mines are being resuscitated, exploration for precious metals and other minerals are being intensified and development of a variety of non-ferrous metal are in the offing. The implementation of the Industrial Master Plan is currently being actively pursued particularly in setting up resource-based industries to increase the value-added contribution from the primary commodity sector.

On the international front, Malaysia continues her efforts to reduce both tariff and non-tariff barriers to improve market access for commodities in the raw, semi-processed and processed forms. The necessary actions are being pursued to counter moves by the American Soybean Association in its adverse publicity campaign against tropical oils and attempts through legislative and regulatory means to impose discriminatory labelling on tropical oils. Malaysia is convinced that nutritional studies which have been initiated in the U.S. will verify and confirm research results which have been obtained from R & D studies conducted in other parts of the world on the positive health attributes of palm oil. In this regard, Malaysia is working with other countries in ASEAN to counteract the threats against tropical oils in the United States. On an ASEAN basis, representations have also been made against the proposal to impose a high consumption levy on vegetable oils into the EC market. Malaysia is also taking steps to counteract the anti-tropical timber campaigns that are being waged by environmentalist groups and associated interests in certain Western European countries, United States, Japan and Australia. Malaysia is as much concerned herself in ensuring that a rich forest resources would not be subjected to wanton destruction but that they are managed in a manner which will ensure perpetuity of substantial areas for prosperity and for the very large intangible benefits that forest can provide for the stability of physical and ecological environment: weather and climate.

With its well-placed position on international sea routes and improving communication network, Malaysia can take advantage of growing points in the Pacific Basin and in diversifying her markets in the newly industrializing countries, developing countries and the socialist countries.

In furthering the production and market prospects for primary commodities, the Ministry of Primary Industries will continue to enhance bilateral, regional and multi-lateral co-operation to bring about greater stability in world trade as well as greater stability in commodity markets. Efforts are being made to foster direct trade, promote new investment and to come up with new uses for primary commodities through R & D. The measures that are currently being taken by the Government to support the commodity sector include:

- Intensifying R & D on the various aspects of primary commodity production and processing to achieve higher productivity.

cost reduction and quality improvement apart from widening end-use;

- Proving incentives and assistance as may be necessary;
- Increasing efforts to maintain existing markets and establish new markets for primary commodities through promotional activities including economic and technical missions and participation in trade-fairs;
- Promoting greater investment into downstream processing of primary commodities;
- Enhancing commodity market arrangements in the Kuala Lumpur Commodity Exchange through the use of futures markets; and
- Utilizing international mechanisms to further the interests of primary commodities such as through the International Rubber Agreement, International Tropical Timber Agreement, activities under the Association of Tin Producing Countries and Association of Natural Rubber Producing Countries, the Cairns Group and Multi-Lateral Trade Negotiations.

KEY PERSONNEL

Minister of Primary Industries

Y.B. Dato Lim Keng Yaik

Deputy Minister of Primary Industries

Y.B. Dato' Alias Ali

Secretary General

Y.B. Dato' Wong Kum Choon

Deputy Secretary General I

Y.B. Dato' Mohd. Yusof Basir

Deputy Secretary General II

Mohd. Rusli Hj. Hussein

Under Secretary - Rubber, Pineapple, Cocoa and Coffee

Abdul Hamid Sawal

Principal Assistant Secretary - International Rubber Marketing Co-operation

Mohd. Yusoff Mydin

Principal Assistant Secretary - Rubber Industry Development

Yeo Heng Hau

Principal Assistant Secretary - Pineapple, Cocoa and Coffee

Puan Hajjah Nur Azmy Mohd. Yaman

Under Secretary - International

Ahmad Zaini Hj. Muhamad

Principal Assistant Secretary - International I

R. Venugopal

Principal Assistant Secretary - International II

Musa Muhamad

Principal Assistant Secretary - Minerals

Tuan Hj. Mohd. Zarif Hj. Mohd. Zaman

Under Secretary - Research and Planning

Tuan Hj. Jahaya Mat

Principal Assistant Secretary I - Research and Planning

Cheah Kam Huan

Principal Assistant Secretary II - Research and Planning

Fatimah Raya Nasron

EDP Manager

Sarojini Devi

Under Secretary - Forestry, Timber, Commodity Trading

Adawiah Zakaria

Principal Assistant Secretary - Forestry/Timber

Imam Baweh Md. Halim

Principal Assistant Secretary - Commodity Exchange

Tuan Hj. Mohd. Sinon Mudzakar

Under Secretary - Palm Oil, Tobacco and Pepper

Ahmad Zubeir Hj. Noordin

Principal Assistant Secretary - Palm Oil I

Muhamad Noor Yacob

Principal Assistant Secretary - Palm Oil II

Abd. Rahman Jaafar

Principal Assistant Secretary - Tobacco and Pepper

Anuar Khabar

MINISTRY OF PRIMARY INDUSTRIES

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Jalan Sultan Hishamuddin

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Telex : MA 30808

Cable : PERUSAHAAN KUALA LUMPUR

Commodities Trading Commission (CTC)

The Commodities Trading Commission (CTC) is an independent national regulatory agency responsible for the regulation and supervision of commodity futures trading in Malaysia. The Commission is responsible to the Minister of Primary Industries.

Formerly known as the Commodities Trading Council, it was established under the Commodities Trading Act, 1980. In 1985, Parliament repealed the 1980 Act, and under the new Commodities Trading Act, 1985, the CTC assumes the status of a statutory authority on March 1, 1986.

OBJECTIVES

The main objectives of the Commission are :

- To ensure the proper functioning of the Kuala Lumpur Commodity Exchange (KLCE) and the Malaysian Futures Clearing Corporation (MFCC) based on the principle of self-regulation.
- To protect the integrity of the market and to safeguard public interests in the market against fraud and improper trading practices.
- To assist the Government and the industry in pursuing the objective of making Kuala Lumpur as an international centre for commodity trading.

FUNCTIONS

Under the law, the CTC has been entrusted with the following functions :

- Responsible for enforcing the provisions of the Commodities Trading Act, 1985.
- Responsible for supervising the activities of the KLCE and the MFCC and promoting proper conduct amongst its members.
- Take all reasonable measures to safeguard the interests of persons who trade in commodity futures whether on the KLCE or overseas exchanges.

- Suppress illegal and improper practises in relation to trading in commodity futures contracts and price manipulation in a commodity market.
- Promote and maintain the integrity of registered persons and encourage the promulgation by dealers and commodity trading advisers of balanced and informed advice to their clients.
- Advise the Minister on all matters relating to trading in commodity futures contracts.
- Advise the Minister on all matters relating to the purchase or sale of commodities for spot delivery or for deferred shipment or delivery.
- Consider and suggest reforms of the law relating to trading in commodity futures contracts, including changes to the constitution, rules and regulation of the KLCE and the MFCC.

KEY PERSONNEL

Commissioner

Tuan Hj. Ismail bin Hj. Ahmad

Deputy Commissioner

Azizah bte. Jaafar

Administration Division

Sharifah Normah bte. Syed Omar

Registration and Enforcement Division

Manuriani bte. Che Tahir

Economic and Market Surveillance Division

- vacant -

Legal Affairs Division

Ismayatim bin Ismail

COMMODITIES TRADING COMMISSION

5th Floor, City Point Dayabumi

Jalan Sultan Hishamuddin

50050 KUALA LUMPUR

Tel : 03-2936644

Telex : MA 20234

Forestry Department, Peninsular Malaysia

The Forestry Department of Peninsular Malaysia is a department under the Ministry of Primary Industries.

FUNCTIONS

The Forestry Department of Peninsular Malaysia is responsible for forestry sector planning and development, the developing of forest recreational areas, the giving of advice and technical assistance to the Forestry Department of any State within Peninsular Malaysia, as well as providing training facilities. The Department is headed by a Director General of Forestry who is also the forestry adviser to the Government.

ACTIVITIES

Forest Operations Division

This Division which is headed by the Deputy Director General (Forest Operations) is responsible for the management and development of forest resources, regulation of exploitation, training and manpower development. The various units under this Division are, forest management, silviculture, forest engineering, forest education and training and special functions.

Planning and Industrial Development Division

This division, headed by the Deputy Director General (Planning and Industrial Development) is responsible for resource planning, economic studies, industrial development, utilization and industrial extension. The various units under this Division are, forest economics, forest planning, industrial development, and compensatory plantation.

State Forest Departments

Each State Forest Department is headed by a Director. He is responsible for the administration and regulation of forest exploitation, forest revenue collection, management and development of forest resource and to plan and co-ordinate the wood-based industries in his State. Professional and sub-professional forest officers serving in the States are federal officers on se-conductment. The uniformed staff which includes forest rangers and foresters are State

employees. For management and administrative purposes the State is divided into district, range and beat.

KEY PERSONNEL

Director General

Dato' Mohd. Darus bin Hj. Mahmud

Deputy Director General (Forest Operations)

- vacant -

Deputy Director General (Planning and Industrial Development)

- vacant -

Assistant Director General (Forest Resource Management)

Dato' Othman bin Abdul Manan

Assistant Director General (Macro and Micro Planning)

Tuan Sheikh Ibrahim bin Sheikh Ali

FORESTRY DEPARTMENT, PENINSULAR MALAYSIA

Jalan Sultan Salahuddin

50660 KUALA LUMPUR

Tel : 03-2988244

Cable : "UTAN" KUALA LUMPUR

State Directors of Forestry

Dato' Leong Hing Nin

State Forestry Office Johore

2nd Floor, Bangunan Sultan Ibrahim

Jalan Bukit Timbalan

80990 Johor Bahru, Johore

Tel : 07-246699, 243566

Abdul Rashid bin Mat Amin

State Forestry Office Kedah

8th Floor, Bangunan Sultan Abdul Halim

Jalan Sultan Badlishah

05000 Alor Setar, Kedah

Tel : 04-733911, 733844

Johari bin Baharudin

State Forestry Office Kelantan

Block 6, 1st Floor

Kota Darulnaim

15503 Kota Bharu, Kelantan

Tel : 09-782140, 781957

Shaharuddin bin Mohd. Ismail
State Forestry Office Negeri Sembilan/Malacca
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Tel : 06-723711, 722311

Dato' Abdul Latif bin Nordin
State Forestry Office Pahang Darul Makmur
5th Floor, Kompleks Tun Razak
Bandar Indera Mahkota
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Tel : 09-505911

Naaman bin Jaafar
State Forestry Office Penang
20th Floor, Block Penara
Bangunan KOMTAR
10000 Penang, Penang
Tel : 04-625272, 621957

S.S. Singham
State Forestry Office Selangor Darul Ehsan
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Che Hashim bin Hassan
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01000 Kangar, Perlis
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Zulmukshar bin Dato' Mohd. Shaari
State Forestry Office Terengganu
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Dato' Ismail bin Awang
State Forestry Office Perak Darul Ridwan
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Tel : 05-595987, 542007, 519316

Malayan Pineapple Industry Board (MPIB)

The Malayan Pineapple Industry Board (MPIB) was established in 1957. A statutory organization set up to ensure progressive and efficient development of the Malaysian Pineapple Industry. It is entrusted with a spectrum of duties from proper farm management for quality fruits, controlled processing techniques, high quality control and organized marketing, to give better income to farmers and workers.

FUNCTIONS

The functions of MPIB include :

- To implement replanting programmes for pineapple smallholders to increase production and quality.
- To provide extension services, to conduct registration of pineapple growers, and to implement fertilizer schemes.
- Collection of statistics and maintenance of statistical records of the industry.
- To implement registration of cannery, transporter, seller and buyer.
- To implement rules on fruit quality and hygiene in pineapple factories.
- The negotiation of agreement on prices and grades of pineapple for sale to canneries.
- The administration of a cess fund and making recommendation regarding rate of cess.

- Granting of financial assistance by way of giving subsidy or otherwise to the industry as a whole or any section of it.
- Any other matters affecting the industry.

KEY PERSONNEL

Acting Chairman

Mohd. Rusli bin Hj. Hussein

Secretary/Chief Executive

Tuan Hj. Azman bin Saaidin

Heads of Division

Administration and Finance

Ismail bin Abdul Jamal

Inspectorate

Simon Chow Hon Leong

Research, Planning and Development

Ng Hong Chai

Development (Replanting and Extension Service)

Tuan Hj. Abdullah bin Mohd Yunos

Public Relations Officer

Kamal Ariff bin Ahmad

Statistic Officer

Halimahtun bte. Hj. Abdul Rahman

MALAYAN PINEAPPLE INDUSTRY BOARD

Batu 5, Jalan Skudal
80200 Johor Bahru, JOHORE
Tel : 07-361211/361012
Cable : ANANAS

Malayan Rubber Development Board (MARDEC)

The Malaysian Rubber Development Corporation (MARDEC) was established in 1969 as a Public Body and registered under the Malaysian Company's Act. It is wholly owned by the Malaysian Government.

OBJECTIVES

MARDEC was established with the objective of increasing the income of rubber smallholders by:

- Improving the marketing channel for rubber smallholders.
- Improve the quality of rubber produced by the smallholders to that of Technically Specified Rubber.

ACTIVITIES

To carry out its functions and responsibilities, MARDEC is now concentrating on purchasing, processing and marketing of rubber.

MARDEC has established 15 factories in Peninsular Malaysia. These factories purchase rubber from smallholders through MARDEC's agents. The price is stipulated by MARDEC based on international prices. Approximately 100,000 smallholders throughout the country utilize the services of MARDEC agents, these MARDEC agents.

This rubber is processed to Technically Specified Rubber such as SMR and concentrated latex.

The rubber that is purchased, processed and exported by MARDEC constitutes 20 percent of the total amount produced by rubber small holders.

KEY PERSONNEL

Chief Executive

Dr. Mahmood Abdul Kadir

Director of Operations

Tuan Hj. Rosli bin Kassim

Director of Finance

Ong Yong

Director of Administration and Service

Tuan Hj. Yusoff bin Hj. Ismail

Marketing Director

Sandana Dass

MALAYSIA RUBBER DEVELOPMENT CORPORATION BERHAD

MARDEC Building

Jalan Kerja Air Lama

68000 Ampang Jaya, SELANGOR

P.O. Box 10546

50716 KUALA LUMPUR

Tel : 03-4567055, 4560959 (Marketing)

Telex : MARUB MA 30950/30785

Cable : MARDEC KUALA LUMPUR

Fax : 4574724

Malaysian Rubber Exchange and Licensing Board (MRELB)

The Malaysian Rubber Exchange and Licensing Board (MRELB) came into being on 1st September 1973, with the promulgation of the Malaysian Rubber Exchange and Licensing Board Act, 1972. It incorporates and consolidates the functions of the former Malaysian Rubber Exchange (MRE), the Malayan Rubber Export Registration Board (MRERB) and the licensing functions exercised by the various District Rubber Licensing Boards under the pre-war Rubber Supervision Enactments and the collection of registration fees under the Rubber Export Registration Act, 1966.

OBJECTIVE

The objective of the Board is to develop the Kuala Lumpur rubber market into an effective and efficient rubber marketing centre.

FUNCTIONS

The functions of the Board are :

- The proper and effective management of the corporation established under Section 3 of the Federation of Malaya Rubber Exchange (Incorporation) Act, 1962.
- The registration and licensing of all persons engaged in the business of packing rubber for export or shipping rubber for export within the meaning of the Rubber Shipping and Packing Control Ordinance, 1949.
- The issue of licences to rubber dealers within the meaning of the Rubber Enactments in Force.
- Investigation and supervision of rubber dealing activities including the movement and transport of rubber within the meaning of the Rubber Enactments in force.
- The coordination of activities in the marketing of rubber with a view to promote the efficient marketing of rubber from Malaysia.

- The co-operation and liaison with all other national agencies responsible for provision of agricultural credits, processing and marketing of rubber.

KEY PERSONNEL

Chairman

Data' Ahmad Sabki Jahidin

Head, Licensing and Supervision Division

John Lee Tong Hing

Head, Market Development Division

Ng Kok Tee

Head, Administration and Finance Division

Abdul Wahab Hj. Arshad

Head, Market Service Division

Teng Sin Wu

Head, Rubber Exchange Division

Abdul Rasip Abdul Latiff

Deputy Head, Licensing and Supervision Division

Ramli Hj. Hamzah

Deputy Head, Market Development Division

Chong Kow Ming

Area Director for Wilayah Persekutuan/Selangor

Mohd. Roslan Abdul Rahim

Area Director for Kelantan/Terengganu

Wong Ah Kau

Area Director for Pahang

Tuan Hj. Nawawi bin Sulaiman

Area Director for Negeri Sembilan/Melaka

Mohd. Yassin Hj. Awang Isa

Area Director for Johor

Yeo Siew Hak

Area Director for Perak

Mokhtar Ismail

Area Director for Kedah/Pertlis/Pulau Pinang

Lee Choong Seng

MALAYSIAN RUBBER EXCHANGE AND LICENSING BOARD (MRELB)

3 - 4 Floor, Wisma Getah Asli II
148, Jalan Ampang
P.O. Box 10531
50716 KUALA LUMPUR
Tel : 03-2615566 (12lines)
Telex : MA 30220
Telegram : Pasgetah, Kuala Lumpur

Area offices

Johore Area Licensing Office
37-2A, 1st Floor Bangunan Persatuan Eng Choon
Jalan Rahmat
83000 Batu Pahat, Johore
Tel : 07-443945

Wilayah Persekutuan/Selangor Area Licensing Office
4th Floor, Wisma Getah Asli II
148 Jalan Ampang
50450 Kuala Lumpur
Tel : 03-2615566

Pahang Area Licensing Office
No. 3, 7th Floor Kompleks Teruntum
Jalan Mahkota
25740 Kuantan, Pahang
Tel : 09-504015

Kedah/Perlis/Penang Area Licensing Office
4476, 3rd Floor Bangunan UMBC
Jalan Bagan Luar
12000 Butterworth, Penang
Tel : 04-343237

Perak Area Licensing Office
2nd Floor, No. 100-104
Jalan Clare
30300 Ipoh, Perak
Tel : 05-512482

Negeri Sembilan/Melaka Area Licensing Office
2nd Floor, Wisma UMNO Negeri Sembilan
Jalan Dato' Sheikh
70000 Seremban, Negeri Sembilan
Tel : 06-725017

Kelantan/Terengganu Area Licensing Office
3rd Floor, Bangunan Syarikat Kerjasama
110, Jalan Sultan Ismail
20200 Kuala Terengganu, Terengganu
Tel : 09-622144

Branch and Unit offices

Johore Bharu Branch Office
2nd Floor, Bangunan Persatuan
Peniaga-Peniaga Getah
69D, Jalan Ah Fook
80000 Johor Bharu, Johore
Tel : 07-222598

Kluang Unit Office
1st Floor, Bangunan Heng Chiew
13 & 14, Jalan Mengkibol
86000 Kluang, Johore
Tel : 07-713055

Muar Unit Office
Ruang 6 & 7, Wisma MCIS
103, Jalan Maharani
84000 Muar, Johore
Tel : 06-923395

Segamat Unit Office
Room 201, Bangunan Koperasi
40, Jalan Abdullah
85000 Segamat, Johore
Tel : 07-911512

Pontian Unit Office
324, 1st Floor, Taman Jaya
Pontian Besar, Johore
Tel : 07-873984

Melaka Branch Office
Plot 137 No. 252B
Taman Melaka Jaya
75000 Melaka, Malacca
Tel : 06-221144

Jasin Unit Office
2nd Floor, Bangunan UMNO
1762 Jalan Kesang
77000 Jasin, Malacca
Tel 06-987484

Kuala Pilah Unit Office
610-A, 1st Floor
Bangunan Perniagaan MARA
Jalan Seremban
72000 Kuala Pilah, Negeri Sembilan
Tel : 06-811093

Raub Branch Office
2B, 2nd Floor, Bangunan LKNP
Jalan Pasar
27600 Raub, Pahang
Tel : 09-351841

Jerantut Unit Office
No. A 7, Tingkat Atas
Bangunan Arked MARA
27000 Jerantut, Pahang
Tel : 09-262770

Temerloh Unit Office
14A, Bangunan LKNP
Jalan Ahmad Shah
28000 Temerloh, Pahang
Tel : 09-291864

Kelang Unit Office
7, 2nd Floor
Jalan Goh Hock Huat
41400 Kelang, Selangor
Tel : 03-3422311

Slim River Branch Office
Tingkat Atas, Lot 609
Bangunan PKNP
35800 Slim River, Perak
Tel : 05-892190

Taiping Branch Office
132, 2nd Floor
Jalan Besar
34000 Taiping, Perak
Tel : 05-825327

Sitiawan Unit Office
8A, Taman Anson
Jalan Kampong Koh
32000 Sitiawan, Perak
Tel : 05-913976

Alor Setar Branch Office
69-B Jalan Raja Kompleks
05000 Alor Setar, Kedah
Tel : 04-724277

Baling Unit Office
10, Belakang Jalan Badlishah
09100 Baling, Kedah
Tel : 04-401478

Kangar Unit Office
24, Jalan Jubilee Perak
01000 Kangar, Perlis
Tel : 04-765933

Sg. Petani Unit Office
312K, Jalan Bakar Arang
08000 Sg. Petani, Kedah
Tel : 04-413914

Kota Bharu Branch Office
3rd Floor, Wisma Pahlawan
Jalan Ismail
15000 Kota Bharu, Kelantan
Tel : 09-784214

Jeli Unit Office
Kompleks Pejabat-pejabat Kerajaan
17600 Jeli, Kelantan
Tel : 09-956211

Kemaman Unit Office
K6001, Tingkat Atas, Bangunan Aked MARA
24000 Kemaman, Terengganu
Tel : 09-591766

Kuala Krai Unit Office
52, 2nd Floor, Wisma Koya
Jalan Sultan Yahya Petra
18000 Kuala Krai, Kelantan
Tel : 09-966813

Malaysian Rubber Research and Development Board (MRRDB)

The Malaysian Rubber Research and Development Board (MRRDB), is a Government agency under the aegis of the Ministry of Primary Industries, and established with the specific purpose of exercising overall control of the research, technical development and promotion work in support of the Malaysian natural rubber (NR) industry. MRRDB's basic role is to assist the Ministry of Primary Industry in its planning to ensure the future viability of the rubber industry.

OBJECTIVES

MRRDB's objectives are :

- Planning and formulation of strategies.
- Formulation of a dynamic research and development policy.
- Industrialization based on rubber.
- Training and manpower.

The structure of MRRDB has been streamlined to allow these priority objectives to be carried out effectively. Production research is centred in Rubber Research Institute of Malaysia (RRIM); developments and innovations resulting in higher productivity and better products and processes are disseminated either through RRIM's own extension services or through the Rubber Industry Smallholders' Development Authority (RISDA) and other appropriate authorities. End-use research facilities are located both in the West, in the laboratories of the Malaysian Rubber Producers' Research Association (MRPRA) in the United Kingdom, and at RRIM's new Technology Centre in Malaysia. And to ensure that a correct image of NR is presented to potential users, the Board maintains a Technical Advisory Service (TAS) at the Malaysian Rubber Bureaux (MRB) world-wide within easy reach of all major consuming regions, the staff of which can provide information on all aspects of NR technology.

KEY PERSONNEL

MRRDB (Head Office)

Controller of Rubber Research & Chairman of the Board

Ahmad Farouk bin Hj. S.M. Ishak

Secretary to the Board

Abu Bakar bin Abu Hassan Ashaari

**Head, Rubber Economics and Planning Unit,
Chief Co-ordinator, Technical Advisory Service
(TAS)**

Dr. Lim Sow Ching

Head, Production Economics Group

Dr. Hj. Mukhalis bin Baba

Head, Industrialization Group

Kong Ping Yee

Head, Marketing Division

Dr. Ng Choong Sook

Head, Publication, Publicity & Information

Abu Bakar bin Abu Hassan Ashaari

MALAYSIAN RUBBER RESEARCH AND DEVELOPMENT BOARD

Menara Getah Asli

148, Jalan Ampang

P.O. Box 10508

50716 KUALA LUMPUR

Tel : 03-2614422

Telex : MRRDB MA 30953

Fax : 2613139

London Representative

Nik Husain bin Hj. Nik Ismail

c/o Tun Abdul Razak Laboratory

Brickendonbury

Hertford

SG 13 8NL

United Kingdom

Malaysian Timber Industry Board (MTIB)

The Malaysian Timber Industry Board is a statutory body established by an Act of Parliament to exercise an overall control of the timber industry in Malaysia and to co-ordinate the development within its various sectors of activity.

The Board has been in operation since June 1973 but its jurisdiction covers Peninsular Malaysia only.

The Board is accredited to the Ministry of Primary Industries and is directly responsible to the Minister.

FUNCTIONS

The Board is responsible for initiating appropriate development in the various sectors of the timber industry and for providing the necessary assistance to ensure its continued growth as a modern and thriving sector of the economy. It regulates and oversees business conduct to ensure orderly trading in the industry.

As provided in the Act, the Board's functions are:

- To regulate and control the trade in, and the marketing and distribution of timber.
- To promote and improve the trade in, and markets for timber.
- To encourage effective utilization of timber with emphasis on product diversification and to promote improvement and economy in the methods of exploiting processing timber.
- To provide technical advisory services required to assist in the development of existing timber industries and the establishment of new industries.
- To assist the timber industries in the marketing of timber.
- To organize and assist in the consolidation of the small scale timber industries and the integration of the activities of the timber

industries generally, transfer of technology so as to achieve greater efficiency in, and secure a stronger base for the timber industry as a whole.

- In carrying out its function, the Board is also empowered :
- To undertake marketing of timber on behalf of the small scale timber industries.
- To set up and maintain such establishments as the Board consider necessary for the discharge of its functions.
- To establish corporations to carry out and have the responsibility, conduct and management of any project, scheme or enterprise that has been planned or undertaken by the Board.
- To prescribe the standards and methods of seasoning, preserving, grading, bundling or packaging timber, and the fees payable for grading.
- To prescribe the minimum standards of hygiene to be maintained in mills, yards and jetties.
- To prescribe the procedure to be followed by exporters in exporting timber.
- The carrying out of the timber trade and for dealing with infringement thereof.

KEY PERSONNEL

Director General

Baharuddin bin Hj. Ghazali

Deputy Director General

Mohamad bin Abu Bakar

Director of Administration

Syed Ahmad Omar Al-Attas

Director of Marketing

Tong Kok Hung

Director of Technical

Chew Lye Teng

Director of Planning and Development

Roszehan bte. Mohd. Idrus

MALAYSIAN TIMBER INDUSTRY BOARD

5th and 6th Floor, Bangunan Sateras
Jalan Ampang
50450 KUALA LUMPUR
P.O. Box 10887
50728 KUALA LUMPUR
Tel : 03-2486233 (8 lines)
Cable : MASKAYU KUALA LUMPUR
Telex : MALTIM MA 30993
Fax : 03-2418416

Area offices

Lot 264, Tingkat Satu, Bangunan MNI
Jalan Kebun Sultan
15350 Kota Bharu, Kelantan
Tel : 09-783824

79C, Tingkat Pertama, Jalan Tok Lam
20100 Kuala Terengganu, Terengganu
Tel : 09-622711

Tingkat 1, C-624, Jalan Lim Hoe Lek
25200 Kuantan, Pahang

No. 67C, Tingkat 3, Taman Selat
Jalan Bagan Luar
12000 Butterworth, Pulau Pinang
Tel : 04-346353

No. 19B, Jalan Cungah
42000 Pelabuhan Klang, Selangor
Tel : 03-3689090

No. 16, Taman Sri Kulai Baru
Jalan Air Hitam
81000 Kulai, Johore
Tel : 07-631541

No. 1 and 2, 18A and 18B, Bangunan MNI
Jalan A, off Jalan Tun Abdul Razak
80000 Johor Bharu, Johore
Tel : 07-242288

National Tobacco Board (LTN)

The National Tobacco Board or Lembaga Tembakau Negara (LTN), a statutory agency under The Ministry of Primary Industries, was established in late 1973. Since its establishment, LTN has succeeded in providing the necessary control and facilities for the orderly conduct and development of the tobacco industry in Malaysia.

Its headquarters is located in Kota Bharu, Kelantan with branches in the states of Kelantan, Terengganu, Pahang, Malacca, Kedah and Perlis.

OBJECTIVES

The objective of the Board is to control, regulate, develop, control and modernize the tobacco industry in order to uplift the socio-economic standard of the rural people by improving the quality, yield and productivity of Malaysian Flue Cured Tobacco.

FUNCTIONS

The duties and power of the Board include :

- To provide regulations on the control and co-ordination of all activities related to the planting, cure, selling, storing and movement of tobacco.
- To consider and take steps to promote those activities.
- To consider and take steps to prevent the outbreak of diseases related to tobacco planting.
- Generally to undertake other measures to improve the industry.

FUTURE PROGRAMMES

Strategies for the future as outlined in the National Tobacco Plan and Fifth Malaysia Plan are :

- To further improve the industry by increasing yield and quality of tobacco leaves and reduce production cost.
- To increase the income level and the standard of living of tobacco farmers.
- To bring development to the less developed areas especially those in the bris soil areas.
- To introduce and extend new production systems whic integrate the development of physical infrastructure (adequate suitable land, drainage, irrigation) and supporting services as provided by LTN.
- To further improve the various supporting services available to the tobacco industry.
- To develop and improve infrastructure like land, drainage and irrigation facilities for traditional tobacco planting areas.
- To control and supervise the marketing of tobacco to ensure market stability and fair practices.
- To modernize the tobacco industry with the introduction of new innovations and technologies.

KEY PERSONNEL

Chairman

Dato' Mohd. Yusof bin Basir

Director Genreal

Tuan Hj. Nawawi bin Hj. Daud

Principal Assistant Director (Operation)

Teo Hui Bek

Principal Assistant Director (Technical)

Tuan Hj. Abdullah bin Hj. Awang

Assistant Director (Planning and Economics)

Abdul Wahab bin Jusoh

Assistant Director (Administration and Finance)

Tuan Hj. Abdul Rahman bin Hj. Salim

Assistant Director (Marketing)

Tuan Hj. Ramli bin Hj. Mohamed

Assistant Director (Enforcement and Licensing)

Hussin bin Abdullah

Assistant Director (Extension)

Tuan Hj. Baruddin bin Ismail

Assistant Director (Agronomy)

Mohammed bin Hj. Abas

Assistant Director (Training)

Idris bin Mohd. Salleh

NATIONAL TOBACCO BOARD

4th Milestone, Jalan Sultan Yahya Petra

Kubang Kerian, P.O. Box 198

15720 Kota Bharu, KELANTAN

Tel : 09-922933, 922802, 921182, 923654

Regional Managers

Kamaruzaman bin Hj. Mohd. Nor

National Tobacco Board

Kubang Kerian, P.O. Box 198

15720 Kota Bharu, Kelantan

Tel : 09-922933

Aziz bin Hj. Tik

National Tobacco Board

Lot 11, Wisma, Jalan Kamaruddin

20400 Kuala Terengganu, Terengganu

Tel : 09-921574

Abd. Muthalib bin Madarsa

National Tobacco Board

Jalan Universiti Utara

Bandar Baru Darul Aman

06000 Jitra, Kedah

Tel : 04-772953

Area Supervisors

Mohd. Azahari bin Rejab

National Tobacco Board

Bachok Branch, Kampung Telok

16300 Bachok, Kelantan

Tel : 09-938292

Mohd. Yusof bin Md. Noor

National Tobacco Board

Pasir Mas Branch

Lot 1223 A, Mukim Kasar

Jalan Pasir Pekan

17009 Pasir Mas, Kelantan

Tel : 09-709139

Raja Kamaruzaman bin Raja Ismail

National Tobacco Board

Pasir Puteh Branch

Padang Pak Amat

16800 Pasir Puteh, Kelantan

Tel : 09-761202

Mohd. Noor bin Yunus

National Tobacco Board

Besut Branch, Kampung Batu Tumbuh

22200 Besut, Terengganu

Tel : 09-976304

Abdul Aziz bin Ahmad

National Tobacco Board

Terengganu Branch

Lot 11 Wisma Armon, Jalan Kamaruddin

20400 Kuala Terengganu, Terengganu

Tel : 09-621574

Amri bin Johari

National Tobacco Board

Kuantan Branch

A-2574, Lorong Selasih

Jalan Berserah

25300 Kuantan, Pahang

Abdul Aziz bin Abu Shah

National Tobacco Board

Malacca Branch

No. 44, Taman Perkota

75350 Batu Hampar, Malacca

Tel : 06-220195

Palm Oil Registration and Licensing Authority (PORLA)

The Palm Oil Registration and Licensing Authority (PORLA) is a government agency established to oversee the palm oil industry in order to ensure an orderly growth. Act 179 of the Palm Oil Registration and Licensing Authority (Incorporation) Act 1976 was passed by the Malaysian Parliament on 28th October, 1976, and PORLA was officially inaugurated on 31st October, 1977.

OBJECTIVE

PORLA'S main objective is to provide for the betterment and proper conduct of the Malaysian palm oil industry, so as to ensure the production and export of high quality palm oil products, to promote efficient marketing for the benefit of both the producers and users of palm oil and to discourage malpractices within the trade.

FUNCTIONS

The functions of PORLA as stipulated in the Palm Oil Registration and Licensing Authority (Incorporation) Act 1976, are :

- To regulate, coordinate and promote all activities relating to supply, sale, purchase, distribution, movement, storage, export and import of oil palm products and the milling of oil palm fruit.
- To promote the efficient marketing and handling of oil palm products.
- To regulate and improve the manner of storing and shipping of oil palm products.
- To promote measures towards attaining a high quality for oil palm products, including the laying down of standards and the establishment of an efficient grading system.
- To cooperate with other bodies in coordinating and encouraging the setting up of industries producing or using oil palm products.

- To gather information and maintain records of all relevant matters relating to the palm oil industry.
- Generally to do everything for the betterment and proper conduct of the palm oil industry.

KEY PERSONNEL

Director General

Toh Ah Bah

Director, Central Region

Y.M. Raja Shahrom bin Raja Kamaruddin

Director, Southern Region

Johari bin Mamat

Director, Sabah/ Sarawak

Muslim bin Imam Amat Samsuddin

Director, Northern Region

Noh bin Muhammad Salleh

Director, Eastern Region

Abdul Jalil bin Murad

Chief Officer, Seremban Subregion

Hashim bin Man

Computer Unit Manager/Systems Analyst

Samsuddin bin Abdul Jalil

Systems Analyst

Zahariah bte. Abu Samah

Administration and Finance Division

Director, Administration/Finance

Mohd. Anuar bin Mohd. Yassin

Administrative Officer (Establishment)

Mohd. Yassin bin Abdul Wahab

Administrative Officer (Finance)

Khairani bte. Abdul Karim

Administrative Officer (General)

Johar bin Abdul Wahab

Economics and Planning Division

Director, Economic/Planning

Mamat bin Salleh

Chief Administrative Officer

Imran bin Mohamad Yusof (Economics)

Senior Administrative Officer (Economics)

Jamil bin Nordin

Administrative Officers (Economics)

Zakaria bin Yacob

Twong Yoke Peng

Mohd. Azmi bin Kulop Ismail

Adzmi bin Hassan

Balu a/l Nambiappan

Neoh Hock Leng

Chandramohan a/l Dharmapalan Nair

Norihan bte. Husin

Administrative Officer (Publication)

Janet Chan

Enforcement and Licensing Division

Director, Enforcement/Licensing

Mohd. Salleh bin Mohd. Kassim

Chief Administrative Officer, (Enforcement)

Chang Lin Chong

Administrative Officers (Enforcement)

Zainal bin Shafie

Mohd. Setar bin Mohd. Rani

Zulkifli bin Abdul Manaf

Zulkefli bin Shawal

Wong Soo Khwan

Rizita bte. Baharuddin

PALM OIL REGISTRATION AND LICENSING AUTHORITY

5th, 6th and 7th Floor, Block A North

Damansara Town Centre

Jalan Semantan, Damansara Heights

50490 KUALA LUMPUR

Tel : 03-2547122, 2547103, 2557122

Telex : PORLA MA 30087 and MA 31823

Fax : 603-2551520

Regional/Sub-regional Offices

Southern Region

Room 3, 22nd Floor, Kompleks Tun Abdul Razak

Jalan Wong Ah Fook

80000 Johor Bharu, Johore

Tel : 07-224491, 224492, 224399

Central Region

No. 67, 1st Floor, Taman Selat

Jalan Bagan Luar

12000 Butterworth, Seberang Perai

Tel : 04-344036, 347920, 344254

Eastern Region

Suite 6, 7 and 8, 10th Floor, Kompleks Teruntum

Jalan Mahkota

25000 Kuantan, Pahang

Tel : 09-500666, 508677, 514632

Sabah/Sarawak

7th Floor, Block D

Lot 7.6, Kompleks Kuwasa

Karamusing Locked Bag No. 158

88999 Kota Kinabalu, Sabah

Tel : 088-225281, 225282, 210194

Kluang Subregion

2nd and 3rd Floor, Wisma Gerak

Jalan Datok Hj. Hassan

86000 Kluang, Johore

Tel : 07-710733

Seremban Subregion

Suite 701, 7th Floor

Bangunan Yayasan Negeri

Jalan Yam Tuan

70000 Seremban, Negeri Sembilan

Tel : 06-729670, 725514

Teluk Intan Subregion

No. 3223-B, Jalan Sg. Nibong

36000 Teluk Intan, Perak

Tel : 05-627127, 627515

Quality Control Unit

7th Floor, Block A North

Damansara Town Centre

Jalan Semantan

Damansara Heights

50490 Kuala Lumpur

Tel 03-2547122, 2547103, 2557122

Palm Oil Research Institute of Malaysia (PORIM)

The Palm Oil Research Institute of Malaysia (PORIM) was set up by an Act of Parliament (The Palm Oil Research and Development Act, 1979) on 15th May, 1979.

OBJECTIVES

The Institute was established by the Government with the specific objective of promoting and carrying out research into all aspects of oil palm and palm oil with the aim of extending and improving the current uses of palm oil and finding new ones.

It also seeks to increase the efficiency of production in order to maintain and enhance its competitiveness with other oils and fats.

FUNCTIONS

The functions of the Institute, in accordance with the Palm Oil Research and Development Act 1979 are :

- To conduct and promote research into the production, extraction, processing, storage, transporting, marketing, consumption and uses of palm oil and palm oil products.
- To secure the development and exploitation of any result of research, when it appears that it is not being developed and exploited or sufficiently developed and exploited.
- To collect, collate and disseminate information relating to oil palm, palm oil, oil palm products and other vegetable oils and fats.
- To promote the use of palm oil and oil palm products in competition with other materials or as complementary thereto.

KEY PERSONNEL

Director General
Prof. Augustine S.H. Ong

Deputy Director General
Dr. Hj. Abd. Halim Hassan

Director, Administration and Finance Division
Wan Nasir Daud

Director, Techno-Economic and Technical Advisory Services
Dr. Yusof Basiron

PALM OIL RESEARCH INSTITUTE OF MALAYSIA

P.O. Box 10620
50720 KUALA LUMPUR
Tel : 03-8335155, 8335775
Telex : MA 31609
Fax : 03-8259446

Porim Stations and Offices - Officers-in-Charge

Dato' Ahmad bin Yunus
PORIM Liaison Office
Brickendonbury (MRPRA), Hertford SG13 8NL
England
Tel : (STD) (0992) 54956
Telex : 817449

Esnan bin Abdul Ghani
PORIM Station, Kluang, Locked Bag 532
Batu 7, Simpang Renggam
86009 Kluang, Johore
Tel : 07-721133, 721134, 721135

Iftikar Ahmad
Malaysian Palm Oil Technical
Advisory Regional Office (MPOPTAS)
P.O. Box 1352, G.P.O. Karachi
Pakistan
Tel : 523772

Zulkifli Mohd. Daud
PORIM Station, Teluk Intan
Lot 302 Taman Sabak Jaya
45100 Sabak Bernam, Selangor
Tel : 05-671624

Mohd. Ariffin bin Jurmi
PORIM Station, Serdang, P.O. Box 207
43400 U.P.M., Serdang, Selangor
Tel : 03-9486117, 9486118

Zamani bin Ali
PORIM Station, Ulu Paka
Bandar Ketengah Jaya
23300 Ketengah Jaya, Dungun, Terengganu
Tel : 09-870142

Rubber Research Institute of Malaysia (RRIM)

Established in 1925, the Rubber Research Institute of Malaysia (RRIM) today is the world's largest research institute investigating all aspects of a single crop, which is natural rubber. The three main areas of its work are *brasiliensis*, to improve productivity, continually update processing methods to convert the harvested latex into guaranteed technically specified rubbers, and finally engage in research to extend rubber usage and discover new end-uses to enhance rubber product manufacture.

OBJECTIVES

The basic research and development objectives of the RRIM are to:

- Ensure the competitive position of NR vis-a-vis SR and other polymers.
- Increase productivity and reduce unit production at cost.
- Modernize and upgrade the smallholder sector through transfer of technology and ensuring implementation of research innovations.
- Continually improve the quality of NR and offer technically specified and chemically modified rubbers.
- Extend and popularize NR usage through assurance of quality and versatility.
- Encourage NR industrialization in Malaysia and assist in NR product manufacture.
- Offer technical advisory services to rubber planters, factory personnel and product manufacturers.

KEY PERSONNEL

Director

Dr. Abdul Aziz bin Sheikh Abdul Kadir

Deputy Director of Research

-vacant-

Assistant Director of Biology

Dr. E. Pushparajah

Assistant Director of Chemistry and Technology

Dr. Sekaran Nair

Assistant Director of Smallholders Extension and Development

Dr. Samsudin bin Tugiman

Assistant Director of Research and Development Support Services

-vacant-

Heads of Division

Soils and Crop Management Division

Chan Heun Yin

Crop Protection and Microbiology Division

Dr. Chee Kheng Hoy

Plant Science Division

Dr. Yoon Pool Kong

Tapping and Exploitation Physiology Division

Dr. P.D. Abraham

Polymer Research and Process Division

Dr. A. Subramaniam

Product Development Division

Dr. Ahmad bin Ibrahim

Analytical Chemistry Division

Dr. Mohinder Singh

Physics and Engineering Division

Dr. Abdul Kadir bin Mohamed

Specifications and Quality Control Division

Hj. Amir bin Abdul Aziz

Project Development and Implementation Division

Dr. Najib Loffy bin Arshad

Applied Economics and Statistics Division

Dr. Mohd. Yusof bin Shahabuddin

Advisory Service

Mohd. Sharif bin Kudin

Works Section

Ahmad bin Osman

**Publications, Library and Information Division
(Officer-in-Charge)**

Hj. Ibrahim bin Said

RUBBER RESEARCH INSTITUTE OF MALAYSIA

260, Jalan Ampang

50450 KUALA LUMPUR

Tel : 03-4567033 (10 lines)

Telex : MA 30369

Cable : "SEARCHING" KUALA LUMPUR

RRIM State Officers**(Project Development and Implementation Division)**

Wong Tee Kiang

RRIM Office

402, Jalan Datin Halimah, Larkin Lama

80350 Johor Bharu, Johore

Tel : 07-222649

Zainuddin bin Che Dan

RRIM Office

2518-P, Pekan Pumpung

05250 Alor Setar, Kedah

Tel : 04-721206

Wan Mansor bin Wan Salleh

RRIM Office

B-144, Jalan Kweng Umat

18500 Machang, Kelantan

Tel : 09-951208

Dr. Abdul Wahid bin Mohd. Jadi

1st Floor, 303 A Jalan Kilang

75300 Melaka, Malacca

Tel : 06-225437

Ismail bin Ibrahim

RRIM Office

A-4370 Jalan Telok Sisek

25000 Kuantan, Pahang

Tel : 09-521998

Tan Kwang Jin

Pegawai Penasihat Wilayah Utara

402, Jalan Bukit Awi

09000 Kulim, Kedah

Tel : 04-572673

Tuan Hj. Mohd. Hidzir Abd. Kadir

RRIM Office

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West Pool Park

31400 Ipoh, Perak

Tel : 05-556924

Ismail bin Ibrahim

Stesen Percubaan IPGM

47000 Sg. Buloh, Selangor

Tel : 03-6361221

Mansor bin Hj. Hashim

RRIM Office

Jalan Sultan Mahmud

20400 Kuala Terengganu, Terengganu

Tel : 09-621858

The Ministry of Land and Regional Development was established in March 1976 and initially comprised of three departments (i.e. Department of Forestry, Department of Survey and Mapping and the Federal Department of Lands and Mines), two land development agencies (i.e. FELDA and FELCRA) and three regional development authorities (i.e. DARA, KEJORA and KETENGAH). In 1978, the Department of Forestry was transferred to the Ministry of Primary Industries and RISDA was placed under the purview of the Ministry. In 1982, the two remaining Departments under the Ministry were fully integrated into the organization of the Ministry as a whole. Between the years 1978 to 1983, four more regional development authorities were created and placed under the Ministry. These are KESEDAR (1978), KEDA (1981), PERDA (1983), and JENGKA (1983). On 1st. July, 1987, FELCRA was transferred to the Ministry of National and Rural Development.

OBJECTIVES

The goal of the Ministry of Land and Regional Development is to contribute towards the achievements of the objectives of the New Economic Policy which are to eradicate poverty and restructure society. This will be done by increasing the productivity and income of the target groups and also through the development of underdeveloped regions so as to reduce the economic difference between these regions and the developed regions on the country. The objectives are :

- To uplift the standard of living of rural inhabitants particularly those in the low income groups by increasing their income through greater productivity and the provision of basic amenities.
- To create a rural society that is self-reliant and progressive through social and institutional development.

- To determine, update, modernise and formulate land legislation, land administration systems, land survey and mapping.

KEY PERSONNEL

Minister of Land and Regional Development
Y.B. Datuk Dr. Sulaiman Hj. Daud

Deputy Minister of Land and Regional Development
Y.B. Datuk Hj. Khalid bin Yunus

Parliamentary Secretary
Y.B. Adam bin Abdul Kadir

Secretary General
Datuk Zainal Abidin bin Hj. Nordin

Deputy Secretary General
Azizan bin Hussain

Director General of Survey and Mapping
Abdul Majid bin Mohamed

Director General of Land Management and Legislation
Tuan Hj. Harun bin Baba

Divisional Secretary (Development)
Zubir bin Yahya

Divisional Secretary (Administration and Finance)
Zainal Abidin bin Mat Said

Divisional Secretary (Social and Institutions Development)
Maznah bte. Mazlan

MINISTRY OF LAND AND REGIONAL DEVELOPMENT
Administration and Development Division
4th Floor, Bangunan Sri Mara
Jalan Raja Laut
50574 KUALA LUMPUR
Tel. : 03-2921566
Cable : MAJUTANAH KUALA LUMPUR

Federal Land Consolidation and Rehabilitation Authority (FELCRA)

The Federal Land Consolidation and Rehabilitation Authority (FELCRA) is a land development agency under the Ministry of National and Rural Development.

OBJECTIVES

FELCRA's objectives through its land rehabilitation and consolidation efforts are :

- Creation of more employment in the agricultural sector.
- Increase in the productivity of the participants with improved agricultural methods and management of resources.
- Increase in income or land ownership with equitable distribution.

FUNCTIONS

FELCRA's functions are :

- To rehabilitate state land schemes either on its own and with the approval of the State Government or at the request of the appropriate state authority or settlers concerned.
- To develop land schemes with the approval of State Governments.
- To rehabilitate or develop alienated lands.

FUTURE PROGRAMMES

FELCRA's target under the Fifth Malaysia Plan is to develop 110,000 hectares of land throughout

the country. FELCRA's financial allocation for the period amounts to M\$ 787.77 million. For the year 1988, FELCRA plans to develop 30,000 hectares of land. The financial allocation approved amounts to M\$291,214,100.

KEY PERSONNEL

Chairman

Y.B. Md. Nour Md. Dom

Director General

Mustapha Juman

Deputy Director General

Abdul Wahid Hj. Azahari

Special Functions

Iaris Hj. Abdul Rahman

Director of Implementation

Tuan Hj. Kamaruzzaman Abdul Majid

Director of Management Services

Mohd. Nor Ahmad

Director of Technical Services

Ng Bian Hoo

Director of Social Services

Md. Ariff Ariffin

Director of Trans-Perak Project

Tuan Hj. Ibrahim Karim

Director of Marketing and Processing

Mohd. Dzaki Hj. Mohd. Rejab

Director of Development Planning

Mokhtar Ahmad (Acting)

FEDERAL LAND CONSOLIDATION AND REHABILITATION AUTHORITY

1st-8th Floor, Bangunan L.T.A.I.

Jalan Bukit Bintang

P.O. Box 12254

50772 KUALA LUMPUR

Tel : 03-2422488 (24 lines)

Telex : MA 31789

Cable : FELCRA KUALA LUMPUR

Federal Land Development Authority (FELDA)

The Federal Land Development Authority (FELDA) was established on 1st July, 1956 as a federal statutory body under the Land Development Ordinance No. 20, 1956. FELDA is administered by a Board responsible to the Minister of Land and Regional Development. It is now one of the biggest land development agencies of the Malaysian Government. Based on a fully integrated "package deal" approach, FELDA's operations include land clearing, planting of main crops, development of villages, selection and emplacement of settlers, management of projects, provision of credit, processing, marketing service and facilitating social and community development. FELDA is in fact a multi-functional development agency.

FUNCTIONS

- To develop hitherto unused (forest) land for agriculture and settlement.
- To relocate suitable persons who are landless or almost landless with the objective of raising their standard of living through modern agriculture.
- To organize and implement systematic development of land by the provision of licensing, credit facilities and supervisory and management services.
- To construct and operate modern processing facilities in order that settlers obtain better returns.
- To guide the development of settler communities so that their attitudes and sense of values are consistent with the developmental needs.

KEY PERSONNEL

Group Chairman

Raja Tan Sri Muhammad Alias Raja Muhammad Ali

Director General

Datuk Alladin Hashim

Deputy Director General (Development)

Jalaludin Jaafar

Director, Senior Development

S. Perumal

Director, Development 1

Sulaiman Lingam

Director, Development 2

Abdul Latiff Othman

Director, Development 3

Mohd. Yusoff Shariff

Director, Development 4

Hamzah Hj. Teh Mohamad

Director, Development 5

Syed Mahadzar Fadaah

Director, Development 6

Mohd. Nor Zakaria

Director, Development 7

Amin Sarji Rais

Director, Development 8

Rozan Abdullah

Director, Development 9

Wong Wee Han

Director, Community Development Services 1

Abdul Ghani Suratman

Director, Community Development Services 2

Za'bah Hj. Mohamad

Deputy Director General (Services)

Mohd. Fadzil Yunus

Director, Finance Division

Yee Chee Seng

Director, Personnel Division

Ahmad Idris Talib

Director, Budget and Planning Division

Abd. Ghafar Hj. Abd. Wahab

Director, Engineering Services

Choy Joy Leong

Director, Process Division

Baharuden Hj. Ali

Director, Survey, Land and Settler Emplacement

Abdul Hamid Samad

Director, Management Services

Ibrahim Hj. Keling

Director, Training Division

Hakimie Abdullah

Group Managing Director (Corporations)

Nasir Yusoff

Senior General Manager (Mills)

Abdul Aziz Hj. Zakaria

General Manager (Mills)

Mat Abas Yusoff

Senior General Manager (Computer Services)

Ahmad Athsani Karni

Agricultural Advisor (Agricultural Services)

Tang Teng Lai

Executive Director (Agricultural Services)

Jamaludin Lamin

General Manager (Agricultural Services)

Chong Gong Gong

Senior General Manager (Trading)

Jayos Pawiro

Senior General Manager (Rubber)

Raja Sharifuddin Hizan Abidin

General Manager (Refinery)

Othman Yusoff

General Manager (Palm Kernel)

Hamdan Husin

General Manager (Marketing)

Mohamad Daud

General Manager (Construction)

Edmund Liew Kok Seong

General Manager (Transport)

Zainal Mokhtar Hj. Mohd. Yunus

General Manager (Security Services)

Zainal Abidin Abd. Hamid

Manager (Latex Handling)

Tee Kim Huan

Group Managing Director (Companies)

Abdullah Yusoff

Managing Director (Kilang Gula FELDA Perlis Sdn. Bhd.)

Jimmy Tan Yew Beng

General Manager (Kilang Gula FELDA Perlis Sdn. Bhd.)

Rosman Hasim

General Manager (FELDA Oil Products Sdn. Bhd.)

Mohd. Yusof Ibrahim

Executive Director (FELDA-JOHORE Bulkiers Sdn. Bhd.)

Yong Moh Lim

General Manager (FELDA-JOHORE Bulkiers Sdn. Bhd.)

Kuan Beng Teik

General Manager (FPM Sdn. Bhd.)

Mohd. Salleh Darus

Managing Director (Malaysia Cocoa Manufacturing Sdn. Bhd.)

Ernest Zulliger

FEDERAL LAND DEVELOPMENT AUTHORITY

Jalan Maktab

54000 KUALA LUMPUR

Tel : 03-2935066

Telex : FELDA MA 32159, MA 30789

Telegraph : felda, kuala lumpur

Johor Tenggara Development Authority (KEJORA)

The Johor Tenggara (South East Johore) Development Authority or Lembaga Kemajuan Johor Tenggara (KEJORA) was established on 1st June 1972 with the task of developing 303,518 hectares of land as recommended by the Master Plan.

OBJECTIVES

The objectives of KEJORA are as follows :

- Eradication of poverty which aims at :
 - Raising the productivity and income of those in low productivity occupation.
 - Increasing opportunities for inter-sectoral movements from low to higher productivity activities in newly developed economic sectors.
 - Providing a wide range of free or subsidized social services especially designed to raise the living standards of the low income groups.
- Restructuring the society in order to eventually eliminate the identification of race with particular forms of economic activity. This objective can be achieved by carrying out the following measures :
 - Reducing the economic disparities through increasing income and employment for the poorest groups and more specifically the Bumiputras.
 - Creating employment opportunities particularly in agriculture.
 - Promoting the overall economic growth.
- If uncontrolled, the process of overall development would lead to further increases in income gap between the non-agriculture sector and the poorest group (mainly Bumiputras). In order to prevent such tendency, additional measures will be undertaken through :

- Increasing the participation of Bumiputras in activities (mainly urban) which can offer relatively higher and potentially rapid growth of income.
- Increasing the range and quality demanded skills and experience (technical, managerial, entrepreneurial) of Bumiputras at all levels.
- Providing financial arrangements which permit those initially with little or no access to capital, gradually to acquire assets and employ them for higher returns.
- Adopting measures to give residents in rural areas, the majority of whom are Bumiputras, more of the advantages of living in towns, including greater diversity of occupation and better and cheaper access to education and their urban facilities.

KEY PERSONNEL

General Manager

Mahtar bin Dato' Hj. Sairan

Deputy General Manager (Operation)

Mohmad Shaid bin Mohd. Taufek

Deputy General Manager (Administration)

Abdul Aziz bin Hj. Mohd. Rejab

Land Manager

Puan Hajjah Rohaya bte. Hj. Awang

Administration Manager

Abas bin Sauan

Planning Manager

Tuan Hj. Mohd. Salleh bin Hj. Kurais

Finance Manager

Johar bin Sarkawi

Project Manager

Idham bin Kayat

Senior Engineer Unit JKR KEJORA

Ir. Anton A. Sebastian

Town Planning Manager

Ahmad bin Abdul Majid

Tourism Manager

Mohd. Ashari bin Shahrani/Shaharan

JOHOR TENGGARA DEVELOPMENT AUTHORITY
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Tel : 07-226233, 226302, 224635, 223121, 221540

Y.M. Ungku Abdul Rahman bin Ungku Mohd.
Tahir
Bandar Tenggara Branch Office
Bandar Tenggara
81000 Kulai, Johore
Tel : 07-681261, 682269

Heads of branch offices

Ashari bin Shahran/Shaharan
Bandar Penawar Branch Office
P.O. Box 20
81907 Kota Tinggi, Johore
Tel : 07-838201, 838202

FUTURE PROGRAMMES

The future programmes for 1988/1989 are tabled as follows:

Year Started	Developer	Name of Project	Hectareage	Crops
1988	Joint Venture	Ranc. Ulu Chenas I	1,500	Integrated farming
1988	Private	Ranc. Panggeli Kecil	1,000	Integrated farming/ oil palm
1988	Private	Ranc. Semberong Kiri	600	Integrated farming/ oil palm
1988	Private	Ranc. Ulu Silika	720	Poultry/ farming
1988	Private	Ranc. Pantai Sempit	1,600	Flowers & fragrances fruits/ prawns
1988	Private	Ranc. Sungai Mupor	20	Integrated farming
1989	Private	Ranc. Sungai Jengli Kanan And Kiri	2,400	Integrated farming
1989	Private	Ranc. Bukit Saga	520	Integrated farming

* Ranc = Rancangan

Kedah Regional Development Authority (KEDA)

The Kedah Regional Development Authority (KEDA) was established as a statutory body on 28th March 1981.

OBJECTIVE

Its primary objective is to improve the income and living standards of the rural population of the State of Kedah living outside the MADA area.

FUNCTIONS

The responsibilities of KEDA include :

- Changing of the traditional rural form and economic structure to commercial based agricultural activities.
- Improving the rural conditions and its surroundings by adding more basic infrastructure, as well as other required facilities
- Mobilizing the rural society towards strong forms of movements, in the direction of encouraged participation in the planning and implementation of the rural development projects.

KEDA'S PROGRAMMES

- To achieve the above objectives, KEDA has planned and is currently undertaking four major programmes, that is small and medium scale industry, commercial agriculture, township and regional development and human resource development. It is envisaged that the growth process generated by the changes and improvement within the above sectors will gradually enhance the socio-economic development within the region hence benefitting directly and indirectly the population therein.
- In promoting industrial development within the region, KEDA undertakes the planning and

promotion of small and medium scale industries. Both resource and non-resource based industries are being promoted through four approaches namely :

- Joint-ventures with both local and foreign entrepreneurs.
- Upgrading of existing local enterprises.
- Undertaking industrial ventures by itself through its subsidiary company.
- Provision of industrial lots and buildings (of MIEL standard) for rental/purchase by both local and foreign entrepreneurs.
- Planning for industrial development in the KEDA region takes into account the need for "regional spread" of industries within the region so as to utilize and harness to the utmost the rich and abundantly available human and natural resources as well as the already well-developed infrastructural facilities and services.
- In its efforts in promoting commercial agriculture, KEDA undertakes the cultivation of such crops as tobacco, fruit trees (including durian, banana and rambutan) and coffee.
- Human resource development gives priority to skill development and related training targeted to the available workforce within the region.
- Undertake its regional development sector project, KEDA is currently undertaking an integrated township development programme which includes upgrading of existing townships, provision of necessary facilities to promote and accelerate commercial, industrial and agricultural development, as well as public amenities (road improvement, telephone, electricity and water supply).

KEY PERSONNEL

General Manager

Abdul Halim bin Abdullah

Deputy General Manager

Tuan Hj. Sulaiman Khan bin Kala Khan

Senior Manager of Planning Sector

Ismail bin Husin

Senior Manager of Implementation Sector
Mohamad Tajudin bin Bakar

Administration and Finance Manager
Abdul Karim bin Abdul Aziz

Evaluation and Coordination Manager
Abdul Rahim bin Pawanteh

Economic Planning Manager
Zakeria bin Ismail

Agribusiness Manager
Mohd. Shuif bin A. Karim

Industrialization Manager
Yem bin Othman

Social and Institutional Development Manager
Khazi bin Hj. Hussain

JKR KEDA Manager
Tuan Hj. Radin Abdul Halim bin Hj. Radin Baidawi

Town Planning Senior Assistant Manager
Mohd. Fathi bin Abdul Rahman

**KEDAH REGIONAL DEVELOPMENT AUTHORITY
(KEDA)**

Bangunan Tunku Negeri Kedah
Jalan Tunku Ibrahim
P.O. Box 195
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731915
Telex : KEDA MA 42269

Kelantan Selatan Development Authority (KESEDAR)

Kelantan Selatan Development Authority was formed under the Kelantan Selatan Development Authority Act 1978 to develop the South Kelantan Region in a planned, controlled and integrated approach, in order to encourage the migration of people from the relatively densely populated north to the sparsely populated southern part of the state which is richly endowed with natural resources.

OBJECTIVES

KESEDAR's main objective is to develop the South Kelantan Region, so as to promote the overall development of the region resulting in maximum benefits to the people.

FUNCTIONS

KESEDAR has been entrusted with the following functions :

- To promote, stimulate, facilitate and undertake economic and social development in the South Kelantan Region.
- To promote, stimulate, facilitate and undertake residential, agricultural, industrial, and commercial development in the South Kelantan Region.
- To control and coordinate the performance of the aforesaid activities in the South Kelantan Region.

KEY PERSONNEL

General Manager

Dr. Nik Ibrahim Nik Mahmood

Deputy General Manager (Operation)

Tuan Hj. Ahmad Kamal bin Hj. Abu Bakar

Deputy General Manager (Planning & Finance)

Tuan Hj. Yusoff bin Hj. Hamzah

Manager, Land Rehabilitation Division

Tuan Hj. Mohamed Hj. Yusoff

Manager, Administration & Training Division

Tuan Hj. Ismail bin Ab. Rahman

Manager, Administration & Training Division

Tuan Hj. Hussin Hj. Omar

Manager, Social Development Division

Tuan Hj. Abdullah Mahmood

Manager, Local Government & Kampong Redevelopment Division

Bonia Mahmud

Manager, Planning & Evaluation Division

Sharifah Zaiton Said Jaafar

Manager, Finance & Budget Division

Shafii bin Hamat

Manager, Special KESEDAR Planning Unit Division

Ramli bin Zulkifli

Manager, Technical Services Division

Ir. Yusoff bin Ismail

Head, Legal Services Unit

Abdul Aziz Husain

KELANTAN SELATAN DEVELOPMENT AUTHORITY

Bandar Baru Gua Musang
18300 Gua Musang, KELANTAN
Tel: 09-901788, 901789

Pahang Tenggara Development Authority (DARA)

The Pahang Tenggara Development Authority (DARA) which was established under the Lembaga Kemajuan Pahang Tenggara Act, 68/72 and gazetted on March 30, 1972 has a mission to initiate, promote and coordinate socio-economic development in Pahang Tenggara.

OBJECTIVES

It's objectives are :

- To establish an agro-based industry on a wide scale basis through efficient technology and management.
- To encourage township and industrial development that can provide employment opportunities in the modern sector.
- To reduce the gap between highly productive and less productive areas.
- To provide opportunities to improve skill among Malaysians particularly Bumiputras.
- To provide employment opportunities.
- To provide basic utilities to attract non-resource based industries and services.

FUTURE PLANS

The main emphasis on future agricultural programme is based on crop diversification. Several agricultural crops have been identified and found to be suitable for cultivation in the region. These include :

- Tropical fruit growing and processing.
- Lowland tea cultivation and processing.
- Coffee cultivation and processing.
- Integrated farming.

An estimated total area of more than 25,000 hectares is available for agricultural

development. In addition, a large strip of land exceeding 12,000 hectares has also been discovered to have potential for aquaculture development. Preliminary study undertaken indicated that both the water quality and soil types are ideal for the breeding of tiger and gravid prawns, brackish-water fish and eel culture.

KEY PERSONNEL

General Manager

Dato' Hj. Ibrahim bin Ismail

Deputy General Manager (Administration)

Tuan Hj. Samsudin bin Othman

Director of Administration and Finance

Tuan Hj. Ramli bin Othman

Director of Planning and Research

Tuan Hj. Salim bin Hj. Haron

Director of Coordination and Monitoring

Puan Hajjah Hamimah bte. Abdul Karim

Director of Land Administration

Tuan Hj. Baharuddin bin Abdul Jalil

Director of Community Development (Traditional Village)

Tuan Hj. Mohd. Yunus bin Hussein

Director of Technical Services and Housing

Tan Boo Dik

Director of Investment and Promotion

Mohd. Hanafiah bin Abdul Talib

Director of Local Government

Tuan Hj. Mat Saad bin Bahari

Director of Social Development/Manpower

Noor Hayati bte. Abdul Manaf

Secretariat

Tuan Hj. Aziz bin Busu

Legal Unit

Tuan Hj. Hashim bin Ambia

Internal Audit Division

Yusof bin Abdul Ghani

PAHANG TENGGARA DEVELOPMENT AUTHORITY

Wisma Sultan Ahmad Shah
26700 Muadzam Shah, PAHANG
Tel : 09-452300
Cable : DARA, Muadzam Shah

Rubber Industry Smallholders Development Authority (RISDA)

RISDA, acronym for Rubber Industry Smallholders Development Authority is a Government statutory body formed under the laws of Malaysia vide Rubber Industry Smallholders Development Authority Act, 1972. It comes under the jurisdiction of the Ministry of Land and Regional Development.

As provided under the provision of the Establishment Act RISDA is responsible for:

- The administration of the Rubber Industry Replanting Fund under Section 3 of the Rubber Industry Replanting Fund Ordinance 1952.
- The management and successful operation of the scheme prepared and approved under provision of Rubber Industry Replanting Fund Ordinance 1952.
- The planting and implementation of all research innovations in the smallholder sector.

MISSION AND OBJECTIVES

Risda's mission is to carry out replanting and other related activities in the most efficient and effective manner with the view of contributing towards the creation of an economically viable smallholder community.

In the pursuit of its mission, RISDA has identified the following as its strategic objectives, viz :-

- Replant all old rubber areas with approved crops and ensure the use of high quality, high yielding planting materials.

- Encourage the optimal use of modern agricultural practices to accelerate production.
- Optimal use of all factors of production to maximize income above the poverty line.
- Raise production levels to their full potential.
- Improve the quality of output and ensure fair market prices.
- Direct involvement of smallholders in the development of entrepreneurship, investment, small scale industries and cooperatives.
- Active participation of smallholders in social and institutional development programmes to acquire knowledge, skills, independence and positive attitudes.

KEY PERSONNEL

Chairman

YB Encik Mohd. Noh Rajab

Director General

Mohd. Zain Haji Yahya

Deputy Director General (Operations)

Shahabuddin Shafie

Deputy Director General (Administration)

Osman Mohd. Said

RUBBER INDUSTRY SMALLHOLDERS DEVELOPMENT AUTHORITY

RISDA HEADQUARTER BUILDING

P. O. Box 11067

50734 KUALA LUMPUR

Tel : 03-4564022

Telex : MA 31211

Cable : RISKUL

Terengganu Tengah Development Authority (KETENGAH)

Terengganu Tengah (Central Terengganu) Development Authority (KETENGAH) was established on 12th April 1973, under Parliamentary Act No. 104/73 (Terengganu Tengah Development Authority Act)

OBJECTIVES

The objectives of this authority are :

- To create efficient well managed technological developments and large scale enterprises in agriculture with special emphasis on the diversification of crops in an area of about 116,173 hectares by 1990.
- To develop seven new towns consisting of 98,384 inhabitants by 1990 and the provision of sufficient infrastructure and social amenities in these towns.
- To assure the pattern of development which will contribute to the reduction of regional gaps. This objective requires a pattern of development which will prevent levels of income and social welfare in the region from dropping too far below the national average, and permit substantial migration from relatively low productivity centres of the poor region within the state.
- To create employment opportunities for 38,150 by 1990 through the adoption of labour intensive programmes and diversification of economy as a result of various developments undertaken by the Authority. This objective is to create more employment, enhance rural incomes and expand job creation.
- To provide means of acquiring higher level of skills, especially for Bumiputra and also other Malaysians.

- To promote and develop forestry activities and timber based industries in the region.

FUNCTIONS

To meet the above objectives, the Authority is entrusted with the following functions :

- To promote, stimulate, facilitate and undertake economic and social development.
- To promote, stimulate, facilitate and undertake residential, agricultural, industrial and commercial development.
- To control and coordinate the performance of the aforesaid activities.

KEY PERSONNEL

General Manager

Dato' Ariffin bin Zakaria

Deputy General Manager

Abdullah Norhaddi bin Embong

Director of Administration and Finance Division

Mohd. Talhah bin Mohd. Taib

Director of Project Division

Alwi bin Said

Director of Technical Service Division

Ng Lian Been

Director of Land and Local Government Division

Tuan Hj. Salleh bin Mohamad

Director of Planning and Coordination Division

Tuan Hj. Wan Abdul Rahman bin Ngah

TERENGGANU TENGAH DEVELOPMENT AUTHORITY

Jalan Cherong Lanjut
20300 Kuala Terengganu, TERENGGANU
Tel : 09-623544, 623554, 623612
Telex : KETENGAH 51304
Cable : "KETENGAH"

Malaysian Industrial and Development Authority (MIDA)

The Malaysian Industrial Development Authority (MIDA) is the Malaysian Government's principal agency for the promotion and coordination of industrial development activities in the country.

FUNCTIONS

One of the principal functions of MIDA is to advise the Minister of Trade and Industry on the formulation and implementation of various industrial development policies and strategies, incentives for industry and other facilities required for accelerated industrial development. In this respect MIDA also offers advice and assistance to State Governments and regional development authorities.

MIDA handles all enquiries from potential investors in the manufacturing sector. It acts as advisor to entrepreneurs, both Malaysian and foreign, on matters relating to the feasibility and technicalities involved in locating manufacturing projects in Malaysia.

All applications for manufacturing licences, tax incentives, tariff protection and import duty exemption are evaluated by MIDA; where necessary, the agency also offers follow-up assistance to investors.

MIDA fulfils its role as a one-stop centre for potential investors through the services of its Central Unit. Investors can obtain the necessary information and assistance from this Unit, which comprises senior officers from the Federal Treasury, Royal Customs and Excise Department, Immigration, Ministry of Trade and Industry, and the Ministry of Labour.

Investors who seek information on specific industrial sectors can contact MIDA's five industries divisions namely Resource-base; Food, Beverages and Chemical; Engineering; Electrical and Electronics; and Building Materials, Textiles and Miscellaneous Industries. Other divisions within MIDA include Tariff, Planning and Industrial Promotion.

KEY PERSONNEL

Chairman
Tan Sri Zainal Abidin Sulong

Director General
N. Sadasivan

Deputy Director General (Operations)
Geh Sim Hong

Deputy Director General (Development)
Zainun Aishah bte. Dato' Ahmad

Director, Planning, Research and International Cooperation Division
Low Peng Lum

Director, Tariff Division
Shahidah bte. Hj. Abdul Majid

Director, Industrial Promotion Division
J. Jegathesan

Director, Administration, Finance and Central Services Division
Yaakub bin Arshad

Director, Resource-Based Industries Division
Fadillah bte. Mohd. Yakin

Director, Engineering Industries Division
Chua Eng Seng

Director, Electrical and Electronics Industries Division
Mardziah bte. Abdul Aziz

Director, Building Materials, Textiles and Miscellaneous
G. Jayanathan

Director, Food, Beverages and Chemical Industries Division
Lee Sum Tung

MALAYSIAN INDUSTRIAL DEVELOPMENT AUTHORITY

3rd-6th Floor, Wisma Damansara
Jalan Semantan
P.O. Box 10618
50720 KUALA LUMPUR
Tel : 03-2553633
Cable : FIDAMAL
Fax : 03-2557970

MIDA'S overseas offices

Consul-Investment
Consulate of Malaysia
11th Floor, R & W House
92 Pitt Street,
Sydney, N.S.W. 2000
Tel : 232-5737
Telex : TC SY D AA 26936

Trade Commissioner (Investment)
Malaysian Commission (Investment Section)
23rd Floor, Malaysia Building, 47-50
Gloucester Road, Hong Kong
Tel : 5-270921
Telex : 60567 MIDA HX

Director
Malaysian Industrial Development Authority
2nd Floor, Nichiginmae Kyoda Building
3-2-4 Nihonbashi Hongoku-cho, Chou-ku
Tokyo 103, Japan
Tel : (03) 279-3082
Telex : MIN J27596

Investment Attache
Commercial Section, Embassy of Malaysia
4-1 Hannam-dong Yongsan-ku
Seoul, Republic of Korea
Tel : 7953032/7959203
Telex : MAWAKIL K 27382

Trade Commissioner (Investment)
Malaysian Industrial Development Authority
5 Shenton Way, No. 26-05/07, UIC Building
Singapore 0106
Tel : 2210155 (2 lines)
Telex : MIDA SP RS 28474

Commercial Attache
Bureau Economic Embassy of Malaysia
42 Avenue Kleber
75116 Paris, France
Tel : 4727-6696/4727-3689/4727-3691
Telex : MIDA 613031 F

Trade Commissioner (Investment)
Malaysian Trade Commission (Investment Section)
6th Floor, ABC Haus, Bahnhofstr 1-9
D-50000 Koln-1, Federal Republic of Germany
Tel : (0221) 124007/124008
Telex : 888 1080 MA D

Director
Malaysian Commercial Bureau (Investment)
Weinbergstrasse 43
8006 Zurich, Switzerland
Tel : 01-251 2646
Telex : 816629 MIDA CH

Trade Commissioner (Investment)
Malaysian Industrial Development Authority
(London Office), 17 Curzon Street
London W1Y 7FE
Tel : 409-0411/493-0616
Telex : 24371 MIDA UK G

Director
Malaysian Industrial Development Authority
Suite 3350, John Hancock Centre
875 North Michigan Avenue, Chicago
Illinois 60611, United States of America
Tel : (312) 787-4532
Telex : 4330368 MIDA UI

Consulate General Malaysia
(Investment Promotion Section)
World Trade Centre Building
350, South Figueroa Street, Los Angeles
California 90071, United States of America
Tel : (213) 621-2661/621-2686
Telex : 4720504 MALA UI

Consul-Investment
Consulate General Malaysia (Investment Section)
630, Third Avenue, New York
N.Y. 10017, United States of America
Tel : (212) 687-2491
Telex : NYMIDA 424869

Department of Agriculture, Sabah (DOA)

The Department of Agriculture as a separate entity was officially established in November 1946, while prior to that date it was under the auspices of the Conservator of Forest. Initially the Department was, besides crop agriculture, also responsible for animal husbandry and veterinary services, marine and fresh water fisheries and drainage and irrigation. However, over the years separate departments have been established to look after each of these functions and today the role of the Department of Agriculture has become more specialized, namely dealing only with crop husbandry.

OBJECTIVES

The Department of Agriculture, Sabah has four main objectives :

- To promote and to accelerate agricultural and rural development.
- To promote growth of the agricultural industry in the State.
- To increase productivity, income and earning capacity of farmers.
- To help the State attain a satisfactory level of sufficiency in major agricultural items.

To achieve these objectives, the Department of Agriculture has identified and drawn up the following strategies :

- Improving farm technologies and cultivation methods.
- Transferring technologies and innovations to the farming community through organized and extension activities.
- Providing subsidies, credits and other facilities to the farming community.
- Diversifying crops and agricultural activities.

- Promoting large-scale development of selected tree crops and food crops.
- Providing formal training for agricultural technicians and rural training for farmers.

FUNCTIONS/ACTIVITIES

The Department of Agriculture has three main functions :

- The Department provides services such as soil surveys, training of manpower, advisory services and other analytical services for public and private agencies.
- Apart from the provision of supporting services the Department is also directly involved in agricultural development.
- The regulatory function includes the following :
 - Control of importation of planting materials
 - Land inspection to ensure soil/crop suitability
 - Imposition of control measures during outbreaks of pests and diseases
 - Some control on planting materials used
 - Examination and approval of development plans submitted by developers and investors

The Department of Agriculture is currently one of seven agencies under the State Ministry of Agriculture and Fisheries. The programmes and activities of the Department are implemented by three Branches, namely Extension, Research and Training and Education. In addition the Department also has two Divisions, Planning and Service, which provide supportive services to all the three implementing Branches.

FUTURE PLANS

The emphasis on applied research with results which are of immediate application will continue to be the main concern of the Research Branch. Research on cocoa and oil palm will continue. At the same time greater research efforts will be placed on paddy, coconuts, field crops, vegetables and coffee.

The Education and Training Branch will continue to provide training/refresher courses for departmental staff, training of agricultural technicians, and training of the farming community.

The Extension Branch will continue its efforts on the development of smallholders by providing suitable technologies and developing their technical and managerial skills. Assistance in the form of planting materials, fertilizers, insecticides and technical advice to farmers will be continued.

A total of 25 projects are being undertaken during the Fifth Malaysia Plan period (1986-1990). These include two new projects namely, Plant Quarantine Station and Coconut Rehabilitation Scheme.

KEY PERSONNEL

Director of Agriculture

Datuk Aripin Datuk Hj. Ampong

Deputy Director

Blaise S. Yapp

Assistant Director (Research)

Dr. Tay Eong Beok

Assistant Director (Extension)

Liew Nyuk Phin

Assistant Director (Planning)

Sylverius Golingai

DEPARTMENT OF AGRICULTURE SABAH

88632 Kota Kinabalu, SABAH

Tel : 088-55155

Telex : MINAF MA 80235

Cable : "AGRICOF"

Research Station

Cocoa Research Station

Quoin Hill

91007 Tawau, Sabah

Tel : 089-773255

Agriculture Research Station

Ulu Dusun

90008 Sandakan, Sabah

Tel : 089-213372

Agriculture Research Station

Lagud Sebrang

89908 Tenom, Sabah

Tel : 087-735661

Agriculture Research Centre

89207 Tuaran, Sabah

Tel : 088-788436

Department of Fisheries Sabah

The Department of Fisheries was established before the Second World War and was merged with the Department of Agriculture because of financial difficulties. In May 1968, the Department was re-established as a separate organization under the Ministry of Agriculture and Fisheries.

Fisheries is basically a technical Department in providing technical supporting services in the sector. The Department is divided into four main divisions, namely:

- Inland Fisheries
- Marine Fisheries
- Aquaculture; and
- Research

Objectives

The objectives of the Department are as follows :

- To accelerate fishery development in the right direction and to provide more employment opportunities
- To increase the productivity and thereby the income earning capabilities of the fishermen.
- To increase the production of fish both from marine and inland fisheries in the State to ensure sufficient production of animal protein.
- To consolidate the research findings and to apply the same for the current development.
- To find ways and means to lay down ground work to ensure sufficient fish production in the future.
- To manage the Exclusive Economic Zone 1984 and the regulations made thereunder in territorial waters and in the exclusive economic zone.
- To plan and implement the management, protection and conservation policies in the State's waters and Exclusive Economic Zone.
- To regulate and control the licensing of fishing boats and fishing activities.

- To provide protection and service to fishermen especially those in the traditional fishermen category.
- To manage the State's marine fisheries resources at the optimum biological and economic level of exploitation.
- Rational fisheries resources utilization and development of aquaculture to increase production and employment in the fisheries sector.
- Carry out research on capture fisheries and aquaculture so as to increase efficiency and develop the appropriate technology for maximum utilization of the natural resources.

FUNCTIONS

The Department performs five basic functions :

- Administration and Regulation: such as the enforcement of Fisheries Act 1985 and Fisheries Regulations 1964, including the prosecution of offenders under these laws in Court: Fishery Licensing; Pearl Oyster Shell Fisheries Ordinance No. 95, control of import and export of fish species, control methods of fishing and gears use, prohibit the use of explosives for fishing, control of cultured fish species, control methods of processing, resource management, both to exploit and conserve so that the fisheries resources can be utilized perpetually.
- Management and supervision of fisheries planning and development such as the introduction of efficient methods of fishing and processing, supervision and assistance in fish- ponds constructions and grants, management of fish breeding stations, vet fisheries planning and development projects for Government approval.
- Research, such as applied research on various aquaculture projects, resource surveys, monitoring the fishing industry, fisheries landing statistics, export quality control, PSP shellfish poisoning and research in processing technology and fish-feed formulation.
- Provisions of service and advice to fishermen and fishing industry.
- Formulation and implementation of policies towards the proper exploitation and

conservation of marine, riverine fisheries resources and aquaculture development.

FUTURE PLAN

- Multi-Species Marine Hatchery
- Fry Production Cum Training Centre
- Lake and Riverine Fishery Project

ON-GOING PROGRAMMES

- Grants for building of fish-ponds
- Expansion of freshwater fish breeding stations
- Fishermen Settlement Scheme, Menggatal
- Fisheries Research Project
- Seaweed culture project
- Oyster culture projects
- Aquaculture project, Mengkabong
- Brackishwater fish culture project
- Artificial fish reefs
- Fish landing facilities
- Cage culture project
- Cockle culture project
- Mussel culture project
- Construction of research vessels
- Construction of patrol boats

KEY PERSONNEL

Director of Fisheries

Joseph Wong Tung Sang

Deputy Director

Yap Kon Shen

Senior Fisheries Officer (Inland)

Cho Yow Won

Senior Fisheries Officer (Aquaculture)

Tang Twen Poh

Senior Fisheries Officer (Marine)

Rayner Stuel Galid

DEPARTMENT OF FISHERIES, SABAH

8th Floor, Menara Khidmat
88000 Kota Kinabalu, SABAH
Tel : 088-52511, 52641, 52909
Telex : MINAF MA 80235

Branches and Stations

Fisheries Research Centre, Likas
c/o Department of Fisheries
88000 Kota Kinabalu, Sabah

Freshwater Fish Breeding Station, Babagon
c/o Department of Fisheries
88000 Kota Kinabalu, Sabah

Brackishwater Fish Culture Station, Menggatal
c/o Department of Fisheries
88000 Kota Kinabalu, Sabah

Marine Cage Culture of Fisheries Station
Trayong, Tuaran
c/o Department of Fisheries
88000 Kota Kinabalu, Sabah

Department of Fisheries
P.O. Box 1369
90008 Sandakan, Sabah

Department of Fisheries
P.O. Box 133
91308 Semporna, Sabah

Department of Fisheries
P.O. Box 616
91008 Tawau, Sabah

Department of Fisheries
P.O. Box 195
89058 Kudat, Sabah

Department of Fisheries
P.O. Box 146
89007 Keningau, Sabah

Freshwater Fish Breeding Station, Keningau
c/o Department of Fisheries
P.O. Box 146
89007 Keningau, Sabah

Department of Fisheries
P.O. Box 11
89137 Kota Belud, Sabah

Freshwater Fish Breeding Station, Kota Belud
c/o Department of Fisheries
P.O. Box 11
89157 Kota Belud, Sabah

Department of Fisheries
P.O. Box 105
89807 Beaufort, Sabah

Department of Fisheries
P.O. Box 37
90107 Beluran, Sabah

Department of Fisheries
P.O. Box 21
89307 Ranau, Sabah

Freshwater Fish Breeding Station, Ranau
c/o Department of Fisheries
P.O. Box 21
89307 Ranau, Sabah

Department of Fisheries
P.O. Box 8
89747 Kuala Penyu, Sabah

Oyster, Cockle Culture Station
Lake Setompok, Kuala Penyu
c/o Department of Fisheries
P.O. Box 8
89747 Kuala Penyu, Sabah

Department of Fisheries
89300 Telupid, Sabah

Freshwater Fish Culture and Breeding Station,
Telupid
c/o Department of Fisheries
89300 Telupid, Sabah

Department of Fisheries
P.O. Box 36
89957 Nabawan, Sabah

Department of Fisheries
W.D.T. 27
89609 Papar, Sabah

Department of Fisheries
W.D.T. 11
89209 Tuaran, Sabah

Department of Fisheries
W.D.T. 104
91109 Lahad Datu, Sabah

Department of Fisheries
W.D.T. 50
91209 Kunak, Sabah

Department of Fisheries
W.D.T. 6
89859 Sipitang, Sabah

Department of Fisheries
W.D.T. 4
89659 Tambunan, Sabah

Department of Fisheries
W.D.T. 4
89100 Kota Marudu, Sabah

Department of Fisheries
Tingkat 1
89900 Tenom, Sabah

Oyster Culture Station
Sungei Mapan, Tawau
c/o Department of Fisheries
P.O. Box 616
91008 Tawau, Sabah

Oyster Culture Station
Semangat, Sandakan Bay
c/o Department of Fisheries
P.O. Box 1369
90008 Sandakan, Sabah

Marine Fisheries Department, Sarawak

Fisheries Department Sarawak was established on 16th September 1965. It was renamed as Marine Fisheries Department so as to reflect its responsibility for the development and management of the maritime and estuarine fisheries activities in Sarawak.

FUNCTIONS

The functions of the Department are :

- To safeguard and control fisheries activities through the enforcement of the Fisheries Act 1985.
- To undertake fisheries resources surveys, water pollution studies, fisheries biological studies and development of fishing gears.
- To provide extension services and to transfer fisheries technology to fishermen through training, publications, exhibition and mass media.
- To collect Sarawak fisheries statistics.
- To promote marine aquaculture activities.

KEY PERSONNEL

Director

Teo Chee Kwang

Deputy Director

Andrew Bangkam Bejie

Assistant Director of Administration and Planning

Andrew Bangkam Bejie

Assistant Director of Research

George Chong Chiaw Min

Assistant Director of Extension Services

Henry Opang Luhah

Assistant Director of Management and Conservation

Mohd. Shah bin Abdul Hamid

MARINE FISHERIES DEPARTMENT SARAWAK

15th Floor, Wisma Persekutuan (Baru)

Jalan Simpang Tiga

P.O. Box 1375

93728 Kuching, SARAWAK

Tel : 082-250357, 250457, 252743, 252476, 418625

Telex : KUFISH MA 70829

Cable : PERIKANAN

Regional Officers

Ismail bin Bujang Pit

Fisheries Officer Region I

Bintawa, P.O. Box 2243

93744 Kuching, Sarawak

Tel : 082-32471, 34144

Bustamah bin Bakar

Fisheries Officer Region II

3rd Floor, Wisma Persekutuan (II)

Jalan Race Course

P.O. Box 1316

96008 Sibul, Sarawak

Tel : 084-331625, 330292

Rural Development Corporation (KPD), Sabah

The Rural Development Corporation or Korporasi Pembangunan Desa (KPD) was formed in July 1976, originally as cooperative society and later reconstituted by law as a state statutory corporation on September 30th, 1977.

KPD is charged with the task of accelerating rural development to improve the economic and social well-being of the rural poor.

OBJECTIVES

The main objectives of KPD are :

- To improve the economic and social well-being of the rural population in Sabah, particularly the poor.
- To inculcate the spirit of self-reliance among the rural communities.
- To help increase agricultural production and accelerate development of agro-based industries.
- To encourage modern, progressive and commercial farming in in-situ areas.
- To promote and develop a pool of skilled Bumiputra entrepreneurs in the agricultural sectors.
- To preserve and increase the overall net worth of the corporation over a period of time.

ACTIVITIES

Since its incorporation as state corporation in September 1977, KPD has actively undertaken the following programmes :

- Joint-venture projects with farmers/land owners
- Settlement schemes
- Demonstration farm projects
- Contract farming
- Marketing

KEY PERSONNEL

General Manager/Group Chief Executive
Felix Galingi

Deputy General Manager/Deputy Chief Executive
Dr. Richard Gunting

Executive Secretary
Stalie Mulok

Group Chief Planner
Alan Khoo

Internal Auditor (Officer-in-Charge)
Michael Chong

Legal Affairs Officer
Melvin Fabia

Acting Engineer
Sau Thean Nam

Acting Systems Manager
Vencent Ng

Public Relations (Officer-in-Charge)
Adeline Chee

Property Executive
Cyril Lim

Marketing Coordinator
Patrick Shu

Administrative and Personnel Manager
Hj. Masood Salleh

Senior Chief Accountant
Paul Soon

Group Manager (Other Plantations)
Fung Yin Leung

Group Manager (Livestock)
Laurentius Kitingan

Group Chief Accountant
Mr. David Cheuk

Company Secretary
Angeline Soh (Officer-in-Charge)

Company Executive
Bernard Kwan

RURAL DEVELOPMENT CORPORATION

9Km, Jalan Tuaran, Locked Bag 86

88998 Kota Kinabalu, SABAH

Tel : 088-33911

Telex : DESA MA 80815

Agricultural Advisor

Mr. Benjamin Lee

KPD Holdings Sdn Bhd

W.D.T. 308

90009 Sandakan, Sabah

Atur : 018-80698

Sabah Forestry Development Authority (SAFODA)

The Sabah Forestry Development Authority (SAFODA) was enacted in December, 1976 and its present function is to implement the State Government's policy of forest protection and conservation through the establishment of forest plantation in wasteland areas, particularly in relation to the formulation and implementation of extension programmes for rural development.

OBJECTIVES

The current objectives of SAFODA in its reforestation and afforestation programmes are to :

- Convert wasteland and marginal agricultural land to productive forestry use.
- Supplement the production of timber and minor forest products from the natural forests with products coming from man-made forest.
- Encourage and promote the active participation of the people in reforestation and afforestation work and provide mass employment.
- Uplift the living standard of the people through forest settlement schemes and the introduction of forestry-oriented agriculture development schemes.

To achieve these objectives, SAFODA has adopted three strategies in its development programmes :

- Establishment of large scale commercial forest plantation.

- Reforestation of scattered wasteland.
- Establishment of private woodlots or treefarms.

FUTURE PLANS

SAFODA will continue its main plantation activities of reforestation of wasteland. More effort and resources will be allocated to commercial plantation development. SAFODA welcomes private investment by both local and foreign investors in joint-venture forestry projects with SAFODA.

KEY PERSONNEL

General Manager
M.P. Udarbe

Deputy General Manager
Benjamin bin Mohamed

Senior Administrative Officer
Mariana Tinggal

Financial Officer
Joseph Liew

Controller of Operation/Plantation
W.J.P. Pereira

Senior Research Officer
Khamis bin Selamat

SABAH FORESTRY DEVELOPMENT AUTHORITY

Lot 14, Expo Building
Jalan Tun Fuad, Teluk Likas
Locked Bag 122
88999 Kota Kinabalu, SABAH
Tel : 088-218133, 218196, 218213, 218270
Telex : MA 80112
Telegram : SAFODA

Sabah Land Development Board (SLDB)

The Sabah Land Development Board (SLDB) was established in January 1969 under the Sabah Land Development Board Ordinance. It took over from the Department of Agriculture 14 major schemes, mainly oil palm.

Since its inception, SLDB has further developed and established its own major land settlement schemes. SLDB currently has land area of 85,101 hectares out of which 47,989 hectares are under oil palm. It also owns six mills.

OBJECTIVES

The main objectives of the Board are as follows :

- To provide assistance in investigation and formulation of State land development policies and strategies.
- Implementation of land development projects for economic plantation crops.
- Plan and construct crop processing facilities and marketing of such produce.

Currently, the emphasis of the SLDB is to run all its Schemes in a commercial manner.

FUTURE PLANS

For the future, SLDB plan to :

- Further increase its planted areas either through own financing or joint venture with other interested organization.
- Construct two more milling facilities in Sandau, Lahad Datu and Madai in Kunak District.
- Construct one refinery in Lahad Datu.

KEY PERSONNEL

Chairman
Y.B. Datuk Robert Evans

Deputy Chairman
Y.M. George Ng Shee Wah

Chief Executive
Abdul Rahman Zainal

Assistant Chief Executive
James Gatidis

Controller of Human Resources and Development
Tuan Hj. Wasli Mohd. Said

Controller of Operations
David Wan

Controller of Processing and Engineering
Rod Wong

Controller of Agricultural Services
Christopher Hoh

Controller of Finance
Jeffrey Lo

SABAH LAND DEVELOPMENT BOARD

Jalan Kelapa Sawit
off Km 4 Jalan Tuaran
88300 Kota Kinabalu, SABAH
Tel : 088-235811

Regional Managers

Jilis Ismail
Regional Office
P.O. Box 152
89807 Beaufort, Sabah
Tel : 087-211739

Lin Fan Chung
Regional Office
Locked Bag 28
91009 Tawau, Sabah
Tel : 089-771033/4

Salim Mohamad
Regional Office
P.O. Box 1253
90008 Sandakan, Sabah
Tel : 089-21400/2

Adalbert Kinson
Regional Office
P.O. Box 154
89108 Kota Marudu, Sabah
Tel : 01-880631

Tuan Hj. Mohd Zain Hj. Idris
Regional Office
P.O. Box 211
Lahad Datu, Sabah
Tel : 089-83244/5

Sarawak Land Consolidation and Rehabilitation

Sarawak Land Consolidation & Rehabilitation Authority is one of the State Statutory Agencies established in May 1976 to consolidate, rehabilitate and develop land for agricultural purposes and inter-related projects in Sarawak.

FUTURE PLANS

Main programme for SALCRA at present and in the immediate future include :

- **Project Management**
Maintaining and managing a total of 9,819 hectares planted under oil palm (5,367 hectares), cocoa (2,802 hectares), rubber (1,460 hectares) and tea (190 hectares) in eight land development schemes, including a palm oil mill and a bulking installation.
- A total of 5,492 hectares are already in production (i.e. Oil Palm - 4,436 hectares; Cocoa - 866 hectares and Tea - 190 hectares).
- Implementation of New Schemes/Project
Implementing the new projects approved by the government during the 5th Malaysia Plan submission including the Kalaka/Saribas (IADP) Oil Palm Project as indicated below.

New Projects/Schemes	Targetted Hectareages
----------------------	-----------------------

Krokong Cocoa Scheme	800
Lundu Cocoa Scheme (extension)	800
Taee/Serian Cocoa Scheme (extension)	500
Pantu Cocoa Scheme	1,600
Kalaka Cocoa Scheme	1,200
Lubok Antu Oil Palm extension	4,000
Kalaka/Saribas (IADP) Oil Palm Project	10,000
	<hr/>
	18,900 ha
	<hr/>

KEY PERSONNEL

General Manager
Denys Lang

Deputy General Manager
William Jitab

SARAWAK LAND CONSOLIDATION & REHABILITATION AUTHORITY

2nd Floor, Electra House
Lebuh Power
P.O. Box 1981
93740 Kuching, SARAWAK
Tel : 082-413777
Telex : MA 70269

Agricultural Institutes, Peninsular Malaysia

There are six Agricultural Institutes under the Training and Career Development Branch of the Department of Agriculture. These institutes are at Serdang, Selangor; Bumbong Lima, Penang; Kuala Lipis, Pahang; Parit, Perak; Air Hitam, Johore and Besut, Terengganu.

OBJECTIVES

The objectives of the Agricultural Institutes are:-

- To provide vocational training in the field of agriculture at the certificate level to fulfil the manpower requirement in the government agricultural agencies and private sectors.
- To train and develop leadership qualities in rural youth in order to prepare them to venture in agriculture and agriculture-related fields.

COURSE CONTENTS*

First Year

Crop Protection
Agronomy 1
Horticulture 1
Soil Management

Agricultural
Mechanization 1
Animal Science 1
Basic Economics

Islamic Studies

Third Year

Agricultural Extension 11
General Administration
Agribusiness
Farm Administration
Agricultural Processing
Agricultural Marketing
English
Islamic Studies

Second Year

Agronomy 11
Horticulture 11
Soil Science 11
Agricultural
Mechanization 11

Agricultural
Extension 1
Crop Protection
Agricultural
Economics
Islamic Studies

- * The curriculum is regularly revised and updated to meet the changing needs of agricultural development.

PRINCIPALS OF AGRICULTURAL INSTITUTES

Ariffin bin Ismail
Agricultural Institute
86100 Air Hitam, Johore
Tel : 07-784161

Salleh bin Suradi
Agricultural Institute
27200 Kuala Lipis, Pahang
Tel : 09-311328

Abdul Rashid bin Ahmad
Agricultural Institute
Bumbong Lima
13209 Kepala Batas, Penang
Tel : 04-893901

Abdul Halim bin Abdul Ghani
Agricultural Institute
32600 Parit, Perak
Tel : 05-361244

Johari bin Hj. Siraj
Agricultural Institute
43409 Serdang, Selangor
Tel : 03-9486204, 9486082

Salim bin Rafiee
Agricultural Institute
22200 Jerteh, Terengganu
Tel : 09-971139

Training and Career Development Branch
Department of Agriculture
50632 KUALA LUMPUR
Tel : 03-2982011
Telex : TANIAN MA 33045
Cable : AGRICOLA

Agricultural Vocational Schools

There are three Agricultural Vocational Schools in Malaysia. These schools are at Rembau, Negeri Sembilan (started in 1969); Temerloh, Pahang (started in 1970); and Teluk Intan, Perak (started in 1982).

OBJECTIVES

The objectives of these schools are:-

- To impart agricultural knowledge and farming skills to students to enable them to become skilled workers in public and private sectors.
- To give students opportunities to venture into commercial enterprises on their own initiative with the training they have received.

COURSE CONTENTS

The duration of the course is two years. The course comprises of two major components, namely the general component and agricultural component.

- The general component consists of the following subjects:

Bahasa Malaysia
English
Vocational Mathematics
Environmental Science
Social Studies
Islamic Studies

- The agricultural component emphasizes practical work involving the use of school farms and workshops. It comprises the following subjects:

Crop Production
Livestock Production
Horticulture Ornamental
Soil Science
Farm Machineries
Farm Management

KEY PERSONNEL

K. Veerappan
Principal
Sek. Men. Vok. (Pertanian)
71300 Rembau, Negeri Sembilan
Tel : 06-651218

Rahmah bte. Adan
Principal
Sek. Men. Vok. (Pertanian)
Chenor
28000 Temerloh, Pahang
Tel : 09-249243

Tuan Hj. Ismail bin Ismail @ Johari
Acting Principal
Sek. Men. Vok. (Pertanian)
Jalan Changkat Jong
36000 Teluk Intan, Perak
Tel : 05-627322

Technical and Vocational Education Division

Ministry of Education Malaysia
Paras 3, Blok F
Pusat Bandar Damansara
50604 KUALA LUMPUR
Tel : 03-2558655
Cable : Pendidikan

Institut Teknologi MARA (ITM) - School of Applied Sciences

Due to the scarcity of trained personnel in agriculture, ITM in 1967 initiated a course to train management personnel for the planting industries. This was followed in 1968 by other allied courses covering a wide range of subjects with a broader objective of preparing students for employment in the industries, scientific research organizations and in certain cases, for higher education.

Currently the school offers eight different courses in the following fields:

- Diploma in Rubber and Plastics Technology (3 years)
- Diploma in Microbiology (4 years)
- Diploma in Industrial Chemistry (4 years)
- Diploma in Food Technology (4 years)
- Diploma in Wood Technology (4 years)
- Diploma in Textile Technology (3 years)
- Diploma in Planting Industry Management (3 years)
- Diploma in Science (2 1/2 years)

ACADEMIC STAFF

Head of School

Tuan Hj. Abdul Razak bin Baba

Deputy Head of School

Ashaari Abdul Jalil

COURSE TUTORS

Diploma in Rubber and Plastics Technology
Aisah Abdullah

Diploma in Microbiology
Nik Roslan Nik Abdul Rashid

Diploma Industrial Chemistry
Zainuddin Hashim

Diploma in Food Technology
Halimahton Zahrah Mohd. Som

Diploma in Wood Technology
Jamaluddin Kassim

Diploma in Science
Zain Azlan Mohd. Zain

Diploma in Textile Technology
Jamalludin Mohamad

Principal Lecturers

Dr. Lee Fah Inn
Tuan Hj. Mohd. Zain Omar

INSTITUT TEKNOLOGI MARA
School of Applied Sciences
Institut Teknologi MARA
40450 ITM Shah Alam
SELANGOR
Tel : 03-5564330, 03-5564345

Universiti Pertanian Malaysia (UPM)

Universiti Pertanian Malaysia or UPM was officially established on 4th October, 1971 by an Incorporation Order of His Majesty, the Yang di-Pertuan Agong. Prior to the establishment of Universiti Pertanian Malaysia, the Authorities of the University of Malaya were responsible for providing agricultural training at diploma (sub-professional) and degree level. The diploma courses were offered by the College of Agriculture, Malaya (from 1931) and degree courses by the Faculty of Agriculture, University of Malaya (from 1959). Owing to the post-war scientific and well as Malaysia's continuing dependence on an agricultural economy, it became apparent that there was a need for a new education. Towards this end, a merger between the College of Agriculture and the Faculty of Agriculture was conceived, resulting in the birth of Universiti Pertanian Malaysia. In the process, the Council of the College of Agriculture was dissolved and its functions and properties transferred to the new university.

PROGRAMMES OFFERED

Diplomas and Degrees awarded on successful completion of the academic programmes offered by the Faculties are as follows :

- Diploma in Engineering (Agricultural)
- Bachelor of Engineering (Agricultural)

- Diploma in Agriculture
- Diploma in Human Development
- Bachelor of Science (Human Development)
- Bachelor of Food Science and Technology

- Bachelor of Education (Agricultural Science)
- Bachelor of Education (Home Technology)
- Bachelor of Education (Physical Education)
- Bachelor of Education (Guidance and Counselling)
- Bachelor of Education (Teaching of Bahasa Malaysia as First Language)
- Bachelor of Education (Teaching of English as a Second Language)

- Diploma in Fisheries
- Bachelor of Science (Fisheries)

- Diploma in Forestry
- Bachelor of Science (Forestry)

- Diploma in Agribusiness
- Bachelor of Science (Agribusiness)
- Bachelor of Science (Resource Economics)

- Diploma in Computer Science
- Bachelor of Computer Science
- Bachelor of Science (Environment)
- Bachelor of Science (Honours)
- Bachelor of Science with Education (Honours)

- Diploma in Animal Health and Production
- Doctor of Veterinary Medicine

Students holding relevant Diploma qualifications may complete a degree programme in a shorter period, depending on course exemptions granted to them.

Postgraduate programmes

The University offers full-time and part-time post-graduate programmes leading to Masters and Ph. D. degrees in various faculties.

PRINCIPAL OFFICERS

Chancellor

DYMM Sultan Salahuddin Abdul Aziz Shah Ibni Al-Marhum Sultan Hisamuddin Alam Shah Al-Haj

Pro-Chancellors

YAB Tun Datu Hj. Mustapha bin Datu Harun
YB Tan Sri Ong Kee Hui

Vice-Chancellor

Prof. Dato^o Dr. Nayan bin Ariff

Deputy Vice-Chancellor

Academic: Prof. Dr. Syed Jalaluddin bin Syed Salim
Student Affairs: Prof. Dr. Kamaruddin bin Hj. Kachar
Development: Assoc. Prof. Dr. Mohd. Khalid bin Mohd. Nor

Registrar

Shahdan bin Asri

Bursar

A' amir Nordin bin Mohd. Ariffin

Director of Consultancy

Prof. Dr. Abdul Manap bin Ahmad

Dean, School of Graduate Studies

Prof. Dr. Sulaiman Mohd. Yassin

Dean, Faculty of Engineering

Prof. Ir. Abang Abdullah bin Abang Ali

Dean, Faculty of Agriculture

Prof. Mohd. Zain bin Hj. Abdul Karim

Dean, Faculty of Educational Studies

Assoc. Prof. Mohd. Shah Hj. Kassim

Dean, Faculty of Fisheries and Marine Science

Assoc. Prof. Dr. Ibrahim Mohamad

Dean, Faculty of Forestry

Assoc. Prof. Dr. Kamis Awang

Dean, Faculty of Resource Economics and Agribusiness

Prof. Dr. Mohd. Arief bin Hussein

Dean, Faculty of Veterinary Medicine and Animal Science

Prof. Dr. Abdul Latiff bin Ibrahim

Dean, Faculty of Science and Environmental Studies

Prof. Dr. Badri bin Mohamad

Dean, Faculty of Food Science and Technology

Prof. Dr. Mohd. Mahyuddin bin Mohd. Dahan

Director of Centre for Extension & Continuing Education

Assoc. Prof. Dr. Rahim Mohd. Sail

Chief Librarian

Tuan Syed Salim Agha

Farm Director

Assoc. Prof. Dr. Idris bin Abdul

Director (Acting) of Sarawak Branch Campus

Assoc. Prof. Dr. Ibrahim bin Mohd. Yusof

Director of Computer Centre

Abdul Rahman bin Bidin

UNIVERSITI PERTANIAN MALAYSIA

43400 UPM Serdang

SELANGOR

Tel : 03- 9486101-10 (10 lines), 9585425-8 (4 lines),
9496304

Telex : UNIPER MA 37454

Cable : UNIPERTAMA SUNGEI BESI

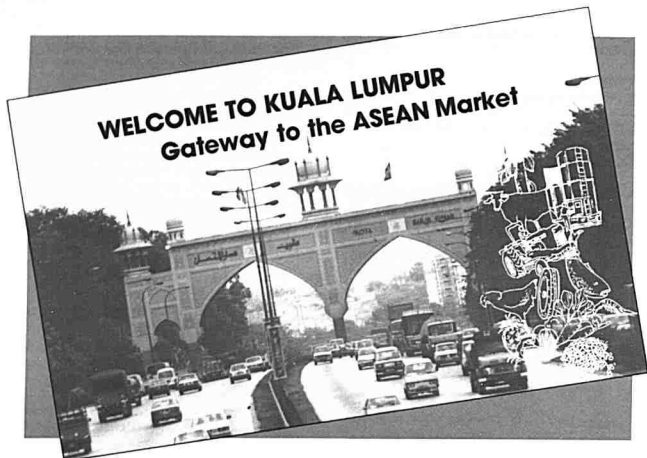


TEAM 89

Trade Exposition on Agriculture, Malaysia 1989

TEAM 89 is an international trade exposition on agriculture and its related upstream and downstream activities. It covers the latest business development in the production of crops, livestock, fish and prawns, their handling, processing, packaging and marketing.

TEAM 89 will provide you the right environment for identifying and increasing agribusiness opportunities and investment.



VENUE : Putra World Trade Centre
Kuala Lumpur, Malaysia

DATE : 11-15 September 1989

TIME : 12.00 noon — 8.00 pm

Endorsed by : Ministry of Agriculture, Malaysia

Supported by : National Chamber of Commerce and
Industry of Malaysia

ASEAN Chamber of Commerce and Industry

Official airline : Malaysia Airlines

Organiser:



**pantai
maju** EDN
BHD

78, Jalan SS 22/21,
Damansara Jaya,
47400 Petaling Jaya,
Selangor, Malaysia.
Tel: 03-7195272 & 7195273
Telex: MA 37009 GOLDEN
Fax: 03-7195433

- We are keen to visit **TEAM 89**. Please keep us informed.
 Yes, we are interested in participating. Please send us details.

Name: _____ Title: _____

Company: _____

Address: _____

Telephone: _____ Telex: _____

Fax: _____ Nature of business: _____

Agricultural Institute of Malaysia (AIM)

The Agricultural Institute of Malaysia (AIM) inaugurated in 1965 by the late Tun Razak is the foremost professional body concerned with agriculture in Malaysia. Its members are drawn from the various Government departments, statutory organizations, research institutes, universities, banks, plantations and commercial firms.

OBJECTIVES

The main objectives of AIM are :

- To act as the official body representing the professional interest of the Agriculturists and Agricultural Scientists in Malaysia.
- To represent the views of the agricultural profession, maintain its integrity, raise the status, and to uphold the interest of the profession in all aspects of agricultural endeavours.
- To promote the advancement of Agriculture and Agricultural Science in Malaysia.
- To foster a better understanding, development and progress of the Malaysian agriculture.
- To be involved in the planning, practice and the overall development of agriculture in Malaysia through consultation, coordination and participation.
- To stimulate thinking and innovation to make Malaysian agriculture move faster.
- To promote, encourage and contribute to the improvement and upgrading of standards in research, investigation, education, extension and dissemination of knowledge related to agriculture.
- To promote and encourage the interchange of ideas amongst professional workers in Agriculture and Agriculture Science within and outside Malaysia.

- To develop and foster a recognition and an appreciation of the agricultural profession amongst farmers, other professions, industries and the general public.
- To give recognition through awards, medals and prizes to individuals or organizations who/ which have made outstanding contributions to Malaysian agriculture.
- To further the objectives of AIM through research, seminars, conferences, symposia and publications.

KEY PERSONNEL

President

Dato' Hj. Abu Bakar Mahmud

Immediate Past President

Datuk Alladin Hashim

Deputy President

Dr. Hashim Abdul Wahab

Vice-President I

Dr. Abdul Aziz S.A. Kadir

Vice-President II

Dato' Hj. Dr. Mohamad Yusof Hashim

Honorary Secretary

Dr. Mohd. Yusof Shahabuddin

Assistant Honorary Secretary

Beng Paik s/o Chau Deng

Honorary Treasurer

Sulaiman Lingam Abdullah

Director of Activities

Dr. Chan Heun Yin

Council Members

Dr. Radzuan Abdul Rahman
Dr. Sulaiman Mohd. Yassin
Abdul Wahid Azahari
Khalip Abdul Raffar
Eddie Chew Keong Lye
Chan Ying Kwok
Tuan Hj. Dr. Abdul Halim Hassan

Honorary Auditors

Tuan Hj. Dr. Wan Noordin Wan Daud
Tong Ah Looi

Executive Secretary

Lee Seok Hang

AGRICULTURAL INSTITUTE OF MALAYSIA

367-1A, 4th Mile, Jalan Ampang

P.O. Box 10833

50726 KUALA LUMPUR

Tel : 03-4566590

East Malaysia Planters' Association (EMPA)

The East Malaysia Planters' Association (EMPA) or Persatuan Penanam-Penanam Malaysia Timur was formed in 1889 under the name of North Borneo Planters' Association. In 1963 the name of the Association was changed to Sabah Planters' Association and in 1973 to East Malaysia Planters' Association to cover the plantation interests in Sarawak as well.

All persons, partnerships, associations and corporations, who are owners or proprietors of plantation estates of more than 20 hectares are eligible for membership. Currently, it has a total membership of 105.

OBJECTIVES

The objectives of the Association are to promote, foster and protect the interests of all owners of estates and plantations in Sabah and Sarawak. It represents to the Government and other public bodies, the views and interests of planters in the two states.

KEY PERSONNEL

Chairman

Jaswant Singh Kler

Deputy Chairman

John Anselmi

Committee Members

Seah Sen Leang

Ray Shepherd

Tan Seng Yeang

David Wan

K.M.S. Moorthy (co-opted)

Secretaries and Treasurers

Ernst & Whinney

Tel : 089-217266

Fax : 089-212694

EAST MALAYSIA PLANTERS' ASSOCIATION

(Persatuan Penanam-Penanam Malaysia Timur)

c/o Ernst & Whinney

9th Floor, Sabah Building

P.O. Box 648

90007 Sandakan, SABAH

Tel : 089-217266, 217281

Telex : MA 82810

Fax : 089-212694

Federation Of Livestock Farmers' Associations Of Malaysia (PPPM)

The Federation of Livestock Farmers' Associations of Malaysia is the national umbrella body of all livestock farmers in Malaysia. It was established in 1972 to represent the interests and aspirations of the poultry and pig farmers. Its primary role is to liaise with the Government and statutory research, commercial and other organizations within and outside the country in order to cater to the needs and promote the welfare of the farming community, as well as to make available adequate supplies of quality protein foods to consumers at reasonable prices and generate revenue for the national coffers.

OBJECTIVES

The objectives of PPPM are :

- To uphold the moral standards of all livestock farmers.
- To promote liaison and cooperation among all livestock farmers.
- To work for the interests of the members and to assist members in solving their problems.
- To effect improvement and advancement of the livestock industry by lowering the cost of production and by increasing productivity.
- To protect the legitimate interests of the members

KEY PERSONNEL

Advisors

Y.B. Datuk Alex Lee Yu Lung
Deputy Minister of Agriculture

Y.B. Dr. Goh Cheng Teik
Member of Parliament for Nibong Tebal

Datuk Dr. Ahmad Mustaffa B. Hj. Babjee
Director General of Veterinary Services
Ministry of Agriculture

Mr. Wang Hung Kow

Legal Advisors

Mr. Low Sik Thong
Mr. Low Hop Bing

Chairman

Mr. Low Kan

Deputy Chairman

Mr. Chiang Kwok Kheng

Deputy Chairman

Mr. Aw York Cheong

Honorary Secretary

Mr. Fong Kok Yong

Assistant Honorary Secretary

Mr. Chen Fah Sang

Treasurer

Mr. Tiong Goon Toon

Committee Members

Mr. Chiam Hang Sim
Mr. Teong E Sing
Mr. Lai Ung Diew
Mr. Cheng Tian Poh
Mr. Ngu Heng Teck
Mr. Tan Siong Yong
Mr. Chan Han Weng
Mr. Nieng Ah Hoh

FEDERATION OF LIVESTOCK FARMERS' ASSOCIATIONS OF MALAYSIA

No. 93A, Jalan SS 15/5A
47500 Subang Jaya, SELANGOR
Tel : 03-7331779, 7336955

Fertilizer Industry Association of Malaysia (FIAM)

The Fertilizer Industry Association of Malaysia (FIAM) was founded on August 13, 1987. Founder members were Peladang Kimia Sdn Bhd, ICI Fertilizer (M) Sdn Bhd, FPM Sdn Bhd, Pengedar Bahan Pertanian Sdn Bhd, Behn Meyer & Co (M) Sdn Bhd and Woodward & Dickerson (M) Sdn Bhd. To-date, the membership includes Petronas, Federal Fertilizer Co Bhd, Guthrie Malaysia Trading Corp. Sdn Bhd, Agromate (M) Sdn Bhd and Hoechst Malaysia Sdn Bhd.

As agriculture will continue to be an important sector of the Malaysian economy and with Malaysia being dependent on imports for all its fertilizer needs except urea, FIAM has been established with the following objectives.

OBJECTIVES

- To promote, foster and advance, in a manner consistent with the public interest, the progress and development of the fertilizer industry which import, manufacture, produce, process and/or distribute fertilizers.
- To cooperate with and offer advice to Federal, State and other Authorities in matters pertaining to the said industry and provide a combined approach to Government bodies in Association matters.
- To inform members of the Association with regard to Federal, State and other legislation, whether existing or proposed, or in connection with reports of Government or scientific committees which affect fertilizer industry.
- To promote the correct and efficient handling and use of fertilizers.
- To establish liaison with similar organizations and agriculture associations in Malaysia or overseas with which the Association has common interest.
- To encourage and support scientific research into all aspects of the fertilizer industry and inform members of commercial or technical developments of Malaysian or overseas origin

which are of importance to the said industry.

- To foster the development and utilization of fertilizer products in Malaysia.
- To conduct industry meetings and conventions.
- With prior approval of the relevant authorities concerned, to acquire, prepare, edit, print, publish or issue and circulate books, papers, periodicals and/or circulars relating to the fertilizer industry or matters of interest to the Association.

KEY PERSONNEL

Chairman

Tuan Hj. Ahmad Shazalli Mahmod

Vice-Chairman

Shamsudin Basi

Honorary Secretary

Siew Yeow Fook

Honorary Treasurer

Hoh Sool Kim

Committee Members

Tuan Hj. Mohd. Salleh bin Darus

Hew Chai Hai

Peter Sze Tian Keng

Auditor

Wong Yu

FERTILIZER INDUSTRY ASSOCIATION OF MALAYSIA

2nd Floor, Bangunan HINO

Jalan 223, Section 51A

46100 Petaling Jaya, SELANGOR

Tel : 03-7561844

Telex : PKSB MA 37212

Fax : 03-7574806

Fruit Exporters Association of Malaysia (FEAM)

The Fruit Exporters Association of Malaysia or Persatuan Pengeksport Buah-Buahan Malaysia was officially registered as an Association in January 1988. The formation of the Association

was in response to the call by the Government to intensify and promote the local fruit industry and to explore the overseas market for such fruits. The Association currently has 32 Corporate Members.

OBJECTIVES

The objectives of the Association are :

- To promote, foster and protect the orderly growth and development of the fruit industry in Malaysia.
- To promote the consideration and discussion of all questions connected with or relating to fruits and their exports.
- To provide a forum for those in the industry to resolve and reconcile issues, views, differences and disputes relating to the fruit export industry.
- To form, invest or otherwise participate in any trading company or companies in pursuance of its objects.
- To consider and decide on :
 - the appointment of delegates, members or observers to any body or conference within and outside Malaysia relating to the marketing and exports of fruits and the supply of statistical and other information to such delegates,
 - the appointment of delegates, members or observers to any statutory boards, registered associations or similar institution in Malaysia,
 - the method of providing and the distribution of funds for the purpose of publicity and research affecting the industries.
- To collect and circulate statistics and other information relating to the industry.

In line with the above objectives, the Association works very closely with various Government Ministries/Agencies such as the Ministry of Agriculture, FAMA, MARDI, MEXPO, the Department of Agriculture, etc.

KEY PERSONNEL

President

Arphan Ahmad

Vice-President

Yee Chee San

Honorary Secretary

Capt. (B) Awaludin Mohal

Assistant Honorary Secretary

Koh Teck Choon

Treasurer

Balakisan M

Assistant Treasurer

Steve Chuan Ngiap Kee

Committee Members

Maj. Gen. (B) A. Rahman Hj. Khamis

Maj. (B) Mahmood Ismail

Ong Boon Hock

S. Subramaniam

Quek Kern Hock

Advisors to the Association

Dr. Abdul Wahab Ngah (MARDI)

Dr. Wong Chi Nang (FAMA)

FRUIT EXPORTERS ASSOCIATION OF MALAYSIA

5-8th Floor, Bangunan Kuwasa

Jalan Raja Laut

50350 KUALA LUMPUR

Tel : 03-2932622 (Mrs. Su)

OR

c/o Kumpulan Fima Berhad

Ground Floor, Kompleks Airtel Fima

Lapanganterbang Antarabangsa Kuala Lumpur

47200 Subang, SELANGOR DARUL EHSAN

Tel : 03-7465050 (Cik Roziah Ibrahim)

INCORPORATED SOCIETY OF PLANTERS (ISP)

The Incorporated Society of Planters (ISP) was founded in 1919. It represents the planters of Malaysia and other territories, whose personal and professional interests it is bound to endeavour to secure and promote.

OBJECTIVES

The objectives of the Society are :

- To promote the general interests of the planting profession.

- To promote the advancement and facilitate the acquisition of that knowledge which constitutes the professional qualification of planter.
- To watch over, promote and protect the mutual and individual interests of its members in respect of matters pertaining to or arising from their employment in the planting profession.
- To assist members in obtaining employment in plantations locally and overseas.
- To promote and maintain good feelings, co-operation and understanding between members and their employers.

KEY PERSONNEL

Chairman

Ibrahim bin Mohd. Amin

Vice-Chairman

Tuan Hj. Baharuddin bin Hj. Ngah

Executive Secretary

M. Rajadurai

INCORPORATED SOCIETY OF PLANTERS

29, 31 & 33 Wisma ISP, Jalan Taman U Thant

55000 KUALA LUMPUR

P.O. Box 10262

50708 KUALA LUMPUR

Tel : 03-2425561, 2425668

Telegram : ISPLA

Malaysian Agricultural Chemical Association (MACA)

The Association represents the interests of agricultural chemical, household pesticide and fertilizer industries in Malaysia.

OBJECTIVES

The objectives of the Association are as follows :

- To promote, foster and advance, in a manner consistent with the public interest, the progress

and development of the industries which manufacture, produce, process and/or distribute agricultural chemicals of all kinds

- To cooperate with and offer advice to Federal, State and other Authorities in matters pertaining to the said industries and provide a combined approach to Government bodies in Association matters.
- To inform members of the Association with regard to Federal, State or other legislation, whether existing or proposed, or in connection with reports of Government or scientific committee which may affect the said industries.
- To promote the safe and efficient handling and use of industry products.
- To establish liaison with similar organizations in Malaysia and overseas with which the Association has a common interest.
- To encourage and support scientific research in all aspects of primary industry, and inform members of commercial or technical developments of Malaysian or overseas origin which are of importance to the said industries.
- To foster the development and utilization of industry products in Malaysia.
- To conduct industry meetings and conventions.
- To acquire, prepare, edit, print, publish or issue and circulate books, papers, periodicals and/or circulars relating to primary industry or matters of interest to the Association with prior approval of the authorities concerned.
- To be a non-profit Association conforming to Malaysian law and take all action which may be necessary or desirable to accomplish any of the foregoing objects and to promote the interests of the Association, provided that none of the objects of the Association shall be political.

KEY PERSONNEL

Chairman

Dr. Soh Kim Gai

Vice-Chairman

Dr. Chang Siew Hoong

Honorary Secretary

Chong Wei Cheong

Honorary Treasurer

Loo Tong Moi

Chairman - Public Relations Sub-Committee

Chew Chang Gi

Chairman - Commerce Sub-Committee

Ng Kwang Yew

Chairman Technical Sub-Committee

Dr. Chang Siew Hoong

Woo Yin Khee (Alternate)

Chairman - Household Pesticides Sub-Committee

Wang Pong Lim

Mohd. Nordin Rahmat (Alternate)

MALAYSIAN AGRICULTURAL CHEMICALS ASSOCIATION

P.O. Box 12234

50770 KUALA LUMPUR

Tel : 03-7195272, 7195273

Telex : GOLDEN MA 37009

Fax : 03-7195433

Malaysian Agricultural Economics Association (PETA)

The Malaysian Agricultural Economics Association (PETA) was established on 29th March 1980.

OBJECTIVES

The objectives of PETA are :

- To act as the official body representing the professional interests of agricultural economists in Malaysia.
- To strive for the enhancement of the importance and status of the agricultural economics profession in the country.
- To represent the views of the agricultural economics profession, maintain its integrity, raise its status and uphold professional activities.

- To promote the advancement of agricultural economics as a socio-scientific discipline in Malaysia.
- To promote, encourage and contribute to the improvement and upgrading of standards in research, education and dissemination of knowledge pertaining to agricultural economics and related social sciences.
- To actively involve itself in issues relating to the socio-economic aspects of agricultural development.
- To further and complement the above objects through research, seminars, conferences, publications and any other appropriate forms.

KEY PERSONNEL

President

Wan Ibrahim bin Wan Daud

Deputy President

Wong Chee Yoong

Honorary Secretary

Dr. Zainal Abidin Mohamed

Honorary Assistant Secretary

Basi bin Zakaria

Honorary Treasurer

Dr. Mad Nasir

Honorary Assistant Treasurer

Mohd. Noor Mamat

Committee Members

Dr. Sahak Mamat
 Dr. Mohd. Ghazali Mohayidin
 Dr. Wong Chi Nang
 Nyanen Thiran
 Abd. Rauf bin Salim
 Rabihah Mahmood
 Siti Khairon Shariff

MALAYSIAN AGRICULTURAL ECONOMICS ASSOCIATION

c/o Faculty of Economics and Management
 Universiti Pertanian Malaysia
 43400 Serdang, SELANGOR
 Tel: 03-9486101 ext 1657

Malayan Agricultural Producers Association (MAPA)

In 1947, with the growth of employees' trade unions throughout the country, particularly in the plantation industry, it became essential for employers to organise themselves into employers' organizations. In the plantation industry, this led to the formation of the Malayan Planting Industries Employers' Association (MPIEA) on 27th September, 1947. The MPIEA was succeeded by the Malayan Agricultural Producers Association (MAPA) on 25th August, 1966.

OBJECTIVES

MAPA is by far the largest employer trade union in Malaysia. Its main role and functions are largely governed by the provisions of the Trade Unions Act 1959 and the Industrial Relations Act, 1967. Generally, they could be summarised as follows:

- To negotiate various collective agreements with employees' trade unions.
- To provide labour and industrial relations services, including representation in:
 - Labour cases.
 - Conciliation meetings conducted by the Ministry of Labour, and
 - Industrial court cases.

On a broader front, MAPA's functions include promoting or opposing legislative or other measures affecting or likely to affect member-companies and employers in general and for that purpose, to make representation to the Government on labour laws and industrial relations policy.

At national level, the MAPA negotiates with the National Union of Plantations Workers (NUPW) in respect of about ten collective agreements covering 250,000 workers. It also negotiates with the All Malayan Estates Staff Union (AMESU) in respect of terms and conditions of employment of Clerical, Medical and Health and Technical Staff, and Non-Clerical Staff.

The membership of this Association compose of all major plantation companies in Peninsular Malaysia and at present stands at 194 members comprising of 461 estates with a planted hectareage totalling 684,449 hectares and 117 factories employing 11,416 employees.

KEY PERSONNEL

President

Y.A.B. Tun Tan Siew Sin
(up to 17th March, 1988)

First Deputy President/Treasurer

Ong Beng Kee

Executive Director

S.J. Chelliah

Assistant Director

Esa bin H.J. Ahmad

Economist/Statistician

N. Rajanthiran

Industrial Relations Officer (HQ)

Tan Keng Aan

MALAYAN AGRICULTURAL PRODUCERS ASSOCIATION

16G-L, Plaza Ampang City
Jalan Ampang
50450 KUALA LUMPUR
P.O. Box 11063
50734 KUALA LUMPUR
Tel : 03-4573988, 4573990, 4573991

Office bearers of branch offices

Roland Saw Keng Hock
Industrial Relations Officer (North)
Room 209, 2nd Floor,
Asia Life Building, Hale Street
P.O. Box 367
30740 Ipoh, Perak
Tel : 05-545253

Mohamad bin Audong
Industrial Relations Officer (Central)
16G-L, Plaza Ampang City
Jalan Ampang
50450 Kuala Lumpur
Tel : 03-4573988, 457990, 4573991

A. Ramadass
Industrial Relations Officer (South)
Suite 803, 8th Floor
Johore Tower Building
No. 15, Jalan Gereja
80100 Johor Bahru, Johore
Tel : 07-233858

Malaysian Cocoa Growers' Council (MCGC)

The Malaysian Cocoa Growers' Council was formed in September, 1981 in recognition of the need for a body to represent the interests of cocoa growers in Malaysia. Membership of the Council comprises RGA (Malaysia) Berhad (RGAMB), The Federal Land Development Authority (FELDA), The Malaysian Estate Owners' Association (MEOA), The United Planting Association of Malaysia (UPAM) and East Malaysia Planters' Association (EMPA).

OBJECTIVES

The general objectives of the Council are to promote, foster and protect the cocoa growing industry of Malaysia. This broadly covers the consideration of all matters related to cocoa growing, processing and marketing.

KEY PERSONNEL

Chairman

Dr. Ng Siew Kee

Vice-Chairman

Jalaludin Jaafar

Working Committee

Dr. Ng Siew Kee (Chairman)
Jalaludin Jaafar (Vice-Chairman)
W. Tully
Khoo Khee Ming
Munchar Jajuli

Executive Secretary

Thong Fah Thor

MALAYSIAN COCOA GROWERS' COUNCIL

3rd Floor, Wisma Getah Asli I
148, Jalan Ampang
50450 KUALA LUMPUR
Tel : 03-2482644

Malayan Edible Oil Manufacturers' Association (MEOMA)

The Malayan Edible Oil Manufacturers' Association (MEOMA) was formed in 1961 with eight founder members. Today, its membership stands at 98, representing 80 percent of the edible oil manufacturing industry in Peninsular Malaysia.

OBJECTIVES

The objectives of the Association are :

- To provide an organization for the benefit and welfare of all edible oil millers in the Federation of Malaya and to promote and protect their mutual interests.
- Promotion of goodwill amongst members in connection with the industry as a whole.
- To enable members through the Association to speak with one voice and act with one purpose on all matters concerning the industry.
- To oppose vigorously any unfair legislation or unreasonable restriction that may adversely affect the industry as a whole.
- To work constantly for the maintenance of fair prices in edible oil and its by-products, and to abstain from unfair and unreasonable competition amongst members.
- To maintain good relations with other similar bodies and organizations and to cooperate with them for the mutual benefit of members.
- To represent members' views at meeting of official and unofficial committees, councils or conferences as may be necessary and expedient.

- To do such other lawful things as are incidental or conducive to the attainment of the above objects or any of them.

KEY PERSONNEL

President

Toh Pang Huat

Vice-Presidents

Edward K. K. Chan
Choy Chong Weng
Lim Yu Tey

Honorary Secretary

Patrick C. E. Lim

Honorary Treasurer

Datuk Low Mong Hua

Honorary Auditor

Lee Peng Hock

Committee Members

Tan It Pheow
Boo Yaw We
Huan Che Tiong
Hamdan Husin
Tay Chin Wat
Lim Yong Chai
Guan Bian Long
Jamil Wahi
Lim Kok Cheong
Goh Seng Chong

MALAYAN EDIBLE OIL MANUFACTURERS' ASSOCIATION

134-1, 1st Floor
Jalan Tun Sambanthan
50470 KUALA LUMPUR
Tel : 03-2747420, 2747421, 2747422
Telex : MA 32724 MEOMA

Malaysian Estate Owners' Association (MEOA)

The Malaysian Estate Owners' Association was established in 1931 and has as its general object

the promotion, fostering and protection of the interest of the plantation industry in Malaysia.

The governing body of the Association consists of members' representatives from various States who are elected at the Annual General Meeting.

All persons, partnership, associations and corporations (including shareholders) registered or incorporated in Malaysia, who are owners or proprietors of land cultivated with economic crops in Malaysia are eligible for membership.

KEY PERSONNEL

President

Lee Oi Hian

First Vice-President

Ho Sim Guan

Second Vice-President

George Lim Swee Lin

Secretaries and Treasurers

Signet & Co Sdn Bhd

MALAYSIAN ESTATE OWNERS' ASSOCIATION

c/o Signet & Co Sdn Bhd
410, 4th Floor
Kompleks Antarabangsa
Jalan Sultan Ismail
50250 KUALA LUMPUR
Tel : 03-2432033
Cable : Signetco
Fax : 03-2410676

Malaysian Feed Millers Association (MFMA)

The Malaysian Feedmillers Association was formed in 1970.

OBJECTIVES

The objectives of the Association are :

- To collectively negotiate as a body with any Government or statutory bodies in respect of any standing or pending legislations, by-laws or regulations which may affect the feed millers industry.

- To maintain and provide a forum for the exchange of ideas, general information and technical information relating to the feed millers industry.
- To maintain and provide a place for social contact between the various feedmillers.
- To ensure that the feed millers industry would not suffer from any unfair competition.
- To provide a meeting place for all feed millers and for this purpose to hold lectures and discussions pertaining to the feed millers industry.
- To do all such lawful things as are incidental or conducive to the attainment of the above objectives or any of them.

KEY PERSONNEL

Executive Secretary

Anne Yap

MALAYSIAN FEED MILLERS ASSOCIATION

155 B, Jalan Maharajalela
50150 KUALA LUMPUR
Tel : 03-2421519

Malaysian Food Canners' Association (MFCA)

OBJECTIVE

The main objective of the Malaysian Food Canners' Association (MFCA) is to unite current operating food canners to promote the development of the food canning industry in Malaysia.

KEY PERSONNEL

Chairman

Yeo Chee Yan

Secretary

Y.M. Raja Redzwa bin Raja Tun Uda

Committee Members

C.Y. Loh
Patrick Prigent
Lee Hee Thiam
Tan Boon Pin
S.T. Seow
Tan Hun Huat
Nigel Loh

MALYSIAN FOOD CANNERS' ASSOCIATION

c/o P.O. Box 6
46700 Petaling Jaya, SELANGOR

Malaysian Institute of Food Technology (MIFT)

The Malaysian Institute of Food Technology (MIFT) was officially registered as a professional body in 1974.

OBJECTIVES

The objectives of MIFT are :

- To stimulate scientific and technological research in various aspects of Food Technology.
- To provide a medium for the exchange, discussion, publication and dissemination of information on various aspects of Food Technology.
- To promote the profession of Food Technology through raising educational standards, promoting the scientific approach to food, and increasing public awareness of the basis role of the Food Technologist in the industry.

KEY PERSONNEL

President
Zahara Merican

Vice-President
Lim Toh Hoy

Honorary Secretary
Goh Seng Aun

Honorary Assistant Secretary
Foo Mong Keng

Honorary Treasurer
Dr. Abdullah Abu Bakar

Honorary Auditor
Cheow Chong Seng

Council Members
Dr. Mohd. Azemi Mohd. Nor
Associate Professor Asiah Mohd. Zain
Husin Abdul Rahman
Kee Thuam Moore
Joseph Moolayil

MALAYSIAN INSTITUTE OF FOOD TECHNOLOGY
P.O. Box 241
Jalan Sultan Post Office
46730 Petaling Jaya, SELANGOR

Malaysian Oil Palm Growers' Council (MOPGC)

The Malaysian Oil Palm Growers' Council (MOPGC) was formed in September, 1978 by the merger of two associations, the Oil Palm Growers' Council of Malaysia and the Malaysian Palm Oil Producers' Association whose objectives were similar and membership was common. MOPGC represents and safeguards the general interests of oil palm growers in Malaysia.

OBJECTIVES

The objectives of MOPGC are :

- To promote, foster and protect the oil palm growing industry in Malaysia.
- To promote the consideration and discussion of all questions connected with or relating to oil palm or products.
- To represent the Government of Malaysia or any State therein either at the request of any such Government or of any Member of the Council or upon the Council's own initiative the views and interests of the oil palm growing industry upon any matter connected therewith and in particular with regard to :

- the appointment of delegates, members or observers to any Commonwealth or International or other Body or Conference relating to oil palms or their products and the supply of statistical and other information to such delegates,
- the method of providing and the distribution of funds for the purpose of publicity and research affecting the oil palm growing industry,
- the appointment of delegates, members or observers to any statutory boards, associations or similar institutions in Malaysia or elsewhere.
- To collect and circulate statistics and other information relating to the oil palm growing industry.
- To provide and collect from its members or otherwise, funds for the purpose of carrying on or furthering the objectives of the Council or any of them.
- To subscribe to any fund, company, association, institution or other body whereby the objectives of the Council or any of them may be carried out or otherwise upon any committee thereof.
- To establish and control an oil palm research organization.
- To do such things as may be deemed incidental or conducive to the furtherance of any or all of the above objectives.

KEY PERSONNEL

Chairman

Dato' B. Bek-Nielsen

Vice-Chairman

Datuk Alladin bin Hashim

Members

Tuan Hj. Nasir Yusoff
 Maj. General Ismail b. Ibrahim
 Y.M. Tunku Mansur Yaacob
 B.C. Belsham
 Ho Sim Guan
 Lee Oi Hian
 J.D.C. Diamond
 W. Tully
 Abdul Rahman Zainal

Tuan Hj. Abdullah Yusof
 Finn Langfred
 J.E. Duckett

MALAYSIAN OIL PALM GROWERS' COUNCIL

Floor Wisma Getah Asli I
 148 Jalan Ampang
 P.O. Box 10747
 50450 KUALA LUMPUR
 Tel : 03-2425088
 Fax : 03-2412504

Malaysian Plant Protection Society (MAPPS)

The Malaysian Plant Protection Society (MAPPS) was officially established in 1976.

OBJECTIVES

- To promote and advance knowledge on all aspects of plant protection in Malaysia.
- To organize and arrange lectures, meetings, symposia, seminars, workshops and conferences for promoting and exchanging views among members on plant protection at regional and international levels.
- To publish and communicate scientific knowledge on plant protection and related subjects in whatever forms it deems necessary.

KEY PERSONNEL

President

Dr. Lee Boun Siew

Immediate Past President

Dr. Heong Kong Luen

Vice-President

Zakaria Sidek

Honorary Secretary

Dr. Loke Wai Hong

Honorary Assistant Secretary

Lim Jit Ling

Honorary Treasurer
Teng Yeew Thai

Council Members
Dr. Jusoh Mamat
Dr. Rajan Amartalingam
Dr. Ong Ching Ang
Dr. Gino Ooi Hong Chin
Ng Kwang Yew

MALAYSIAN PLANT PROTECTION SOCIETY
P.O. Box 12351
50774 KUALA LUMPUR

Malaysian Rubber Producers' Council (MRPC)

The Malaysian Rubber Producers' Council (MRPC) was formed in March 1951. The membership of the Council comprises the Federal Land Development Authority; Malaysian Estate Owners' Association; National Smallholders Association Malaysia; Rubber Growers Association (Malaysia) Berhad; and the United Planting Association of Malaysia.

OBJECTIVES

The general objectives of the Council are to promote, foster and protect the rubber-producing industry in Malaysia.

KEY PERSONNEL

Executive Secretary
Mohd. Nor Maidin

Technical Executive
Koh Chwee Eang

Economist
Choong Soo Lin

MALAYSIAN RUBBER PRODUCERS' COUNCIL
3rd Floor, Bangunan Getah Asli
148 Jalan Ampang
P.O. Box 12688
50786 KUALA LUMPUR
Tel.: 03-2482677, 2482713

Malaysian Rubber Products Manufacturers' Association (MRPMA)

The Malaysian Rubber Products Manufacturers Association was formally established in October 1977, taking over the functions and roles of the Malaysian Rubber Goods Manufacturers' Association (MRGMA), its predecessor which was first registered on 7th March 1952.

OBJECTIVES

The MRPMA is the single national Trade Association of the country representing manufacturers of rubber products. The objectives of the Association as enumerated in its Constitution can be summarised into five distinct areas as follows:

- To encourage cooperation between manufacturers of all kinds of rubber products, to protect their interest, to promote their welfare and provide for the industry the means of formulating, influencing and carrying out policy in regard to industrial, economic, fiscal, commercial and technical issues.
- To disseminate market intelligence and information to member companies and to transmit request for market information through relevant Government agencies.
- To organize inward and outward sales and business missions and participate in overseas trade fairs.
- To organize management and other seminars for the industry.
- To liaise with similar associations in other countries and participate in regional and international forums.

KEY PERSONNEL

President
Shum Kwai Hong

Vice-Presidents
Idris Samad
Tong Kai Kwai

Honorary Secretary
Abdul Halim Hassan

Honorary Treasurer
Esa Adam

Committee Members
Cheng Sek Yu
Lim Chin Lam
Michel Bonhomme
H.J. Beentjes
Ng Koon Seng

MALAYSIAN RUBBER PRODUCTS MANUFACTURERS' ASSOCIATION

c/o Malaysian Rubber Research and Development Board
15th Floor Wisma Getah Asli II
148 Jalan Ampang
P.O. Box 11455
50716 KUALA LUMPUR
Tel : 03-2614422, 2611134

Malaysian Society of Agricultural Engineers (MSAE)

The Malaysian Society of Agricultural Engineers was officially formed on 6th November, 1982.

OBJECTIVES

The objectives of the Society are :

- To promote the profession of agricultural engineering in the country.
- To promote the science and the arts of engineering in agriculture.
- To encourage research and development in the field of agricultural engineering appropriate to the needs of the nation.
- To encourage and promote the development of agricultural engineering education.
- To encourage the professional development of its members.
- To increase and extend the association of agricultural engineers among themselves and

with engineers, scientists and technologist of allied fields, both within the country as well as in other countries.

KEY PERSONNEL

President
Dr. Mohd. Nur Ahmad

Executive Secretary
Nor Mariah Adam

Vice-President (Administration)
Tengku Ahmad Tengku Ibrahim

Vice-President (Technical)
Dr. Salim Said

Treasurer
Dr. Abdul Aziz Zakaria

Exco Members
Kamarudzaman Aribi
Abu Kassim Yusof

MALAYSIAN SOCIETY OF AGRICULTURAL ENGINEERS

d/a Fakulti Kejuruteraan Pertanian
Universiti Pertanian Malaysia
43400 Serdang, SELANGOR
Tel : 03-9486101

Malaysian Society of Animal Production (MSAP)

The Malaysian Society of Animal Production (MSAP) was formally established in 1971. Membership of the Society comprises of personnel and individuals from government, semi-government and private organizations with interests in animal production.

OBJECTIVES

The objectives of MSAP are :

- To promote the profession of animal production in the country.

- To act as a body for interested individuals in the general field of animal production to meet and establish contacts and also to organize seminars, conferences and field activities that could help educate and impart up to date information on the various aspects of animal production.
- To encourage co-operation between science, education, extension and commerce in the field of animal production.

classification and cartography, soil mineralogy, soil physics and soil technology.

KEY PERSONNEL

President

Dr. Sharufuddin bin Hj. Abdul Hamid

Immediate Past President

Dr. Mok Chak Kim

Vice-Presidents:

Peninsular Malaysia

Abdul Jamil bin Mohd Ali

Sabah

Donson Simin

Sarawak

Hj. Ahmad Hj. Ebon

Honorary Secretary

Dr. Mohd. Khanif Yusop

Honorary Assistant Secretary

Eddie Chew Keong Lye

Honorary Treasurer

Dr. Ng Ai Peng

Honorary Assistant Treasurer

Dr. Mohd. Zaki Hj. Ghazalli

Committee Members

Tuan Hj. Tayeb Dolmat

Dr. Peter Lim Kim Huan

Dr. Jalaluddin Jipelos

Dr. Aminuddin Hussin

MALAYSIAN SOCIETY OF SOIL SCIENCE

P.O. Box 12644
50784 KUALA LUMPUR

National Association of Smallholders (NASH)

The movement of free farmers in the country was started in October 1952 with the formation of the Johor Federation of Smallholders. The National Association of Smallholders (NASH) was formed in June 1975 to represent the very many smallholders associations in the country.

KEY PERSONNEL

President

Ahmad Tajuddin Zainuddin

Vice-President

Prof. Dr. Mohd. Mahyuddin bin Dahan

Honorary Secretary

Dr. Mohd. Ariff bin Omar

Honorary Treasurer

Dr. Abdul Wahid bin Sulaiman

MALAYSIAN SOCIETY OF ANIMAL PRODUCTION

c/o Livestock Research Division
MARDI
P.O. Box 12301, GPO
50774 KUALA LUMPUR
Tel : 03-9486601 - 12 ext. 494 and ext. 437

Malaysian Soil Science Society (MSSS)

The Malaysian Society of Soil Science is the national body representing the profession of soil science in Malaysia. It was established on 2nd April, 1971 and is registered under the Societies Act, 1966. The Society began with 26 founder members and to date, the membership is 400 comprising of honorary, life, ordinary and associate members.

OBJECTIVE

The Society was formed with the primary objective of fostering the advancement of all disciplines of soil science in Malaysia. The disciplines include soil biology, soil chemistry, soil fertility and plant nutrition, soil genesis.

OBJECTIVES

The objectives of NASH are :

- To discuss and forward the grievances of smallholders families to the Government.
- To lead, guide and help modernize the smallholders and farmers of the country.
- To promote the interests of smallholders in whatever ways possible.

KEY PERSONNEL

President

Dato' Hj. Ahmad Arshad

General Secretary

Tuan Hj. Mohd. Nor Maidin

Honorary Treasurer

Tuan Hj. Ahmad Hj. Salleh

Executive Secretary

Hashim Abu Bakar

NATIONAL ASSOCIATION OF SMALLHOLDERS

1st Floor Bangunan Getah Asli
148 Jalan Ampang
50450 KUALA LUMPUR
Tel : 03-2429201

Palm Oil Refiners Association of Malaysia (PORAM)

The Palm Oil Refiners Association of Malaysia (PORAM) was formed in 1975. To date the Association has 32 members representing more than 70 percent of palm oil refiners in the country.

OBJECTIVES

The objectives of PORAM are :

- To provide a forum for palm oil refiners to represent the interest of the palm oil refining and processing industry.

- To provide a vehicle for advancing the status of the industry.
- To promote:
 - the processing, refining and fractionation of palm oil and the manufacture of all products and by-products therefrom,
 - the efficient marketing and handling of palm oil, its derivatives, allied products and by-products,
 - the establishment, maintenance and attainment of standards specifications and descriptions for processed palm oil, its derivatives, allied products and by-products,
 - cooperation with other organizations or agencies connected with the industry,
 - the use of processed palm oil, its derivatives, allied products and by-products.
- To maintain a library for the use of members and to collect, collate and publish information of service and/or interest to members of the Association.

KEY PERSONNEL

Chairman

Datuk Robert Chan Woot Khoon

Vice-Chairman

Toh Pang Huat

Honorary Treasurer

R.L. Parakh

Executive Secretary

Paul Yap-Singh

Assistant Secretary

Doris Nichol

Members

Wong Chew Yin
Ami Mohd. Salleh,
Ngan Chu Chu
Victor Ngo

THE PALM OIL REFINERS ASSOCIATION OF MALAYSIA

P.O. Box 12, Wisma Selangor Dredging
15th Floor, West Block
142-C Jalan Ampang
50450 KUALA LUMPUR
Tel : 03-2617788, 2617789, 2617791
Telex : MA 31337 PORAM and MA 31483 PORAM
Fax : 03-2618063

Rubber Growers' Association (Malaysia) Berhad (RGA)

The Rubber Growers' Association (Malaysia) Berhad (RGA) was incorporated in Malaysia on 7th June 1983 to reflect the changed pattern of ownership of the member plantations, including those owned overseas, by Malaysians. Membership of RGA (Malaysia) Berhad is open to corporations or individuals who own or are actively involved in plantations and its main objective is not only to promote the interests of the growers but also of the development of tropical crops.

OBJECTIVES

The objectives of RGA are :

- To promote the consideration and discussion among the members of the Company of all questions affecting the interests of persons interested in or connected with the cultivation of rubber and other tropical crops, and to watch over and protect such interests.
- To represent to the Government and legislature and other public bodies of this and other countries and dependencies, the views and the interests of those persons interested in or connected with the cultivation of rubber and other tropical crops, trees and plants.
- To promote legislative and other measures affecting the interests of those persons engaged in the cultivation of rubber and other tropical crops, and to take such steps as may seem, expedient for altering and

improving any existing laws, customs or usages affecting such interests.

- To engage and join with any person, persons or corporations in scientific and other research and experimental work for the purpose of discovering sound principles of and improvements in the cultivation of rubber and other tropical trees and plants, and in the extraction, collection, preparation and manufacture of raw materials from such trees and plants, and the manufacture of finished or semi-finished goods from such raw materials, and to diffuse information with reference thereto; and in connection with such objectives to establish and support and work research stations, laboratories and other experimental machinery and means, to take over and support and work any such research stations, laboratories and other experimental machinery and means already existing.

KEY PERSONNEL

Executive Secretary

Maj-Gen (Retired) Ismail Ibrahim

RUBBER GROWERS' ASSOCIATION (MALAYSIA) BERHAD

Wisma Getah Asli I
148 Jalan Ampang
P.O. Box 11094
50734 KUALA LUMPUR
Tel : 03-2424648, 2482341
Fax : 03-2422570
Telegram : PRECENTOR KUALA LUMPUR

United Planting Association of Malaysia (UPAM)

The United Planting Association of Malaysia (UPAM) promotes the consideration and discussion of all questions connected with or relating to the plantation industries in Malaysia other than wages and conditions of service. Membership consists of plantation companies, State Planting/Planters' Associations, RGA (Malaysia) Berhad and the Malaysian Estate Owners' Association.

KEY PERSONNEL

President

Boon Weng Siew, PIS

Vice-President

Hussain Shaari

Executive Committee Member

B.C. Cooper

Executive Committee Member

Loh Hang Pai, AMP

Chief Executive

Abdul Rahman Teh Mohamed

UNITED PLANTING ASSOCIATION OF MALAYSIA

2nd Floor, Wisma Getah Asli I

148 Jalan Ampang

P.O. Box 10272

50708 KUALA LUMPUR

Tel : 03-2485622, 2485721

University of Malaya Agricultural Graduates' Alumni (UMAGA)

The University of Malaya Agricultural Graduates' Alumni (UMAGA) was founded in 1964 in the former Faculty of Agriculture, University of Malaya. With a membership of more than 700 ordinary members and more than 260 life members, UMAGA has actively pursued its objectives by organizing agricultural conferences, seminars and symposiums, agricultural expositions and various agricultural publications.

OBJECTIVES

The objectives of the Alumni are :

- To strive to give due importance and status to agriculture as a profession in the country's agricultural and economic development.
- To act as a body by which and through which past graduates of the Faculty of Agriculture, University of Malaya could forge and establish social contact and a sense of brotherhood with each other.

- To officially represent past graduates of the Faculty of Agriculture, University of Malaya in matters related to their interest as graduates of agriculture.
- To work closely and to co-ordinate efforts with agricultural bias agencies in the pursuit of the betterment of agriculture and agricultural development in the country.
- To be interested and to be actively involved in issues that are related to the socio-economic aspects and problems of agriculture and agricultural development of the country.
- To diffuse informed opinion on aspects of agriculture and agricultural development through publications, seminars and the like.

KEY PERSONNEL

President

Koh Pak Boo

Deputy President

Ang Boon Beng

Immediate Past President

Koh Pak Boo

Vice-Presidents

Ahmad Kamari Md. Kamari

Dr. Soh Aik Chin

Tan Peng Hua

Honorary Secretary-General

Henry Fu Hwa Meng

Assistant Honorary Secretary-General

Teh Choong Eng

Honorary Treasurer

Ong Say Ann

Council Members

Dr. Loke Wai Hong

Tan Swee Lian

Dr. Wan Mohamed bin Wan Embong

Faisal Wong Fatt Way

UNIVERSITY OF MALAYA AGRICULTURAL GRADUATES' ALUMNI

78B, Jalan SS 22/21

Damansara Jaya

47400 Petaling Jaya, SELANGOR

Tel : 03-7195272, 7195273

Telex : MA.37009 GOLDEN

Universiti Pertanian Malaysia Alumni Association (PAUPM)

Established as the Alumni Association of College of Agriculture, Malaya in the early 1950s, the Association was renamed Universiti Pertanian Malaysia Alumni Association or Persatuan Alumni Universiti Pertanian Malaysia (PAUPM) when the University was formed in 1971.

OBJECTIVES

The objectives of the Association are :

- To work for the improvement of the standard of agricultural education and training of the University.
- To strive for the betterment of members in their professions.
- To provide for better communication between members.
- To work for the advancement of agriculture in Malaysia.
- To undertake, if decided upon by a general meeting, the editing, printing, publication and circulation of any journal, magazine, news

sheet or other printed literature for members and members of the public.

KEY PERSONNEL

President

Tuan Hj. Ghazali Salmat

Vice-President

Dr. Ahmad Badri bin Mohammad

Honorary Secretary

Yusof Ahmad

Assistant Honorary Secretary

Abdul Rahman Sharif

Honorary Treasurer

Mazan Duaji

Members

Dr. Hj. Idris Abdol

Dr. Sharifudin Hj. Abdul Hamid

Tan Kuang Haw

Dr. Rohani Ibrahim

UNIVERSITI PERTANIAN MALAYSIA ALUMNI ASSOCIATION

Bahagian Hal Ehwal Pelajar
Universiti Pertanian Malaysia

d/a Bahagian Ladang
Universiti Pertanian Malaysia

43400 Serdang, SELANGOR

Tel : 03-9486101 ext. 1510, 1501, 1521, 1504

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Listing - Products/Services Alphabetical

Agricultural Chemicals

AGRICULTURAL CHEMICALS

ACTACORP SDN BHD
40A Jalan SS2/66
47300 Petaling Jaya, Selangor
Tel: 03-7754144, 7754150, 7754472
Contact: Ong Say Yuan (Managing Director)
Loo Tong Moi (General Manager)

Manufacturer and distributor of agrochemicals

AGRICULTURAL CHEMICALS (M) SDN BHD
P O Box 78, Butterworth, Penang
Tel: 04-307988

ANCOM SDN BHD
Persiaran Selangor, Shah Alam
P O Box 10465, 50714 Kuala Lumpur
Tel: 03-5594022



BAYER (MALAYSIA) SDN BHD
6th Floor Pernas International, Jalan Sultan Ismail
P O Box 12170, 50768 Kuala Lumpur
Tel: 03-2615366, 2615711
Telex: MA 30305
Fax: 03-2618229
Contact: Yoong Siew Cheong
(Commercial Director -
Crop Protection Division)

*Manufacturer and distributor of herbicides,
insecticides, fungicides and other pesticides
(Refer advertisement facing inside front cover)*



BEHN MEYER & CO (M) SDN BHD
4th Floor, Resource Plaza, 4 Lorong Perlaran Barat
P O Box 402, Jalan Sultan, 46750 Petaling Jaya
Tel: 03-7561983, 7561233
Telex: MA 36913, 36907
Fax: 03-7562118
Contact: Ooi Cheng Bin (Division Manager)

*Importer and distributor of weedicides,
fungicides, insecticides and foliar fertilizers
(Refer advertisement page 11)*

BEHN MEYER & CO (PTE) LTD
100 Pasir Panjang Road, P O Box 2000
Singapore 5
Tel: 02-4736633
Telex: RS 21390, RS 24961
Contact: S.K. Hoh (Senior Group Manager)
U. Becker (Division Manager)

*Importer and distributor of weedicides,
fungicides, insecticides and foliar fertilizers
(Refer advertisement page 11)*

CHEMICAL COMPANY OF MALAYSIA BHD
Refer to ICI Agrochemicals (M) Sdn Bhd



CIBA-GEIGY (MALAYSIA) SDN BHD
5 Jln SS13/6C Subang Jaya, 47500 Petaling Jaya
P O Box 1005 Jln Semangat, 46860 Petaling Jaya
Tel: 03-7338970, 7330761
Telex: MA 36354 CIGY
Fax: 03-7743602
Contact: Ong Say Ann (Marketing Manager)

*Distributor of herbicides, insecticides, fungicides
and rodenticides*



CROP PROTECTION (M) SDN BHD
Lot 746, 4 1/2 Miles Jalan Kapar
P O Box 84, 41710 Klang, Selangor
Tel: 03-3911301 (6 lines)
Telex: MA 39410 CROP
Contact: Lee See Aik (Sales Director)

*Manufacturer and distributor of herbicides,
insecticides and fungicides. Distributor of
agricultural sprayers
(Refer advertisement page 83)*



DUPONT FAR EAST INC. - Malaysia Branch
6th Floor, Wisma Budiman
Persiaran Raja Chulan, 50200 Kuala Lumpur
Tel: 03-2323522
Telex: MA 30391
Fax: 03-2387250
Contact: Tan Suei (Marketing Manager)

*Distributor of agricultural chemicals
(Refer advertisement page 78)*



DUNLOP AGRO-MANAGEMENT SDN BHD
73300 Batang Melaka, Negeri Sembilan
H/Q Postal Add.: P O Box 11395
50744 Kuala Lumpur
Tel: 06-456323/344; 03-9486811
Telex: MA 21300 DUNEST
Fax: 03-9489998
Contact: Dr. Soong Ngin Kwi
(Research Controller)

*DEB-R Rodenticides (rat bait)
(Refer advertisement page xii-xiii)*



F. E. ZUELLIG (MALAYSIA) SDN BHD
11th Floor, Wisma Damansara, Jalan Semantan
Damansara Heights, P O Box 10251
50708 Kuala Lumpur
Tel: 03-2545022
Telex: MA 31299 FEZKL
Fax: 03-2550896
Contact: Soo Man Kheng
(Department Manager - Agrochemicals)

*Manufacturer and supplier of herbicides,
insecticides, fungicides, rodenticides and
miticides*

FERTITRADE (M) SDN BHD
45 Jalan 2/115A, Taman Pagar Ruyung
Jalan Kuchai Lama, 58200 Kuala Lumpur
Tel: 03-7830971, 7830972
Telex: MA 37672 AGRO
Contact: Chin Mee Siau
(Managing Director)

Trading in chemicals acids and nelson

GAZZAZ SDN BHD
Room 4, Level 6, Block G Centre
Pusat Bandar Damansara, Damansara Heights
50490 Kuala Lumpur
Tel: 03-2552044
Telex: HM SHAH MA 37540
Contact: Mohd. Afzal (Managing Director)

Distributor of agricultural chemicals

Ger. Mal. Sdn Bhd

GER-MAL SDN BHD
1 Jalan 13/6
46200 Petaling Jaya
Tel: 03-7555566
Telex: MELCH MA 37316/36301
Fax: 03-7570658
Contact: Boon Yon Nyin (Company Manager)

Agrochemicals, fungicides, pesticides, herbicides



HALEX (M) SDN BHD
11-1 Jalan Petaling, Kaw. Perindustrian Dato Onn
80350 Johor Bahru, Johore
Tel: 07-371543, 373309
Telex: MA 60212 HALEXM
Contact: Yeoh Cheng Poh (Managing Director)
Kuala Lumpur Office : 03-9301610, 9309579
18 Jalan Manis, Taman Segar, Cheras
P O Box 6108 Pudu, 55710 Kuala Lumpur

Importing and distributing of agrochemicals



HARRISONS & CROSFIELD (M) SDN BHD
9 Jalan 222, 46100 Petaling Jaya
Selangor
Tel: 03-7567266
Telex: MA 37665
Fax: 03-7577994
Contact: Chan Fook Nam
(Marketing & Development Manager)

*Distributor and agents for quality agriculture
chemicals
(Refer advertisement page 85)*



HEXTAR CHEMICALS SDN BHD
 23C Jalan Satu, Kaw. 16, Berkeley New Town
 Centre, 41300 Klang, Selangor
 Tel: 03-3412484, 3412489
 Telex: MA 39605 MALPAR
 Contact: Ong Soon Ho (Managing Director)

*Manufacturer and distributor of herbicides,
 insecticides, fungicides, rodenticides and plant
 growth regulators
 (Refer advertisement page 89)*

HIF TECH

HIF TECH SDN BHD
 115B, Kawasan 16, Jalan Batu Tiga
 Berkeley Town Centre, 41300 Klang, Selangor
 Tel: 03-3412269, 3412278
 Telex: MA 39460 HIF
 Contact: Wong See Ping
 (Managing Director)

*Supplier and distributor of agricultural chemicals
 (major products - herbicides: Esimix 211, Despa
 810, Kilgras 800; fungicides: Kocide 101 + Manex)*



HOECHST MALAYSIA SDN BHD
 12th Floor, Wisma Damansara, Jalan Semantan
 Damansara Heights, P O Box 10540
 50716 Kuala Lumpur
 Tel: 03-2549100
 Telex: MA 30370 HOE
 Fax: 03-2559420
 Contact: D. Strilchuk
 (Manager - Agrochemical Division)
 Penang Branch: 04-614342, 612213/214
 Kota Bharu Branch: 09-781330
 Kuching Branch: 082-452210/11/12

*Herbicides - BASTA; insecticides -Decis, Thiodan;
 fungicides - Brestan, Saprol, Derosal
 (Refer advertisement outside back cover)*



ICI AGROCHEMICALS (MALAYSIA) SDN BHD
 8th Floor Wisma Sime Darby
 Jalan Raja Laut, 50350 Kuala Lumpur
 Tel: 03-2919366
 Telex: MA 30326
 Fax: 03-2919901
 Contact: Iain Alexander Brown
 (General Manager)

*Manufacturer and distributor of agrochemicals
 (Refer advertisement page 15)*



INAGRO SDN BHD
 Lot 598/1640, Kawasan Perusahaan PKNS
 Pandamaran 42000 Port Klang, Selangor
 Tel: 03-3685728, 3685729, 3685732
 Telex: MA 33968
 Contact: Wang Ten Aun (Director)

Repacking & formulating of agrochemicals

KENSO CORPORATION (M) SDN BHD
 Suite 2401, 24th Floor, Plaza See Hoy Chan
 Jalan Raja Chulan, 50200 Kuala Lumpur
 Tel: 03-2387944
 Telex: MA 33968 MATENO
 Fax: 03-2384252
 Contact: Ng Siew Seng (Divisional Manager)

*Producer and distributor of herbicides and other
 agrochemicals*

MAJU TANI, SYARIKAT
 W.D.T. 265, 91009 Tawau
 Sabah
 Tel: 089-779013, 778401

Monsanto

MONSANTO (M) SDN BHD
 116 Jalan Semangat, P O Box 1042
 Jalan Semangat 46860 Petaling Jaya, Selangor
 Tel: 03-7575933
 Telex: MA 37645 MONKUL
 Fax: 03-7572618
 Contact: Chuah Ewe Teik
 (Managing Director)

*Manufacturing and marketing of agricultural chemicals - Roundup, Scout, Wallop, Spark and Lasso
 (Refer advertisement facing inside back cover)*

Monsanto Pasir Gudang Plant
 PLO 211 Jalan Emas Satu
 Pasir Gudang Ind. Estate
 81700 Pasir Gudang, Johor
 Tel: 07-514588, 514589, 514590
 Fax: 07-514581
 Contact: Wong Choo You
 (Plant Manager)



MULTICOM AGRICULTURAL PRODUCTS AGENCY
 Lot 10798 Leboh Raya Petal
 Pandamaran Light Industrial Area
 42000 Port Klang, Selangor
 Tel: 03-3684623
 Telex: MA 39605 MALPAR
 Contact: Ong Soon Ho
 (Managing Director)

*Manufacturer and distributor of herbicides, insecticides, fungicides, rodenticides and plant growth regulators
 (Refer advertisement page 89)*

NATIONAL BUSINESS CORPORATION
 8 Lorong Bakar Batu, # 04-07
 Kalam Ayer Industrial Estate, Singapore 1334
 Tel: 02-7488555

PERTUBUHAN PELADANG KEBANGSAAN
 Tingkat 2, Wisma Peladang, Jalan Bukit Bintang
 55100 Kuala Lumpur
 Tel: 03-2482066
 Telex: MA 30719



PACIFIC CHEMICALS BERHAD
 Jalan Ulas, Kawasan Perindustrian Shah Alam
 40000 Shah Alam, Selangor
 Tel: 03-5591211
 Fax: 03-5599791
 Contact: M.C. Foong
 (General Manager)

*Manufacturers and marketeers of agricultural chemicals
 (Refer advertisement page 25)*

RACHUTA SDN BHD
 7 Jalan SS 25/24, Taman Mayang
 Petaling Jaya, Selangor



RHONE POULENC MALAYSIA SDN BHD
 Lot 8, Jalan 19/1, P O Box 150
 46710 Petaling Jaya, Selangor
 Tel: 03-7551355
 Telex: MA 37651 MANBKL
 Fax: 03-7552209
 Contact: Ismail Yusoff
 (Agrochemicals Manager)

Producer and supplier of herbicides, insecticides, fungicides, growth regulators and rodenticides

SEN CHING KIMIA SDN BHD
 TB 3555, Ground Floor, Block F
 Pertama Commercial Centre
 Apas Road W.D.T. 265, 91009 Tawau, Sabah
 Tel: 089-761192
 Telex: MA 83215 KALINE
 Contact: Lee Chai Hai (Director)

Producer and supplier of herbicide and insecticide



SERBA KIMIA SDN BHD
2nd Floor, Bangunan Hino, Jalan 223, Section 51A
46100 Petaling Jaya, Selangor
Tel: 03-7561844
Telex: MA 37212 PKSB
Fax: 03-7574806
Contact: Dr. Cheam Soon Tee
(General Manager)

*Importer, distributor and formulator of herbicides, insecticides, fungicides, rodenticides and other agricultural chemicals. Also importer and distributor of industrial chemicals and plastic resins
(Refer advertisement page 81)*

TIRAM KIMIA SDN BHD
Bangunan SHELL, Jalan Semantan
P O BOX 11027, 50732 Kuala Lumpur
Tel: 03-2559144



UNION HARVEST SDN BHD
2nd Floor, Bangunan Jurukur
64-66 Jalan 52/4, 46200 Petaling Jaya, Selangor
Tel: 03-7572122
Telex: MA 36432 UHSB
Fax: 03-7572630
Contact: Wong Yu (Managing Director)

Trading in chemical



YINPOLIN AGRICULTURE SDN BHD
48A Jalan 3, Kawasan 16, Taman Intan
41300 Klang, Selangor
Tel: 03-3418055 (5 lines)
Telex: MA 38629 INPOLI
Contact: Lau Sam Siong
(Managing Director)

Distributor of paraquat herbicide, ethokem® adjuvant and other agrichemicals

YONG GUAN & CO
31 Medan Midah, Taman Midah
56000 Kuala Lumpur
Tel: 03-9313633, 9313720
Telex: MA 30539 YOANG
Fax: 03-9716407
Contact: K.H. Chong

Agricultural, industrial and SMR chemicals



ZEENEX (MALAYSIA) SDN BHD
88A Jalan Mega Mandung, Kompleks Bandar
5th miles, Jalan Klang, 58000 Kuala Lumpur
Tel: 03-7839266 (4 lines)
Telex: MA 36336 ZEENEX
Fax: 03-7814368
Contact: B.H. Chai
(Managing Director)

Importer & distributor of herbicides, insecticides, fungicides, acaricides, molluscicides, plant growth regulator and fertilizers

AGRICULTURAL COMMODITY TRADERS

ASIATIC DEVELOPMENT BERHAD
10th Floor, Wisma Genting
Jalan Sultan Ismail, 50250 Kuala Lumpur
Tel: 03-2613733
Telex: MA 31250 ADSB
Fax: 03-2615304
Contact: Koo Pui Sing
(Assistant Chief Executive)

Oil palm, rubber and cocoa commodities



HARRISONS MALAYSIAN PLANTATIONS BHD
10-16th Floor, Menara PNB, Jalan Tun Razak
P O Box 11043, 50734 Kuala Lumpur
Tel: 03-2619022
Telex: MA 30844, MA 30845
Fax: 03-2618221

(Refer advertisement page 18)



MULTI-PURPOSE COMMODITY TRADING SDN BHD
 Batu 7, Jalan Kajang-Puchong
 43000 Kajang, Selangor
 P O Box 11453, 50746 Kuala Lumpur
 Tel: 03-9486811
 Telex: MA 32422 MULMAR
 Fax: 03-9489998
 Contact: Tan Seng Hock
 (General Manager)

*Crude palm oil, latex concentrate and cocoa beans
 (Refer advertisement page xii-xiii)*



TAIKO PLANTATIONS SDN BHD
 1 Jalan S.P. Seenivasagam, 30000 Ipoh
 P O Box 167, 30720 Ipoh, Perak
 Tel: 05-517844, 519422
 Telex: TAIKO MA 44094/44324
 Fax: 05-505312
 Contact: Oo Leng Hwa (Marketing Director)

Marketing of palm product, rubber and cocoa

AGRICULTURAL EQUIPMENT AND SUPPLIES

AE ENGINEERING SDN BHD
 15 Jalan Overseas Union Garden
 Klang Road, 58200 Kuala Lumpur
 Tel: 03-7834086



B-TRAK SDN BHD
 84 Jalan SS 15/4D, Subang Jaya
 47500 Petaling Jaya, Selangor
 Tel: 03-7334622, 7334604, 7334611
 Telex: MA 36567
 Fax: 03-7332572
 Contact: Seelan Chelliah (Manager)
 Bee Ling Han (Sales Manager)
 Ding Ing Chai (Sales Manager)

*Sole distributor of Massey Ferguson tractors,
 agricultural implements and industrial machinery
 and Linnhoff motor grader*

BEKALAN TANI SDN BHD
 97A Jalan Raja Muda
 50300 Kuala Lumpur
 Tel: 03-2912921, 2911526



CHYE KHIANG SENG (M) SDN BHD
 Wisma C.K.S., 155 Jalan Kapar
 P O Box 211, 41720 Kelang, Selangor
 Tel: 03-3413220, 3413221, 3413230-3
 Telex: MA 39608 CKSLTD
 Fax: 03-3427171
 Contact: Chew Wan Joo (Manager)

All types of synthetic fishing nets, ropes and twines, FFB loading net, nylon security nets, cocoa fermenting net, tea leaves collecting net, nursery net, high rise building safety net, cocoa sunlight shade & industry nets

CPM PACIFIC PTE LTD
 17 Liu Fang Road
 Singapore 2262
 Tel: 02-2651492, 2650701



CROP PROTECTION (M) SDN BHD
 Lot 746, 4 1/2 Miles Jalan Kapar
 P O Box 84, 41710 Klang, Selangor
 Tel: 03-3911301 (6 lines)
 Telex: MA 39410 CROP
 Contact: Lee See Aik (Sales Director)

*Distributor of agricultural sprayers
 (Refer advertisement page 83)*

FEDERAL AUTO HOLDINGS BHD
 Jalan Usaha 3/1, P O Box 7
 40700 Shah Alam, Selangor
 Tel: 03-5592101

GER-MAL SDN BHD
 1 Jalan 13/6, 46200 Petaling Jaya
 Selangor
 Tel: 03-7555566
 Telex: MELCH MA 37316/36301
 Fax: 03-7570658
 Contact: Boon Yon Nyin (Company Manager)

Supplier of sprayers, generators and other equipment



HONG LEONG EQUIPMENT SDN BHD
 Lot 223 Jalan Utas 15/7, Shah Alam Industrial Est.
 P O Box 73, 40700 Shah Alam, Selangor
 Tel: 03-5593533, 5595885
 Telex: HL QUIP MA 38514
 Contact: Hoo Ah Sai (Product Manager)

Equipment trading - hydraulic excavators, motor graders, wheel loaders, skid steer loaders, asphalt pavers, forklift trucks and portable conveyors

HOWARD

HOWARD ALAT PERTANIAN SDN BHD
 7482 Jalan Dua, Taman Selayang Baru
 12km Jalan Ipoh, P O Box 8, 68107 Batu Caves
 Tel: 03-6186637, 6186608, 6186609
 Telex: MA 30535 HRFE
 Fax: 03-6188844
 Contact: Mohd Yusoff (Sales Manager)

Manufacturer of tractor-mounted rotary cultivators, slashers, tine tillers, post-hole diggers, etc. and rough terrain tractor loader/transporter. Also distributors for PERMAGLAS cobalt-glass fused to steel tanks for portable and non-portable crates



HUP HENG (KL) SDN BHD
 221-225 Jalan Pudu
 55100 Kuala Lumpur
 Tel: 03-2482955, 2482966, 2482988
 Telex: MA 31382 HHKLSB
 Fax: 03-2437052
 Contact: Lim Boon Chai (Director)

Importer, distributor and contractor of pumps and machineries for all applications (Refer advertisement page 77)

INTAN KARANG SDN BHD
 Lot 11, Jalan 13/6
 46200 Petaling Jaya, Selangor
 Tel: 03-7572151, 7572152, 7572727
 Telex: MA 37278 INTAN
 Fax: 03-7571928
 Contact: S. Somu (Manager)

Marketing & sales of agricultural tractors (Belarus) & various types of agricultural implements suitable for plantations

J. WHYTE (M) SDN BHD
 9 Jalan 222, P O Box 79
 46700 Petaling Jaya, Selangor
 Tel: 03-7567266



JURU RUBCOIL SDN BHD
 50B Jalan Tapah, Off Jalan Goh Hock Huat
 41400 Kelang, Selangor
 Tel: 03-3422751, 3422750
 Telex: MA 39572
 Fax: 03-3427225
 Contact: Ir Hoo Kong Meng (Managing Director)

Importer and supplier of a complete range of pumps, valves, controls and instrumentation, burners and monocable system for transport of agricultural produce

KADIN-DEUTZ SDN BHD
 7 Lorong SS 13/6B, Subang Industrial Estate
 Subang Jaya, 47500 Petaling Jaya, Selangor
 Tel: 03-7332731, 7334036

KNS

KAM NAM & SONS HOLDINGS SDN BHD
 Lot 9616 Jalan Kuchai Lama, 58200 Kuala Lumpur
 P O Box 86, Jalan Klang Lama
 58700 Kuala Lumpur
 Tel: 03-7831782, 7835703, 7835704
 Telex: MA 37530 KNS
 Fax: 03-7813710
 Contact: Steve Kam (Managing Director)

Equipment for fertilizers, premixes, drip irrigation. Manufacturer of Direct and Heat Exchanger Solid Fuel Burners for agricultural crop dryers (Refer advertisement page 129)



KUBOTA AGRICULTURAL MACHINERY SDN BHD
 Lot 14A Jalan Perusahaan 4,
 Batu Caves Ind. Estate 68100 Batu Caves
 Selangor
 Tel: 03-6882967 (4 lines)
 Telex: MA 27001 KAM
 Fax: 03-2987398
 Contact: Abdul Rashid Feroze Din
 (Manager - Agricultural Equipment
 Division)

*Assembler and distributor of Kubota tractors,
 rotary tillers, power sprayers, water pumps, diesel
 and gasoline engines, agricultural implements,
 Thomes skid steer loader, Laverda combine
 harvester, paddy reaper and thresher and
 Berthoud sprayers and mist blowers
 (Refer advertisement page 30)*

LION-LKIM AQUAFARMS SDN BHD
 4th & 5th Floor, Wisma SPS, 32 Jalan Imbi
 55100 Kuala Lumpur
 Tel: 03-2412155/3166
 Farm Add: 19th Mile, 41700 Puchong, Selangor
 Farm Tel: 01-332051
 Telex: WIRASM MA 33195
 Fax: 03-2411036
 Contact: Lim Song Hok (Farm Manager)

*Supply of aquaculture equipment and products:
 Paddlewheels, Artemia Tanks, Algal Tanks, pH
 Meters and Freshwater fish and prawn feed*



**MOTION SMITH (DIVISION OF MECOMB
 MALAYSIA SDN BHD)**
 Lot 20 Jalan 225, 46100 Petaling Jaya
 Selangor
 Tel: 03-7743422
 Telex: MA 37764
 Fax: 03-7743414
 Contact: G. L. Ng (General Manager)

*Distributor for Spectra-Physics (U.S.A.) laser
 equipment for land levelling, etc.
 (Refer advertisement page 35)*



NAFAS (BAHAGIAN JENTERA)
 Lot 9, Jalan 241, Section 51-A
 46100 Petaling Jaya, Selangor
 Tel: 03-7766622
 Telex: MA 30719 TANI
 Fax: 03-7765304
 Contact: Ahmad Abdul Rahman
 (Manager - Bahagian Jentera)

*Importer & distributor of FIAT agricultural tractors,
 Mitsubishi power tillers and combine harvester,
 NARDI and Howard agricultural implements and
 KIHARA tobacco curing equipment. Importer
 and distributor of KIHARA tobacco curing and
 NARDI tobacco planting equipment
 (Refer advertisement page 39)*

NORSAN FISHING NET INDUSTRIES SDN BHD
 Lot 3427, 3rd Mile, Klang-KL Federal Highway
 41300 Klang, Selangor
 Tel: 03-5595200
 Telex: MA 39585

*Supplier of all types of fishing nets, ropes and
 twines FFB loading nets and other nets for
 agriculture
 (Refer advertisement page 130)*



POSIM INDUSTRIAL EQUIPMENT SDN BHD
 (A member of the Lion Group)
 14-2 Jalan Vivekananda, Brickfields
 50470 Kuala Lumpur
 Tel: 03-2746911, 2746988
 Telex: MA 32373 POSIM
 Fax: 03-2747060
 Contact: Phang Wai Yeen
 (General Manager)

*Sales, service, parts and rental of new and used
 Bobcat equipment - skid steer loader, hydrostatic
 trencher and hydraulic excavator
 (Refer advertisement page 9)*

ROOSTER AGRI-VET SDN BHD
 M.M.A. Building, 124 Jalan Pahang
 Pejabat Pos Medan Tuanku, 53000 Kuala Lumpur
 Tel: 03-2923905, 2989278

S.G. CUTTER PTE LTD
25 Jalan Unggas
Singapore 1129
Tel: 02-2530342

SCOTT & ENGLISH (MALAYSIA) SDN BHD
Lot 17 Jalan 51A/227, P O Box 162
46720 Petaling Jaya, Selangor
Tel: 03-7562122
Telex: MA 37264
Fax: 03-7562836
Contact: Ng Kam Pai

(Manager - Industrial Equipment Div.)

CUMMINS Department: 03-2211033, 2218121
Contact: Yap Sin Bin
(Department Manager)

*Tractors - Landini Agricultural Machinery, Italy
Pumps and Munchers - Mono Pumps Ltd., UK
Cummins Diesel Engines and Generating sets,
USA*



SHORGA SDN BHD
Lot 3427, 3rd Mile, Klang-KL Federal Highway
41300 Klang, Selangor
Tel: 03-5595200
Telex: MA 39585
Contact: Raja Noraini Bte. Raja Datuk Nong Chik
(Executive Director)

*Sole agent for all types of fishing nets, ropes and
twines, FFB loading nets and other nets for
agriculture
(Refer advertisement page 130)*



SPHERE CORPORATION SDN BHD
Lot 5, Kawasan M.I.E.L., Pandamaran Industrial
Estate, 42000 Port Kelang, Selangor
Tel: 03-3687177 (5 lines)
Telex: MA 39576 SPECOP
Fax: 03-3687097
Contact: Teoh Geok Leong
(Marketing Manager)

*Specialize in the design, manufacture and
commissioning of machinery and equipment for
the processing of rubber coconut, cocoa and
other agricultural produce*



TCIM SDN BHD
9 Jalan Kemajuan, 46200 Petaling Jaya
Selangor
Tel: 03-7553288, 7553076
Telex: MA 37374
Fax: 03-7559809
Contact: Lee Engguan (Executive Director)

*Material handling, agricultural, construction.
Distributor of agricultural tractor
(Refer advertisement page viii)*



TECK SENG MACHINERY (M) SDN BHD
27 Jalan Segambut Pusat, Segambut
51200 Kuala Lumpur
Tel: 03-6267255, 6266246, 6267634
Telex: MA 32116 TSMKL
Fax: 03-6214553
Contact: Sia Ah Mooi
(Administration Director)

*Suppliers of diesel engine, generating set and
water pump; tractor and combine harvester;
palm oil and late centrifuges, marine engine and
gear box*



Tractors Malaysia

TRACTORS MALAYSIA
11th Floor, Wisma Tractors, 7 Jalan SS 16/1
Subang Jaya, 47500 Petaling Jaya, Selangor
Tel: 03-7346688
Telex: MA 25171/2, 25173
Fax: 03-7346623
Contact: Manager (AE/ATSB)

*Trading and manufacture - Ford agricultural
tractors
(Refer advertisement page 23)*

umw**TOYOTA**
INDUSTRIAL EQUIPMENT

UMW INDUSTRIAL POWER SDN BHD
P O Box 30, Jalan Utas, Batu Tiga Industrial Est.
40700 Shah Alam, Selangor
Tel: 03-5595113
Telex: MA 38692
Fax: 03-5591550
Contact: Ricky Too
(General Manager)

*Distributor of Vacpadana agriculture tractors,
Honda water pumps and power tillers, Mitsubishi
diesel engines and generator sets, Broomwade*

umw

UMW INDUSTRIES (1985) SDN BHD
P O Box 52, 40700 Shah Alam
Selangor
Tel: 03-5591201
Telex: MA 38690
Fax: 03-5591550
Contact: Chua Ah Chai (Sales Manager)

Material Handling Division

UNITED BINTANG MACHINERY SDN BHD
Lot 1 Jalan Perusahaan Satu
Batu Caves Light Industrial Estate,
68100 Batu Caves, Selangor
Tel: 03-6896600, 6896633, 6896644
Telex: MA 32256 UBM
Fax: 03-2925270

*Construction and agriculture machinery, Ford
tractors 5000/6600/764. Case 580B/F/G*

AGRICULTURAL PROCESSING

ALFA-LAVAL (M) SDN BHD
Jalan Sepana 15/3, P O Box 83
Post Office Section 16, 40700 Shah Alam
Selangor
Tel: 03-5594511
Telex: MA 38541 ALVAL
Fax: 03-5598361 (c/o Haven Automation)
Contact: Muhd Rosli Yusoff (Manager)

*Supplier of milking equipments, food processing
plant, spray drying (NIRO ATOMIZER) and
centrifuges for palm oil, latex and starch
industries*

CNY CHEMICAL SDN BHD
W.D.T. 265, 91009 Tawau, Sabah
Tel: 089-779013

CPM PACIFIC PTE LTD
17 Liu Fang Road
Singapore 2262
Tel: 02-2651492, 2650701



DUNLOP ESTATES BHD
Batu 7, Jalan Kajang-Puchong, 43000 Kajang
P O Box 11395, 50744 Kuala Lumpur
Tel: 03-9486811
Telex: MA 21300 DUNEST
Fax: 03-9489998
Contact: Cheong Sah Fah
(General Manager - Production)

*Processing of palm oil, rubber and cocoa
(`MULCOA` cocoa beans)
(Refer advertisement page xii-xiii)*

EUCO METALS SDN BHD
42 Jalan SS 21/39, Damansara Utama
47400 Petaling Jaya, Selangor
Tel: 03-7185676, 7185363

GUTHRIE INDUSTRIES (M) SDN BHD
4th Mile, Jalan Kampong Jawa, P O Box 2004
41900 Klang, Selangor
Tel: 03-3313122



JURU RUBCOIL SDN BHD
50B Jalan Tapah, Off Jalan Goh Hock Huat
41400 Kelang, Selangor
Tel: 03-3422751, 3422750
Telex: MA 39572
Fax: 03-3427225
Contact: Ir Hoo Kong Meng
(Managing Director)

*Filtration machineries for water, vegetable oil,
etc. Bolted steel tanks for water storage, waste
treatment and dry storage*

KNS

KAM NAM & SONS HOLDINGS SDN BHD
 Lot 9616 Jalan Kuchai Lama, 58200 Kuala Lumpur
 P O Box 86, Jin Klang Lama, 58700 Kuala Lumpur
 Tel: 03-7831782, 7835703, 7835704
 Telex: MA 37530 KNS
 Fax: 03-7813710
 Contact: Steve Kam
 (Managing Director)

Designer, manufacturer, consultant and supplier of plants and machineries for feedmeals, fertilizers, premixes, agriculture crop drying - rubber, timber, cocoa coconut etc. Manufacturer of direct and heat exchanger solid fuel burners
 (Refer advertisement page 129)

SCOTT & ENGLISH (M) SDN BHD
 Lot 17 Jalan 51A/227, P O Box 162
 46720 Petaling Jaya, Selangor
 Tel: 03-7562122
 Telex: MA 37264
 Fax: 03-7562836

Contact: Ng Kam Pai (Manager - Industrial Equipment Div.)

Mono pumps and munchers for oil palm mill



SPHERE CORPORATION SDN BHD
 Lot 5 Kawasan M.I.E.L., Pandamaran Industrial Estate, 42000 Port Klang, Selangor
 Tel: 03-3687177 (5 lines)
 Telex: MA 39576 SPECOP
 Fax: 03-3687097
 Contact: Teoh Geok Leong
 (Marketing Manager)

Specialise in the design, manufacture and commissioning of machinery and equipment for the processing of rubber coconut, cocoa and other agricultural produce

AQUACULTURE

CHYE KHIANG SENG (M) SDN BHD
 Wisma C.K.S., 155 Jalan Kapar
 P O Box 211, 41720 Kelang, Selangor
 Tel: 03-3413220, 3413221, 3413230
 Telex: MA 39608 CKSLTD
 Fax: 03-3427171
 Contact: Chew Wan Joo (Manager)

Supplier of all types of synthetic fishing nets and ropes



HUP HENG (KL) SDN BHD
 221-225 Jalan Pudu, 55100 Kuala Lumpur
 Tel: 03-2482955, 2482966, 2482988
 Telex: MA 31382 HHKLSB
 Fax: 03-2437052
 Contact: Lim Boon Chai (Director)

Importer, distributor and contractor for aquaculture equipments and supplies
 (Refer advertisement 77)

LION-LKIM AQUAFARMS SDN BHD
 4th & 5th Floor, Wisma SP5, 32 Jalan Imbi
 55100 Kuala Lumpur
 Farm Add: 19th Mile, 47100 Puchong, Selangor
 Tel: 03-2412155/3166
 Farm Tel: 01-332051
 Telex: WIRASM MA 33195
 Fax: 03-2411036
 Contact: Lim Song Hok (Farm Manager)

Supply of aquaculture equipment, prawn & fish fries produce: Live Freshwater Prawn, Cherry Snapper, Silver Snapper, Jelawat, Grass Carp, Red Patin, Siakap (Seabass) and Marble Goby. For Fries: Freshwater Prawn Juveniles, Tiger Prawn Postlarvae, Catfish, Grass Carp, Red Tilapia, Nilo Tilapia, Jelawat, Red Patin and Lampam Jawa



NORSAN FISHING NET INDUSTRIES SDN BHD
 Lot 3427, 3rd Mile, Klang-KL Federal Highway
 41300 Klang, Selangor
 Tel: 03-595200
 Telex: MA 39585
 Contact: Raja Noraini Bte. Raja Datuk Nong Chik
 (Executive Director)

*Supplier for all types of fishing nets, ropes and twines
 (Refer advertisement page 130)*



SHORGA SDN BHD
 Lot 3427, 3rd Mile, Klang-KL Federal Highway
 41300 Klang, Selangor
 Tel: 03-5595200
 Telex: MA 39585
 Contact: Raja Noraini bte. Raja Datuk Nong Chik
 (Executive Director)

*Sole agent for all types of fishing nets, ropes and twines, FFB loading nets and other nets for agriculture
 (Refer advertisement page 130)*

WILLIAM JACKS & CO (M) SDN BHD
 13/4 Jalan Bersatu, 47400 Petaling Jaya
 Selangor
 Tel: 03-7554011

BUILDING MATERIALS



ALUMINIUM COMPANY OF MALAYSIA BERHAD
 (A Member of the Alcom Group)
 Lot 3 Persiaran Waja, Bukit Raja Industrial Estate
 P O Box 233, 41720 Klang, Selangor
 Tel: 03-3412311
 Telex: MA 39403
 Fax: 03-3412793
 Contact: Jackie Low
 (Sales Manager - Building Sheet)

*Manufacturers and exporters of aluminium rolled products: tread plate, flat and coiled sheet, circles, roofing sheets, foil, Aluminium extruded products: in mill, natural anodised, Anotone and Anolok finishes; Aluminium truck body, window, door and curtain wall fabrication
 (Refer advertisement page 117)*

COMPUTERS

KOMPUTER SISTEM (M) SDN BHD
 Wisma CSA, Jalan SS 22/55, Damansara Jaya
 47400 Petaling Jaya, Selangor
 Tel: 03-7195721



PERKHIDMATAN KOMPUTER PERLADANGAN SDN BHD
 (Subsidiary of Harrisons Malaysian Plantations Berhad)
 10 - 16th Floor, Menara PNB
 201-A Jalan Tun Razak
 50400 Kuala Lumpur
 Tel: 03-2619022, D.L. - 2613825
 Telex: MA 30844, MA 30845
 Fax: 03-2618221
 Contact: Michael H. Kemp (Managing Director)

*Estate management information systems, palm oil mill & refinery systems, marketing systems, research applications, hardware & software evaluation, computer environmental studies
 (Refer advertisement inside back cover)*

SYSTEMS FORMULATE SDN BHD
 58A Jalan Burhanuddin Helmi
 Taman Tun Dr Ismail
 60000 Kuala Lumpur
 Tel: 03-7180236, 7182407

CONSULTANCY AND ADVISORY SERVICES

AGRICULTURAL RESEARCH & ADVISORY BUREAU (A.R.A.B)
 3 1/2 Mile, Kajang-Serdang Road
 43000 Kajang Post Office, Selangor
 Tel: 03-8334151, 8334122



AGRIQUEST SDN BHD
 78B Jalan SS 21/22, Damansara Jaya
 47400 Petaling Jaya, Selangor
 Tel: 03-7195272, 7195273
 Telex: MA 37009 GOLDEN
 Fax: 03-7195433
 Contact: Kho Boon Lian (Director)

*Agricultural development consultancy, market research and survey, agricultural project management
 (Refer advertisement page 142)*



APPLIED AGRICULTURAL RESEARCH SDN BHD
Locked Bag No. 212, Sg. Buloh Post Office
47000 Sg. Buloh, Selangor
Tel: 03-6561152, 6561206
Telex: MA 30442
Fax: 03-2419750
Contact: Chew Poh Soon
(Head of Agricultural Research)

Agronomic consultancy, analytical tests, planting materials, fertilizers and rat baits for plantation crops



DUNLOP AGRO-MANAGEMENT SDN BHD
73300 Batang Melaka, Negeri Sembilan
HQ Postal Add: P O Box 11395
50744 Kuala Lumpur
Tel: 06-456323/334; 03-9486811
Telex: MA 21300 DUNEST
Fax: 03-9489998
Contact: Dr. Soong Ngin Kwi
(Research Controller)

*Turnkey projects: agricultural consultants
(Refer advertisement page xii-xiii)*

GUTHRIE AGRICULTURAL SERVICES, CHEMARA
P O Box 134, 70110 Seremban, Negeri Sembilan
Tel: 06-725131

H.R.U. SDN BHD
P O Box 2000, 41720 Klang, Selangor
Tel: 03-3312144, 3312228



HEVEA PALM ADVISORY SERVICES SDN BHD
97A Jalan SS 21/1A, Damansara Utama
47400 Petaling Jaya, Selangor
Tel: 03-7189429, 7189561
Telex: MA 36825 PSEEDS
Contact: Phang Sew (Managing Director)

Consultants in agriculture and supplier of agricultural inputs

HMPB CONSULTANCY SERVICES (M) SDN BHD
15th Floor, Menara PNB, 201-A Jalan Tun Razak
P O Box 11043, 50734 Kuala Lumpur
Tel: 03-2615377
Telex: MA 30844
Fax: 03-2618221
Contact: Allen Cheong Chee Hong
(General Manager)

Consultants in tropical agriculture



JURU RUBCOIL SDN BHD
50B Jalan Tapah, Off Jalan Goh Hock Huat
41400 Kelang, Selangor
Tel: 03-3422751, 3422750
Telex: MA 39572
Fax: 03-3427225
Contact: Ir. Hoo Kong Meng (Managing Director)

Consultants for oil palm, rubber and cocoa industry - project engineering and machinery design

KEMASRUNDING SDN BHD
94 & 96 Jalan SS 15/4, Subang Jaya
47500 Petaling Jaya, Selangor
Tel: 03-7338898

KUMARASIVAM TAN & ARIFFIN SDN BHD
1 Wisma KTA, Jalan SS 15/5A, Subang Jaya
47500 Petaling Jaya, Selangor
Tel: 03-7336644

KUMPULAN EMAS BHD
65 Persiaran Selangor, Shah Alam Industrial Estate
40000 Shah Alam, Selangor
Tel: 05-5592972 (20 lines)

SAJAI PLANTATION SERVICES SDN BHD
76C Jalan SS 22/21, Damansara Jaya
47400 Petaling Jaya, Selangor
Tel: 03-7196696
Fax: 03-7573641
Contact: Haji Johari bin Muhd. Abbas
(Director/Consultant)

Consultants and agronomic services



PA CONSULTING SERVICES MALAYSIA SDN BHD
 5th Floor, Wisma Getah Asli II
 148 Jalan Ampang, 50450 Kuala Lumpur
 Tel: 03-2612322
 Telex: MA 30233 PACOKL
 Fax: 03-2618231
 Contact: Eu Hong Chew (Senior Consultant)

Marketing, productivity improvement, training & education, personnel policies, benefit studies, executive recruitment
 (Refer advertisement page 36)



PANTAI MAJU SDN BHD
 78B Jalan SS 22/21, Damansara Jaya
 47400 Petaling Jaya, Selangor
 Tel: 03-7195272, 7195273
 Telex: MA 37009 GOLDEN
 Fax: 03-7195433
 Contact: Kho Boon Lian (Executive Director)

Consultants in agriculture



PERBADANAN KHIDMAT PERTANIAN FELDA
 Karung Berkunci 204, Pejabat Pos Jalan Gurney
 54900 Kuala Lumpur
 Tel: 03-2987673/772/588/929
 Telex: PKPF MA 28199
 Contact: Hanafi Kasbi (Administration/
 Marketing Manager)

Supply oil palm, cocoa, coffee planting materials and ratbaits. Provide agricultural advisory and analytical services
 (Refer advertisement page 90)

PLANMAC MANAGEMENT SERVICES SDN BHD
 76C Jalan SS 22/21, Damansara Jaya
 47400 Petaling Jaya, Selangor
 Tel: 03-7193200

PLANTATIONS ENGINEERING ADVISORY SERVICES SDN BHD
 Lot 0.25, Ground Floor, Angkasaraya Building
 Jalan Ampang, 59459 Kuala Lumpur
 Tel: 03-2412129, 2431969

PLANTEK (M) SDN BHD
 74C Jalan SS 22/21, Damansara Jaya
 47400 Petaling Jaya, Selangor
 Tel: 03-7193510

S.U.C. - UNIVERSAL SDN BHD
 88A Jalan SS 21/39, Damansara Utama
 47400 Petaling Jaya, Selangor
 Tel: 03-7170242

SAILCOS SDN BHD
 14A Jalan SS 25/22, Taman Mayang
 47301 Petaling Jaya, Selangor
 Tel: 03-7038511, 7038532
 Telex: MA 36730
 Cable: COSLAB PETALINGJAYA
 Contact: Dr. Koo Swe Hoo (Director)

Laboratory and consulting services



SIME DARBY SERVICES
 6th Floor, Wisma Sime Darby
 Jalan Raja Laut, 03050 Kuala Lumpur
 Tel: 03-2936333
 Telex: MA 33503
 Fax: 03-2933602
 Contact: Dr. Ho Chai Yee (Development Director)

Plantation management, agronomic and laboratory services; contract research; plantation engineering services

TECK SENG MACHINERY (M) SDN BHD
 27 Jalan Segambut Pusat, Segambut
 51200 Kuala Lumpur
 Tel: 03-6267255, 6266246, 6267634
 Telex: MA 32116 TSMKL
 Fax: 03-6214553
 Contact: Sia Ah Mooi (Administration Director)

Agricultural engineering consultancy

DRUMS

VAN LEER (MALAYSIA) SDN BHD
 10 Jalan Kilang, P O Box 18
 46700 Petaling Jaya, Selangor
 Tel: 03-7916155
 Telex: MA 37460 VLCM
 Fax: 03-7915068
 Contact: Stephen Wong (Sales Manager)

*Supplier of steel and plastic drums
 (Refer to advertisement page 87)*

EDUCATION SERVICES

PA CONSULTING SERVICES MALAYSIA SDN BHD
 5th Floor, Wisma Getah Asli II
 148 Jalan Ampang, 50450 Kuala Lumpur
 Tel: 03-2612322
 Telex: MA 30233
 Fax: 03-2618231
 Contact: Eu Hong Chew (Senior Consultant)

*Marketing, productivity improvement, training
 and education, personnel policies, benefit
 studies, executive recruitment
 (Refer advertisement page 36)*

ENGINEERING SERVICES

DUNLOP AGRO-MANAGEMENT SDN BHD
 73300 Batang Melaka, Negri Sembilan
 H/Q Postal Add: P O Box 11395
 50774 Kuala Lumpur
 Tel: 06-456323/334; 03-9486811
 Telex: MA 21300 DUNEST
 Fax: 03-9489998
 Contact: Dr. Soong Ngin Kwi
 (Research Controller)

*Palm oil mill, cocoa factory, latex factory, other
 related services
 (Refer advertisement page xii-xiii)*

J. WHYTE SDN BHD
 9 Jalan 222, P O Box 79
 46700 Petaling Jaya, Selangor
 Tel: 03-7567266

JURU RUBCOIL SDN BHD
 50B Jalan Tapah, Off Jalan Goh Hock Huat
 41400 Klang, Selangor
 Tel: 03-3422751, 3422750
 Telex: MA 39572 JRCOIL
 Fax: 03-3427225
 Contact: Ir. Hoo Kong Meng (Managing Director)

Process consultants, designers and engineers

KUMARASIVAM, TAN & ARIFFIN SDN BHD
 1 Wisma KTA, Jalan SS 15/5A, Subang Jaya
 47500 Petaling Jaya, Selangor
 Tel: 03-7336644

LI-HOE ENGINEERING & TRADING SDN BHD
 59-65 Harper Light Industrial Area
 41400 Klang, Selangor
 Tel: 03-3422959, 3422982
 Telex: MA 39879 LIHOE
 Fax: 03-3428066
 Contact: Ng Hwa Bian (Managing Director)

*Mechanical engineering contractor;
 manufacture, supply, instal and commissioning of
 SMR rubber processing machineries and exports*



NAFAS (BAHAGIAN JENTERA)
 Lot 9, Jalan 241 Section 51-A
 46100 Petaling Jaya, Selangor
 Tel: 03-7766622
 Telex: MA 30719 TANI
 Fax: 7765304
 Contact: Ahmad Abdul Rahman
 (Manager - Bahagian Jentera)

*Advisory services for farm mechanization and
 farm machinery selection, and farm machinery
 rentals
 (Refer advertisement page 39)*

PALMILLTECH (M) SDN BHD
 12 Jalan 39, Kawasan 16, Off Connaught Bridge
 41300 Klang, Selangor
 Tel: 03-3423490

**PLANTATION ENGINEERING ADVISORY SERVICES
SDN BHD**

Lot 0.25, Ground Floor, Angkasaraya Building
Jalan Ampang, 50450 Kuala Lumpur
Tel: 03-2612129, 2631969

SCOTT & ENGLISH (MALAYSIA) SDN BHD
Cummins Department

16 Jalan Chan Sow Lin, 55200 Kuala Lumpur
Tel: 03-2211033

SIME DARBY SERVICES

6th Floor, Wisma Sime Darby
Jalan Raja Laut, 50350 Kuala Lumpur
Tel: 03-2936333
Telex: MA 33503
Fax: 03-2933602
Contact: Dr. Ho Chai Yee (Development Director)

Plantation engineering services

TECK SENG MACHINERY (M) SDN BHD

27 Jalan Segambut Pusat, Segambut
51200 Kuala Lumpur
Tel: 03-6267255, 6266246, 6267634
Telex: TSMKL 32116
Fax: 03-6214553
Contact: Sia Ah Mooi (Administration Director)

*Supplier of diesel engine, generating set, marine
engine and gear box. Agricultural engineering
consultancy*

**ENVIRONMENTAL HEALTH
(INDUSTRIAL)****WELLCOME MALAYSIA SDN BHD**

7 Lorong SS 13/3F, Subang Jaya
47500 Petaling Jaya, Selangor
Tel: 03-7334350
Telex: MA 36247 TABMAL
Fax: 03-7331024
Contact: Dr Lee Nai Pin (Manager)

*Pharmaceuticals, toiletries, laboratory
diagnostics and reagents, vaccines and sera,
biological products and environmental health
(industrial)*

FEEDS**CARGILL (MALACCA) SDN BHD**

174 Air Keroh Industrial Area
75450 Malacca
Tel: 06-320633

DINDINGS SOYA & MULTIFEEDS SDN BHD

10th Floor, Wisma MCA, Jalan Ampang
50450 Kuala Lumpur
Tel: 03-2619055

FEDERAL FLOOR MILLS BHD

15th & 16th Floor, Wisma Jerneh
Jalan Sultan Ismail, 50250 Kuala Lumpur
Tel: 03-2424077

GOLD COIN LIMITED

14 Jalan Tepong, Jurong Town
P O Box 1849, Singapore 9036
Tel: 02-2652044

PUBLIC FEEDMILL (M) SDN BHD

Lot 1922 Batu 6, Jalan Bukit Kemuning
Kelang, Selangor
Tel: 03-3312414, 3312416

SIN HENG CHAN (MALAYA) BHD

82 Jalan Kilang, 75300 Malacca
Tel: 06-222755

SIN KIAN HUAT EDAR SDN BHD

KTM Godown, 3 Jalan Tun Sambathan
50470 Kuala Lumpur
Tel: 03-2749616

SINMAH MULTIFEED SDN BHD

AG 5730 Alor Gajah Industrial Estate
78000 Alor Gajah, Malacca
Tel: 06-561293

WEY LEE FEEDMILL SDN BHD

Lot 4 Jalan 241/51A
46100 Petaling Jaya, Selangor
Tel: 03-7760341

FERTILIZERS



AG MINERALS SDN BHD
 21M Jalan SS 21/1A, Damansara Utama
 47400 Petaling Jaya, Selangor
 Tel: 03-7190955 (3 lines)
 Telex: MA 37399 AGLAND
 Contact: Leong Kok Kee

Importer and distributor of fertilizers



AGROMATE (M) SDN BHD
 45-2, 2nd Floor, Jalan 2/115A, Taman Pagar
 Ruyong
 Jalan Kuchai Lama, 58200 Kuala Lumpur
 Tel: 03-7829288, 7829505
 Telex: MA 37672 AGRO
 Contact: Tang Quee Huang (Managing Director)

Wholesaler/retailer of fertilizers



AJINOMOTO (MALAYSIA) BERHAD
 Lot 5710, Jalan Kuchai Lama, Petaling
 58200 Kuala Lumpur
 Tel: 03-7832433
 Telex: MA 31163 AJIKUL
 Contact: Lee Kee Chiang (Sales Manager)
 Mazlan bin Duaji (Deputy Manager)

*Manufacturer and distributor of a new organic
 fertilizer enriched with phosphate and potash
 (Refer advertisement page 98)*

ANCOM SDN BHD
 Persiaran Selangor, Shah Alam, Selangor
 P O Box 10465, 40700 Kuala Lumpur
 Tel: 03-5594022

APPLIED AGRICULTURAL RESEARCH SDN BHD
 Locked Bag No. 212, Sg. Buloh Post Office
 47000 Sg. Buloh, Selangor
 Tel: 03-6561152, 6561206
 Contact: Chew Poh Soon
 (Head of Agricultural Research)

Fertilizers and rat bait for plantation crops



AROGRO SDN BHD
 Jalan Gudang 16/9, 40000 Shah Alam
 P O Box 11, Shah Alam, Selangor
 18 Lorong Hujung Emas Dua, Jalan Klang Lama
 58200 Kuala Lumpur
 Tel: 03-5598581/5590124
 Contact: Huan Chee Boon (Managing Director)

*Manufacturer and distributor of 100% pure
 organic fertilizer (non-burn, control release
 pelleted poultry manure)*



ASEAN BINTULU FERTILIZER SDN BHD
 12th Mile, Tanjong Kidurong Road
 P O Box 482, 97008 Bintulu, Sarawak
 Tel: 086-52300 (13 lines)
 Telex: ABF BTU MA 73212
 Fax: 086-51043
 Contact: Shamsudin Basri (Manager-Fertilizer
 Marketing Dept)
 PETRONAS, P O Box 12444
 50778 Kuala Lumpur
 Tel: 03-2748568

*Manufacture ammonia and granular urea
 (Refer advertisement page 4)*

BAJAKIMIA SDN BHD
 279 Jalan Perkasa Satu, Taman Maluri
 Cheras, 55100 Kuala Lumpur
 Tel: 03-9853107, 9853839



BEHN MEYER & CO (M) SDN BHD
 4th Floor, Resource Plaza, 4 Lorong Persiaran Barat
 P O Box 402, Jalan Sultan, 46750 Petaling Jaya
 Selangor
 Tel: 03-7561983, 7561233
 Telex: MA 36913, MA 36907
 Fax: 03-7562118
 Contact: Ooi Cheng Bin (Division Manager)

*Manufacturer, importer and distributor of
 Nitrophoska, BM compounds, straight fertilizers,
 mixtures, foliar and micro elements fertilizers
 (Refer advertisement page 11)*

BEHN MEYER & CO (PTE) LTD
 100 Pasir Panjang Road
 P O Box 2000, Singapore 5
 Tel: 02-4736633
 Telex: RS 21390
 Contact: S.K. Hoh (Senior Group Manager)
 S.C. Khoo (Division Manager)

Manufacturer, importer and distributor of Nitrophoska, BM compounds, straight fertilizers, mixtures, foliar and micro elements fertilizers (Refer advertisement page 11)

CHEE CHENG ENTERPRISE
 19 Jalan 21/1, SEA Park
 46300 Petaling Jaya, Selangor
 Tel: 03-7757896

CHEMICAL COMPANY OF MALAYSIA BHD
 Refer ICI Fertilizers (M) Sdn Bhd

CHEMSOURCE (M) SDN BHD
 368, 2nd Floor, Jalan Pudu, 55100 Kuala Lumpur
 Tel: 03-2436129, 2436109

CONSOLIDATED FERTILIZER CORP SDN BHD
 1125 Jalan Pandamar, Pandamaran
 42000 Port Kelang, Selangor
 Tel: 03-3670817

EASTERN AGENCIES (M) SDN BHD
 Lot 18, Jalan 19/1, 46300 Petaling Jaya
 Selangor
 Tel: 03-7576122
 Telex: MA 37660
 Fax: 03-7556519
 Contact: Tee Lee Yu (Product Manager)

Supplier of Wellgro fertilizer

FERTITRADE (M) SDN BHD
 45 Jalan 2/115A, Taman Pagar Ruyung,
 Jalan Kuchai Lama, 58200 Kuala Lumpur
 Tel: 03-7830971, 7830972
 Telex: MA 37672 AGRO
 Contact: Chin Mee Siak (Managing Director)

Trading in fertilizers, chemicals, acids & Netlon



FPM SDN BHD
 Lot 115, Johore Port Authority Area
 P O BOX 29, 81700 Pasir Gudang, Johor
 Tel: 07-512801, 512802, 512803
 Telex: MA 60542 FPM
 Fax: 07-511810
 Contact: Mohd Salleh bin Darus
 (General Manager)

Manufacture and sales of compound fertilizers (Refer advertisement page ii)

GAZZAZ SDN BHD
 Room 4, Level 6, Block G Centre
 Pusat Bandar Damansara, Damansara Heights
 50490 Kuala Lumpur
 Tel: 03-2552044
 Telex: HM SHAH MA 37540
 Contact: Mohd. Afzal (Managing Director)

Distributor of NPK mixtures, compounds and straight fertilizer

Ger. Mal Sdn Bhd

GER-MAL SDN BHD
 1 Jalan 13/6, 46200 Petaling Jaya, Selangor
 Tel: 03-7555566
 Telex: MELCH MA 37316/36301
 Fax: 03-7570658
 Contact: Boon Yon Nyin (Company Manager)

NPK fertilizer, straights fertilizer



GUTHRIE MALAYSIA TRADING CORPORATION SDN BHD
 Wisma Guthrie, 21 Jin Gelenggang
 Damansara Heights
 P O Box 12516, 50716 Kuala Lumpur
 Tel: 03-2541644
 Telex: MA 30346
 Cable: GEALCO
 Contact: Fertilizer Division

Importer and distributor of fertilizers



HALEX (M) SDN BHD
 11-1 Jalan Petaling, Kaw. Perindustrian Dato Onn
 80350 Johor Bahru, Johor
 Tel: 07-371543, 373309
 Telex: MA 60212 HALEXM
 Contact: Yeoh Cheng Poh (Managing Director)
 Kuala Lumpur Office: 03-9301610, 9309579
 18 Jalan Manis Taman Segar, Cheras
 P O Box 6108 Pudu, 55710 Kuala Lumpur

Importing and distributing of fertilizers



ICI FERTILIZERS (MALAYSIA) SDN BHD
 8th Floor, Wisma Sime Darby
 Jalan Raja Laut, 50350 Kuala Lumpur
 Tel: 03-2919366
 Telex: MA 30326
 Fax: 03-2919901
 Contact: Tuan Hj. Ahmad Shazalli
 (General Manager)

*Manufacturer and distributor of Cock's Head
 Brand compounds, mixtures and straights
 (Refer advertisement page 15)*



HARRISONS & CROSFIELD (M) SDN BHD
 9 Jalan 222, 46100 Petaling Jaya
 Selangor
 Tel: 03-7567266
 Telex: MA 37665
 Fax: 03-7577994
 Contact: Chan Fook Nam (Marketing &
 Development Manager)

*Distributor and agents for speciality fertilizers
 (Refer advertisement page 85)*



HOECHST MALAYSIA SDN BHD
 12th Floor, Wisma Damansara, Jalan Semantan
 P O Box 10540, 50716 Kuala Lumpur
 Tel: 03-2549100
 Telex: MA 30370 HOE
 Fax: 03-2559420
 Contact: D. Strlichuk
 (Manager - Agrochemical Division)
 Penang Branch: 04-614342, 612213
 Kota Bharu Branch: 09-781330
 Kuching Branch: 082-452210, 452211-2

*Fertilizer - Complex
 (Refer advertisement outside back cover)*

IMC CORP (SINGAPORE) PTE LTD
 96 Somerset Road, #09-01 U.O.L. Building
 Singapore 0923
 Tel: 02-2351878, 2351887

JANITOR LANDSCAPING & NURSERY SDN BHD
 39 Jalan 17/45, 46400 Petaling Jaya, Selangor
 Tel: 03-7577514

KENSO CORPORATION (M) SDN BHD
 Suite 2401, 24th Floor, Plaza See Hoy Chan
 Jalan Raja Chulan, 50200 Kuala Lumpur
 Tel: 03-2387944
 Telex: MATENO MA 32745
 Fax: 03-2384252
 Contact: Ng Siew Seng (Divisional Manager)

Distributor of fertilizers

KPM NIAGA SDN BHD
 Lot 5 Jalan 243, Section 51A
 46100 Petaling Jaya, Selangor
 Tel: 03-7766044, 7767617

**MALAYSIA INTERNATIONAL TRADING CORP.
 SDN BHD (MITCO)**
 3rd Floor, Menara Boustead
 Jalan Raja Chulan, 50200 Kuala Lumpur
 Tel: 03-2437455

mitsubishi
mitsubishi CORPORATION (Singapore Branch)
 138 Robinson Road, #08, #09 & #10 Hong Leong
 Finance Bldg, Singapore 0106
 Tel: 02-2209111

MITSUI & CO LTD
 17th Floor, Menara Promet, Jalan Sultan Ismail
 50250 Kuala Lumpur
 Tel: 03-2418099



PELADANG KIMIA SDN BHD
 2nd Floor, Bangunan HINO, Jalan 223
 Section 51A, 46100 Petaling Jaya, Selangor
 Tel: 03-7561844
 Telex: MA 37212 PKSB
 Fax: 03-7574806
 Contact: Loke Keng Hung (General Manager)

*Importer, manufacturer and distributor of straight
 fertilizers, NPK blends and mixtures
 (Refer advertisement page 81)*

PENGEDAR BAHAN PERTANIAN SDN BHD
 Lot 11, Jalan 13/6
 46200 Petaling Jaya, Selangor
 Tel: 03-2431544



PERBADANAN KHIDMAT PERTANIAN FELDA
 Karung Berkunci 204, Pejabat Pos Jalan Gurney
 54990 Kuala Lumpur
 Tel: 03-2987672, 2987772, 2987588
 Telex: MA 28199 PKPF
 Contact: Hanafi bin Kasbi
 (Admin. and Marketing Manager)

*Supplier of fertilizers
 (Refer advertisers page 90)*

PERTUBUHAN PELADANG KEBANGSAAN (NAFAS)
 2nd Floor, Wisma Peladang
 Jalan Bukit Bintang, 55100 Kuala Lumpur
 Tel: 03-2482066
 Telex: MA 30719
 Contact: A. Rahim Rahmat (General Manager)

Importer and supplier of fertilizers



PETRONAS (Fertilizer Marketing Dept.)
 14th Floor Menara Dayabumi, Jalan Sultan
 Hishamuddin, P O Box 12444,
 50778 Kuala Lumpur
 Tel: 03-2748568
 Telex: MA 32285 ABIFER
 Contact: Shamsudin Basri (Manager)

*Manufacture ammonia and granular urea
 (Refer advertisement page 4)*



PHILIPPINE PHOSPHATE FERTILIZER CORPORATION
 6F Glass Tower Bldg., 115 Alvarado St., Legaspi
 Village, Makati 1200, Metro Manila, Philippines
 Tel: 8179431-34
 Telex: 23254 PHILPHOS RCA
 64473 PSPATE PN (EASTERN)
 45699 PHILPF PM ITT
 Contact: Filonilo C. Regudo (Senior Vice-
 President, Commercial Operations)

*Manufacture and sales of phosphatic fertilizers
 (Refer advertisement page 87)*

TIRAM KIMIA SDN BHD
 Bangunan SHELL, Jalan Semantan
 P O Box 11027, 50732 Kuala Lumpur
 Tel: 03-2559144

TITAN (M) SDN BHD
 5 & 7 Lorong SS 13/6A, Off Jalan SS 13/6
 47509 Subang Jaya, Selangor
 Tel: 03-7330009, 7330098



TRANSAMMONIA A.G.
 541 Orchard Road, #10-04
 Liat Towers, Singapore 0923
 Tel: 02-2355584
 Telex: TRAMMO RS 23533, RS 35017
 Fax: 02-7377274
 Contact: Peter Shaddick (Vice-President)

*Trading and supplier of fertilizers & fertilizer raw
 materials*



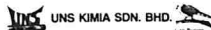
UNION HARVEST SDN BHD
 2nd Floor, Bangunan Jurukur, 64-66 Jalan 52/4
 46200 Petaling Jaya, Selangor
 Tel: 03-7572122
 Telex: MA 36432 UHSB
 Fax: 03-7572630
 Contact: Wong Yu (Managing Director)

Trading in fertilizer



ZEENEX (MALAYSIA) SDN BHD
 88A Jalan Mega Mandung, Kompleks Bandar
 5th miles, Jalan Klang, 58000 Kuala Lumpur
 Tel: 03-7839266 (4 lines)
 Telex: MA 36335 ZEENEX
 Fax: 03-7814368
 Contact: B.H. Chai (Managing Director)

*Importer and distributor of plant growth regulator
 and fertilizers*



UNS KIMIA SDN BHD
 Tingkat 4, 91 Bangunan Bakti
 Jalan Dang Wangi, 50100 Kuala Lumpur
 Tel: 03-2925120
 Contact: Udanis Mohd. Nor
 (Chairman/Managing Director)

Supplier of fertilizer



YINPOLIN AGRICULTURE SDN BHD
 48A Jalan 3, Kawasan 16 Taman Intan
 41300 Klang, Selangor
 Tel: 03-3418055 (5 lines)
 Telex: MA 38629 INPOLI
 Contact: Lau Sam Siong (Managing Director)

*Fertilizers mixtures, compounds and straight
 fertilizers*

YONG GUAN & CO
 31 Medan Midah, Taman Midah
 56000 Kuala Lumpur
 Tel: 03-9313633, 9313720
 Telex: MA 30539 YOANG
 Fax: 03-9716407
 Contact: K. H. Chong

Fertilizers, agricultural, industrial & SMR chemicals

FOOD AND FOOD PROCESSING

AJINOMOTO.

AJINOMOTO (MALAYSIA) BHD
 Lot 5710 Jalan Kuchai Lama, Petaling
 58200 Kuala Lumpur
 Tel: 03-7832433
 Telex: MA 31163 AJIKUL
 Contact: Lee Kee Chiang (Sales Manager)

*Producer of Ajinomoto, Aji plus ; Ajishio salt;
 distributor of special delight frozen food and
 specialty amino acid chemicals
 (Refer advertisement page 98)*

ALFA-LAVAL (M) SDN BHD
 Jalan Sepana 15/3, P O Box 83
 Post Office Section 16
 40700 Shah Alam, Selangor
 Tel: 03-5594511
 Telex: MA 38541 ALVAL
 Fax: 03-5598361 (c/o Haven Automation)
 Contact: Muhd Rosli Yusoff (Manager)

*Supplier of processes and equipments in food
 industry complete with spray drying (NIRO
 ATOMIZER) and stainless steel pumps and fittings*

AMERICAN EMBASSY
 376 Jalan Tun Razak, 50400 Kuala Lumpur
 Tel: 03-2489011
*Our AIMS service can put you in contact with U.S.
 food suppliers at no expense*

JURU RUBCOIL SDN BHD
 50B Jalan Tapah, Off Jalan Goh Hock Huat
 41400 Klang, Selangor
 Tel: 03-3422751, 3422750
 Fax: 03-3427225
 Contact: Ir Hoo Kong Meng (Managing Director)

Supplier of food processing machineries and equipments



KAM NAM & SONS HOLDINGS SDN BHD
 Lot 9616 Jalan Kuchai Lama
 58200 Kuala Lumpur
 Tel: 03-7831782, 7835703
 Telex: MA 37530 KNS
 Contact: Steve Kam (Managing Director)

De-boning, peeling and mixing machines for chicken, fish, meat, prawn & shrimp. General food preparation equipments

MACKESSEN SDN BHD
 3A Jalan SS 21/37, Damansara Utama
 47400 Petaling Jaya, Selangor
 Tel: 03-7190775, 7180806

SCOTT & ENGLISH (M) SDN BHD
 Lot 17 Jalan 51A/227, P O Box 162
 46720 Petaling Jaya, Selangor
 Tel: 03-7562122
 Telex: MA 37264
 Fax: 03-7562836
 Contact: Ng Kam Pai (Manager - Industrial Equipment Div.)

Mono Pumps Ltd U.K. - stainless steel pumps

HORTICULTURAL SUPPLIES AND SERVICES

CHEE CHENG ENTERPRISE
 19 Jalan 21/1, SEA Park
 46300 Petaling Jaya, Selangor



KUBOTA AGRICULTURAL MACHINERY SDN BHD
 Lot 14A, Jalan Perusahaan 4, Batu Caves
 Industrial Estate, 68100 Batu Caves, Selangor
 Tel: 03-6882967 (4 lines)
 Telex: MA 27001 KAM
 Fax: 03-2987398
 Contact: Abdul Rashid Feroze Din (Manager)

Distributor of Kubota tractors, engine, pedestrian rotary tillers, water pumps, power sprayers, brush cutters, Berthoud sprayers and mist blowers (Refer advertisement page 30)

S.G. CUTTER PTE LTD
 25 Jalan Unggas, Singapore 1129
 Tel: 02-2530342

YUSDA INDUSTRIES SDN BHD
 10 Lorong University B, Section 16, P O Box 362
 46740 Petaling Jaya, Selangor
 Tel: 03-7574695, 7562496

IRRIGATION - SYSTEMS AND EQUIPMENT



HUP HENG (KL) SDN BHD
 221-225 Jalan Pudu, 55100 Kuala Lumpur
 Tel: 03-2482955, 2482966, 2482988
 Telex: MA 31382 HHKLSB
 Fax: 03-2437052
 Contact: Lim Boon Chai (Director)

Importer, distributor and contractor of pumps and machineries for all applications (Refer advertisement page 77)

IRRITEKNIK SDN BHD
 119A Jalan SS 21/37, Damansara Utama
 47400 Petaling Jaya, Selangor
 Tel: 03-7172685
 Contact: Chee Siaw Kam (Manager)

Supply, design and installation of irrigation systems

J. WHYTE SDN BHD
9 Jalan 222, P O Box 79
46700 Petaling Jaya, Selangor
Tel: 03-7567266

JOON HUAT ENGINEERING SDN BHD
30 Jalan 21/12, SEA Park
46300 Petaling Jaya, Selangor
Tel: 03-7742263, 7742316

KIRLOSKAR ELECTRIC CO LTD
6 Jalan Travers, 50470 Kuala Lumpur
Tel: 03-2741011



SUPREME PIPING CO SDN BHD
1 Jalan Walter Grenier
55100 Kuala Lumpur
Tel: 03-2432750, 2421187
Cable: EUCONCOY
Contact: John Eu (Director)

*Manufacturer of polybutylene pipe and celcon
acetal pipe-fittings for household plumbing,
agriculture and industrial usage*

TECK SENG MACHINERY (M) SDN BHD
27 Jalan Segambut Pusat, Segambut
51200 Kuala Lumpur
Tel: 03-6267255, 6266246, 6267634
Telex: MA 32116 TSMKL
Fax: 03-6214553
Contact: Sia Ah Mooi (Administration Director)

Water pumps for irrigation

LABORATORY AND RESEARCH SERVICES

APPLIED AGRICULTURAL RESEARCH SDN BHD
Locked Bag No. 212, Sg. Buloh Post Office
47000 Sg. Buloh, Selangor
Tel: 03-6561152
Telex: MA 30442
Fax: 03-2419750
Contact: Chew Poh Soon
(Head of Agricultural Research)

Agronomic consultancy and analytical tests

ASSOCIATED TESTING LABORATORY SDN BHD
149 & 149A Taman City, Jalan Kuching
51200 Kuala Lumpur
Tel: 03-6266183, 6264474



DUNLOP AGRO-MANAGEMENT SDN BHD
73300 Batang Melaka, Negeri Sembilan
H/Q Postal Add: P O Box 11395
50744 Kuala Lumpur
Tel: 06-456323/334; 03-9486811
Telex: MA 21300 DUNEST
Fax: 03-9489998
Contact: Dr. Soong Ngin Kwi
(Research Controller)

*Registered SMR laboratory; testing of cocoa
bean quality, latex, fertilizer, water & effluent and
palm oil; soil and leaf nutrient analysis
(Refer advertisement page xii-xiii)*

EDTECH ASSOCIATES SDN BHD
99A Jalan SS 21/37, Damansara Utama
47400 Petaling Jaya, Selangor
Tel: 03-7187152, 7192572

H.R.U. SDN BHD
Highland Research Unit, 3rd Mile, Jalan Langat
Klang, Selangor
Tel: 03-3312144, 3312228



PERBADANAN KHIDMAT PERTANIAN FELDA
Karung Berkunci 204, Pejabat Pos Jalan Gurney
54990 Kuala Lumpur
Tel: 03-2987673, 2987772, 2987588
Telex: PKPF MA 28199
Contact: Hanafi Kasbi (Admin. and Marketing
Manager)

*Provide agricultural advisory and analytical
services
(Refer advertisement page 90)*

SAILCOS LABORATORIES SDN BHD
 14A Jalan SS 25/22, Taman Mayang
 47301 Petaling Jaya, Selangor
 Tel: 03-7038511, 7038532
 Telex: MA 36730
 Cable: CONSLAB PETALINGJAYA
 Contact: Dr Koo Swe Hoo (Director)

Laboratory and consulting services, pollution control

TESTING SERVICES (SABAH) SDN BHD
 P O Box 1146, 90008 Sandakan, Sabah
 Tel: 089-44087

LABORATORY AND SCIENTIFIC EQUIPMENT

JURU RUBCOIL SDN BHD
 50B Jalan Tapah, Off Jalan Goh Hock Huat
 41400 Kelang, Selangor
 Tel: 03-3422751, 3422750
 Telex: MA 39572 JRCOIL
 Fax: 03-3427225
 Contact: Ir Hoo Kong Meng (Managing Director)

General supplier of laboratory and scientific instruments



MOTION SMITH (DIVISION OF MECOMB MALAYSIA) SDN BHD
 Lot 20, Jalan 225
 46100 Petaling Jaya, Selangor
 Tel: 03-7743422
 Telex: MA 37764 MOTION
 Fax: 03-7743414
 Contact: G.L. Ng (General Manager)

*Trading in agricultural field and laboratory testing equipment
 (Refer advertisement page 35)*

SAILCOS LABORATORIES SDN BHD
 14A Jalan SS 25/22, Taman Mayang
 47301 Petaling Jaya, Selangor
 Tel: 03-7038511, 7038532
 Telex: MA 36730
 Cable: COSLAB PETALINGJAYA
 Contact: Dr. Koo Swe Hoo (Director)

SCHMIDT SCIENTIFIC SDN BHD
 12th Floor, Wisma Mirama, Jalan Wisma Putra
 P O Box 10592, 50718 Kuala Lumpur
 Tel: 03-2427089, 2427122

SWIFT FILMO SINGAPORE PTE LTD
 315 Outram Road, #12-08 Tan Boon Liat Building
 Singapore 0316
 Tel: 02-2231411

YONG GUAN & CO
 31 Medan Midah, Taman Midah
 56000 Kuala Lumpur
 Tel: 03-9313633, 9313720
 Telex: MA 30539 YOANG
 Fax: 03-9716407
 Contact: K. H. Chong

Electronic and laboratory testing equipments

LANDSCAPING

AE ENGINEERING SDN BHD
 15 Jalan O.U.G., Jalan Klang Lama
 58200 Kuala Lumpur
 Tel: 03-7834086

DUNLOP AGRO-MANAGEMENT SDN BHD
 73300 Batang Melaka, Negeri Sembilan
 H/Q Postal Add: P O Box 11395
 50744 Kuala Lumpur
 Tel: 06-456323/334; 03-9486811
 Telex: MA 21300 DUNEST
 Fax: 03-9489998
 Contact: Dr. Soong Ngin Kwi
 (Research Controller)

*Office compound landscaping; housing estate landscaping; highway turfing; shade tree planting, etc.
 (Refer advertisement page xii-xiii)*

GREENVILLE LANDSCAPE SDN BHD
 20-1 Jalan Utara, Off Jalan Imbi
 55100 Kuala Lumpur
 Tel: 03-2483755, 2483733

GUTHRIE DEVELOPMENT SDN BHD
 4th Mile Jalan Kampong Jawa, P O Box 2004
 41900 Klang, Selangor
 Tel: 03-3318361

INSTANTGREEN SDN BHD
5-1 Jalan Mutiara Raya, Taman Mutiara
Jalan Cheras, Kuala Lumpur
Tel: 03-9313091, 9317121

JANITOR LANDSCAPING & NURSERY SDN BHD
39 Jalan 17/45, 46400 Petaling Jaya, Selangor
Tel: 03-7577514, 7577711

PERMINT SUTERASEMAI SDN BHD
Kawasan Perindustrian Chendering
21080 Kuala Terengganu, Terengganu
Tel: 09-671355

YUSDA INDUSTRIES SDN BHD
10 Lorong University B, Section 16, P O Box 362
46740 Petaling Jaya, Selangor
Tel: 03-7574695, 7562496

LIVESTOCK

ALUMINIUM COMPANY OF MALAYSIA BERHAD
Lot 3 Persiaran Waja, Bukit Raja Industrial Estate
P O Box 233, 41720 Kelang, Selangor
Tel: 03-3412311
Telex: MA 39403
Fax: 03-3412793
Contact: Jackie Low
(Sales Manager - Building Sheet)

Manufacturers and exporters of aluminium rolled products for livestock industry (Refer advertisement page 117)

ADVANCE FARM SYSTEMS (M) SDN BHD
35 Jalan SS 18/6, Subang Jaya
47500 Petaling Jaya, Selangor
Tel: 03-7336960, 7339243

AGRITECH ENTERPRISE SDN BHD
22 Jalan SS 4C/5, Taman Rasa Sayang
47301 Petaling Jaya, Selangor
Tel: 03-7033226, 7035239, 7035260
Contact: Chew Heng Chong (Managing Director)

BEKALAN TANI SDN BHD
97A Jalan Raja Muda, 50300 Kuala Lumpur
Tel: 03-2912921, 2911526

CHANG CHENG (M) SDN BHD
19-21 Jalan Overseas Union, 5th Mile
Klang Road, 58200 Kuala Lumpur
Tel: 03-7922733, 7922181

DESA CATTLE (S) SDN BHD
Locked Bag 86, 88998 Kota Kinabalu, Sabah
Tel: 088-32389, 34129

INTERLAC INDUSTRIAL (S) PTE LTD
30 Liu Fang Road, Singapore 2262
Tel: 02-2656833

KAM NAM & SONS HOLDINGS SDN BHD
Lot 9616 Jalan Kuchai Lama, 58200 Kuala Lumpur
P O Box 86, Jln Klang Lama, 58700 Kuala Lumpur
Tel: 03-7831782, 7835703, 7835704
Telex: MA 37530 KNS
Fax: 03-7813710
Contact: Steve Kam (Managing Director)

Consultant and supplier of plants and machineries for poultry and livestock farm, chicken processing and pig slaughtereries (Refer advertisement page 129)

LINTRACHEM ENTERPRISE SDN BHD
27 Jalan SS 15/4, Subang Jaya
47500 Petaling Jaya, Selangor
Tel: 03-7330408, 7330140

LION-LKIM AQUAFARMS SDN BHD
4th & 5th Floor, Wisma SPS, 32 Jalan Imbi
55100 Kuala Lumpur
Farm Add: 19th Mile, 47100 Puchong, Selangor
Tel: 03-2412155/3166
Farm Tel: 01-332051
Telex: WIRASM MA 33195
Fax: 03-2411036
Contact: Lim Song Hok (Farm Manager)

Supply of agriculture products: Office plants rental, Fruits and poultry

TONG SEH INDUSTRIES SUPPLY SDN BHD
29C Jalan Goh Hock Huat
41400 Klang, Selangor
Tel: 03-3422260

WENGER TRADING, SYARIKAT
39 Jalan 22, Kawasan 3, Taman Goodwood
P O Box 102, 41200 Klang, Selangor
Tel: 03-3327811, 3324140

PACKAGING

MUDA FIBRE MANUFACTURING SDN BHD
 10th Floor Wisma MCA, Jalan Ampang
 50450 Kuala Lumpur
 Tel: 03-2619055
 Telex: MA 32130 SOYA
 Fax: 03-2610502
 Contact: Kenneth Teh (Sales Manager)

*Manufacturing of polypropylene woven bags for
 fertilizer, sugar, rice and palm oil kernel*



TEGO SDN BHD
 11th Floor Wisma Jerneh
 Jalan Sultan Ismail, 50250 Kuala Lumpur
 Tel: 03-2415066
 Telex: MA 21083 TEGO
 Cable: POLYTEGO KUALA LUMPUR
 Contact: George Yap (Marketing Manager)
 Factory: Senawang Industrial Estate
 P O Box 211, 70720 Seremban, Negeri Sembilan
 Tel: 06-773361/2

*Manufacturer of PP and PE fabrics/bags and
 geotextiles*

WESMALEX PLASTIC INDUSTRIES SDN BHD
 3rd Floor, 117 Jalan Bandar
 50000 Kuala Lumpur
 Tel: 03-2300344

PALM OIL PROCESSING

ALFA-LAVAL (M) SDN BHD
 Jalan Sepana 15/3, P O Box 83
 Post Office Section 16
 40700 Shah Alam, Selangor
 Tel: 03-5594511
 Telex: MA 38541 ALVAL
 Fax: 03-5598361 (c/o Haven Automation)
 Contact: Muhd. Rusli Yusoff (Manager)

*Supplier of milking equipments, food processing
 plant, spray deying (NIRO ATOMIZER) and
 centrifuges for palm oil, latex and starch
 industries*

CHYE KHIANG SENG (M) SDN BHD
 Wisma C.K.S., 155 Jalan Kapar
 P O Box 221, 41720 Klang, Selangor
 Tel: 03-3413220, 3413221
 Telex: MA 39608 CKSLTD
 Fax: 03-3427171
 Contact: Chew Wan Joo (Manager)

*FFB loading nets, nylon twines and ropes for palm
 oil industry*

CNY CHEMICAL SDN BHD
 W.D.T. 265, 91007 Tawau
 Sabah
 Tel: 089-779013

DUNLOP ESTATES BHD
 Batu 7, Jalan Kajang-Puchong
 43000 Kajang, Selangor
 P O Box 11395, 50744 Kuala Lumpur
 Tel: 03-9486811
 Telex: MA 21300 DUNEST
 Fax: 03-9489998
 Contact: Cheong Sai Fah
 (General Manager - Production)

*Palm oil processing, turnkey palm oil mill
 construction, advisory services on palm oil
 processing
 (Refer advertisement page xii-xiii)*

JURU RUBCOIL SDN BHD
 50B Jalan Tapah, Off Jalan Goh Hock Huat
 41400 Klang, Selangor
 Tel: 03-3422751, 3422750
 Telex: MA 39572 JRCOIL
 Fax: 03-3427225
 Contact: Ir Hoo Kong Meng (Managing Director)

*Palm oil processing plants and equipments
 suppliers*

KAM NAM & SONS HOLDINGS SDN BHD
 Lot 9616 Jalan Kuchai Lama
 58200 Kuala Lumpur
 Tel: 03-7831382, 7835703
 Telex: MA 37530 KNS
 Contact: Steve Kam (Managing Director)

*Manufacturer, consultant, supplier and
 representative of plants and machines for
 palm oil processing
 (Refer advertisement page 129)*

KUMPULAN EMAS BHD
65 Persiaran Selangor, 40000 Shah Alam
Selangor
Tel: 03-5592972

MECHMAR BESTOBELL BHD
50-54 Jalan Burhanuddin Helmi
Taman Tun Dr Ismail, 60000 Kuala Lumpur
Tel: 03-7189399

NOVENCO ENGINEERING PTE LTD
Supreme House, 9 Peneng Road
#09-13/4, Singapore 0923
Tel: 02-3382168

PALM EQUIPMENT SDN BHD
49 Jalan SS 2/75, 47300 Petaling Jaya
Selangor
Tel: 03-7745632, 7745696

SCOTT & ENGLISH (MALAYSIA) SDN BHD
Lot 17, Jalan 51A/227, P O Box 162
46100 Petaling Jaya, Selangor
Tel: 03-7562122
Telex: MA 37264
Fax: 03-7562836
Contact: Ng Kam Pai (Manager - Industrial
Equipment Div.)

Mono pumps and munchers for oil palm mill

SHORGA SDN BHD
Lot 3427, 3rd Mile Klang-KL Federal Highway
41300 Klang, Selangor
Tel: 03-5595200
Telex: MA 39585
Contact: Raja Noraini bte Raja Datuk Nong Chik
(Executive Director)

*Sole agent for all types of ropes and twines, FFB
loading nets and other nets for agriculture
(Refer advertisement page 130)*

TECK SENG MACHINERY (M) SDN BHD
27 Jalan Segambut Pusat, Segambut
51200 Kuala Lumpur
Tel: 03-6267255, 6266246, 6267634
Telex: MA 32116 TSMKL
Fax: 03-6214553
Contact: Sia Ah Mooi (Administration Director)

Supplier of palm oil centrifuges

PALM OIL REFINERIES

(For list of oil palm mills - refer page 344)

GANDA EDIBLE OILS BHD
Penthouse, Wisma Central
Jalan Ampang, 50450 Kuala Lumpur
Tel: 03-2618712, 2611580, 2613850

MALAYSIA VEGETABLE OIL REFINERY SDN BHD
Lot 220, Jalan Timah Tiga, Pasir Gudang Industrial
Estate, 81700 Johor Bharu, Johor
Tel: 07-511557, 511571
Telex: MA 60767
Contact: Tan Seng Hock (General Manager -
Commercial)

*Fully RBD palm oil, fully RBD olein, fully RBD stearin
and palm fatty acid distillate
(Refer advertisement page xii-xiii)*

RIAN EDIBLE OIL INDUSTRIES SDN BHD
1025 Dunlop Street, P O Box 688
91008 Tawau, Sabah
Tel: 089-771711, 771713

PLANTATION MANAGEMENT SERVICES



DUNLOP AGRO-MANAGEMENT SDN BHD
73300 Batang Melaka, Negeri Sembilan
Tel: 06-456323/344
H/Q Postal Add.: P O Box 11395
50744 Kuala Lumpur
Tel: 03-9486811
Telex: MA 21300 DUNEST
Fax: 03-9489998
Contact: Dr. Soong Ngim Kwi (Research
Controller)

*Advisory and plantation management
consultancy services
(Refer advertisement page xii-xiii)*

KUMPULAN GUTHRIE SDN BHD
Wisma Guthrie, 21 Jalan Gelenggang
P O Box 12516, 50780 Kuala Lumpur
Tel: 03-2541644



HARRISONS MALAYSIAN PLANTATIONS BHD
 10-16th Floor, Menara PNB, Jalan Tun Razak
 P O Box 11043, 50734 Kuala Lumpur
 Tel: 03-2619022
 Telex: MA 30844, MA 30845
 Fax: 03-2618221
 Contact: Estate Department

(Refer advertisement page 18)

KUALA LUMPUR-KEPONG BHD
 G P O (WD) 633, Ipoh, Perak
 Tel: 05-517844, 519422
 Telex: MA 44324, MA 44904
 Cable: TAIPLANTICO IPOH

LAM SOON MANAGEMENT SERVICES SDN BHD
 18 Jalan 14/14, 2nd Floor, Wisma Koh
 46100 Petaling Jaya, Selangor
 Tel: 03-7574366

PENGURUSAN BISMA SDN BHD
 Lot 302, 3rd Floor, Podium Dayabumi
 Jalan Sultan Hishamuddin, 50050 Kuala Lumpur
 Tel: 03-2748429

PLANMAC MANAGEMENT SERVICES SDN BHD
 76C Jalan SS 22/21, Damansara Jaya
 47400 Petaling Jaya, Selangor
 Tel: 03-7193200, 7193091

**PLANTATIONS MANAGEMENT SERVICES (SABAH)
 SDN BHD**
 W.D.T. 182, 91109 Lahad Datu
 Sabah
 Tel: 089-82675

PLANTEK (M) SDN BHD
 74C Jalan SS 22/21, Damansara Jaya
 47400 Petaling Jaya, Selangor
 Tel: 03-7193510
 Contact: Hew Choy Kean (Managing Director)



SAJAI PLANTATION SERVICES SDN BHD
 76C Jalan SS 22/21, Damansara Jaya
 47400 Petaling Jaya, Selangor
 Tel: 03-7196696
 Fax: 03-7573641
 Contact: Haji Johari bin Muhd. Abbas
 (Director/Consultant)

*Plantation management/consultants and
 agronomic services*

SIME DARBY SERVICES
 6th Floor, Wisma Sime Darby
 Jalan Raja Laut, 50350 Kuala Lumpur
 Tel: 03-2936333
 Telex: MA 33503 SDPHO
 Fax: 03-2933602
 Contact: Dr. Ho Chai Yee (Development Director)

*Plantation management, agronomic and
 laboratory services; contract research; plantation
 engineering services*



TAIKO PLANTATIONS SDN BHD
 1 Jalan S.P. Seenivasagam, 30000 Ipoh
 P O Box 167, 30720 Ipoh, Perak
 Tel: 05-517844, 519422
 Telex: TAIKO MA 44094/44324
 Fax: 05-505312
 Contact: Ong Beng Kee (Managing Director)

Plantation management

PLANTATIONS

(For complete list of estate - refer page 292)

ASIATIC DEVELOPMENT BERHAD
 10th Floor, Wisma Genting
 Jalan Sultan Ismail, 50250 Kuala Lumpur
 Tel: 03-2613733
 Telex: MA 31250 ADSB
 Fax: 03-2615304
 Contact: Koo Pai Sing (Assistant Chief Executive)

Crops - Oil palm, rubber and cocoa

BOH PLANTATIONS SDN BHD
 Batu Lima, Jalan Ampang, P O Box 10245
 50708 Kuala Lumpur
 Tel: 03-4567422



DUNLOP ESTATES BHD
 Batu 7, Jalan Kajang-Puchong, 43000 Kajang,
 Selangor
 P O Box 11395, 50744 Kuala Lumpur
 Tel: 03-9486811
 Telex: MA 21300 DUNEST
 Fax: 03-9489998
 Contact: P.J. Koshy (Director - Plantation)

Oil palm, cocoa, rubber
 (Refer advertisement page xii-xiii)



HARRISONS MALAYSIAN PLANTATIONS BHD
 P O Box 11043
 50734 Kuala Lumpur
 Tel: 03-2619022
 Telex: MA 30884/5
 Fax: 03-2618221
 Contact: Estate Department

Oil palm, rubber, cocoa, coconut
 (Refer advertisement page 18)

KUALA LUMPUR KEPONG BHD
 1 Jalan S.P. Seenivasagam, 30000 Ipoh
 P O Box 167, 30720 Ipoh, Perak
 Tel: 05-517844, 519422

KUMPULAN GUTHRIE SDN BHD
 Wisma Guthrie, 21 Jalan Gelenggang
 P O Box 12516, 50708 Kuala Lumpur
 Tel: 03-2541644

LADANG FIMA PERBADANAN KEDAH SDN BHD
 KM 3, Jalan Jeneri, 08200 Sik
 Kedah
 Tel: 04-464262

PERLUS PLANTATIONS BERHAD
 17th Floor, Wisma Jerneh
 38 Jalan Sultan Ismail, 50250 Kuala Lumpur
 Tel: 03-2412077
 Telex: MA 32662
 Fax: 03-2418242

*Sugar cane cultivation, sugar refining, rubber
 cultivation and oil palm cultivation*

SIME DARBY PLANTATIONS
 6th Floor, Wisma Sime Darby
 Jalan Raja Laut, 50350 Kuala Lumpur
 Tel: 03-2936333

RUBBER PROCESSING



DUNLOP ESTATES BERHAD
 Batu 7 Jalan Kajang-Puchong
 43000 Kajang, Selangor
 P O Box 11395, 50744 Kuala Lumpur
 Tel: 03-9486811
 Telex: MA 21300 DUNEST
 Fax: 03-9489998
 Contact: Cheong Sai Fah (General Manager-
 Production)

Processing of & 'MULTEX' latex concentrate
 (Refer advertisement page xii-xiii)

GUTHRIE INDUSTRIES (M) SDN BHD
 4th Mile, Jalan Kampong Jawa, P O Box 2004
 41720 Klang, Selangor
 Tel: 03-3313122

HMPB LATEX SDN BHD
 P O Box 205, Pejabat Pos Jalan Klang Lama
 58000 Kuala Lumpur
 Tel: 03-7929633

Processing of latex concentrators

HUP SENG ENGINEERING CO
 9D Jalan Dua, 2 1/2 Miles Off Jalan Sungai Besi
 57100 Kuala Lumpur
 Tel: 03-2484713, 2435876



LI-HOE ENGINEERING & TRADING SDN BHD
 59 - 65, Harper Light Industrial Area
 off Jalan Goh Hock Huat, 41400 Klang, Selangor
 Tel: 03-3422959, 3422982
 Telex: MA 39879 LIHOE
 Fax: 03-3428066
 Contact: Ng Hwa Bian (Managing Director)

Mechanical engineering contractor, specialised in manufacture, supply, install and commissioning of SMR rubber processing machineries and exports



SPHERE CORPORATION SDN BHD
 Lot 5, Kawasan M.I.E.L., Pandamaran Industrial Estate, 42000 Port Klang, Selangor
 Tel: 03-3687177 (5 lines)
 Telex: SPECOP MA 39576
 Fax: 03-3687079
 Contact: Teoh Geok Leong (Marketing Manager)

Specialized in design, manufacture and commissioning of machinery and equipment for the processing of rubber, coconut, cocoa and other agricultural produce

TECK SENG MACHINERY (M) SDN BHD
 27 Jalan Segambut Pusat, Segambut
 51200 Kuala Lumpur
 Tel: 03-6267255, 6266246, 6267634
 Telex: MA 32116 TSMKL
 Fax: 03-6214553
 Contact: Sia Ah Mool (Administration Director)

Supplier of latex centrifuges

SEEDS AND PLANTING MATERIALS

CHEE CHENG ENTERPRISE
 19 Jalan 21/1, SEA Park
 46300 Petaling Jaya, Selangor



DUNLOP AGRO-MANAGEMENT SDN BHD
 73300 Batang Melaka, Negeri Sembilan
 H/Q Postal Add.: P O Box 11395
 50744 Kuala Lumpur
 Tel: 06- 456323/334; 03-9486811
 Telex: MA 21300 DUNEST
 Fax: 03-9489998
 Contact: Dr. Soong Ngin Kwi
 (Research Controller)

Supplier of high yielding cocoa hybrids and clones: tissue culture materials (Refer advertisement page xii-xiii)

H.R.U. SDN BHD
 Highland Research Unit, 3rd Mile Jalan Langat
 P O Box 2009, 41720 Klang, Selangor
 Tel: 03-3312144, 3312228
 Telex: MA 30442 BABEAL
 Cable: BARBEAL

High yielding oil palm (HRU Series IV), cocoa and coconut (wide range available) hybrid planting materials



HARRISONS MALYSIAN PLANTATIONS BERHAD
 P O Box 11043
 50734 Kuala Lumpur
 Tel: 03-2619022
 Telex: MA 30844/5
 Fax: 03-2618221
 Contact: Estates Department

High yielding oil palm, cocoa, rubber and coconut seeds and planting materials (Refer advertisement page 18)



PERBADANAN KHIDMAT PERTANIAN FELDA
 Karung Berkunci 204, Pejabat Pos Jalan Gurney
 54990 Kuala Lumpur
 Tel: 03-2987673, 2987772, 2987588
 Telex: MA 28199 PKPF
 Contact: Hanafi bin Kasbi (Admin. and
 Marketing Manager)

*Supply of oil palm, cocoa, and coffee planting
 materials, and Ratbaits
 (Refer advertisement page 90)*

PERTUBUHAN PELADANG KEBANGSAAN (NAFAS)
 Tingkat 2, Wisma Peladang, Jalan Bukit Bintang
 55100 Kuala Lumpur
 Tel: 03-2482066
 Telex: MA 30719

*Seedlings of fruit trees, oil palm, cocoa, MAWA
 coconut, etc.*



PREMIUM SEEDS SDN BHD
 97A Jalan SS 21/1A, Damansara Utama
 47400 Petaling Jaya, Selangor
 Tel: 03-7189429, 7189561
 Telex: MA 36825 PSEEDS
 Contact: Lee Loy Fat (Director)

*Importer, producer and distributor of vegetable
 and other seeds
 (Refer advertisement page 70)*

UNITED PLANTATIONS BHD
 Research Department, Jenderata Estate
 Teluk Intan, Perak
 Tel: 05-661411

SOIL CONDITIONER



Peat-gro

PEAT-TECH (MALAYSIA) SDN BHD
 Lot 3.18, 3rd Floor Wisma HLA
 Jalan Raja Chulan, 50200 Kuala Lumpur
 Tel: 03-2416461, 2487737
 Telex: 33222 KOALIN MA
 Fax: 03-2422394
 Contact: Yip Yoon Wah (Director - Technical)

Peat production

VETERINARY/ANIMAL HEALTH PRODUCTS

ADGRO ENTERPRISE
 15 Jalan Besar, 47000 Sungai Buloh N/V
 Selangor
 Tel: 03-6561940

AGE D'OR CHEMICALS SDN BHD
 1 Lorong SS 13/6C Subang Jaya
 47500 Petaling Jaya, Selangor
 Tel: 03-7330640

AGRI NUTRITION ASIA PTE LTD
 33 Gul Drive, Singapore 2262
 Tel: 02-8611511

AGRINUSER (M) SDN BHD
 20 Jalan Sibn 17, Taman Rasa Sayang
 68100 Batu Caves, Kuala Lumpur
 Tel: 03-6275929



AGRITECH ENTERPRISE SDN BHD
 22 Jalan SS 4C/5, Taman Rasa Sayang
 47301 Petaling Jaya, Selangor
 Tel: 03-7033226, 7035239, 7035260
 Contact: Chew Heng Chong (Managing Director)

*Exclusive distributor of Coopers animals health
 products*

BORNEOSEW MEDICAL TRADING (M) SDN BHD
 105A Jalan SS14/1, Subang Jaya
 47500 Petaling Jaya, Selangor
 Tel: 03-7340772, 7340775
 Telex: MA 25142
 Contact: Alfred C.K. Loh (Managing Director)

*Agent for: Solvay Animal Health (Duphar B.V.
 Holland & Fromm Laboratories, U.S.A.);
 Compagnie Rousselot S.A., France; Norbrook
 Laboratories Ltd, N. Ireland, U.K.*

CERNITIN CORP. SDN BHD
 35 Bishop Street, 1st Floor, 10200 Penang
 Tel: 04-613697, 618082

CHAN CHENG (M) SDN BHD, SYARIKAT
 19-21 Jalan Overseas Union, 5th Mile
 Klang Road, 58200 Kuala Lumpur
 Tel: 03-7922733, 7922181

CHEMIVET SDN BHD
 19A Jalan Dato Haji Harun, Taynton View
 6th Mile Cheras Road, 56000 Kuala Lumpur
 Tel: 03-9318440, 9714481

COOPERS ANIMAL HEALTH (M) SDN BHD
 74 Jalan University, P O Box 77
 46700 Petaling Jaya, Selangor
 Tel: 03-7556166, 7556209

CYANAMID (FAR EAST) LTD
 190 Middle Road, #09-04 Fortune Centre
 Singapore 0718
 Tel: 02-3370222

DANBERG (M) SDN BHD
 4 Jalan SS 12/1B, Subang Jaya
 47500 Petaling Jaya, Selangor
 Tel: 03-7334905, 7334916

DIAN SENG SDN BHD
 5232 Masjid Tanah, 78300 Malacca
 Tel: 06-541245, 541025

ELI LILLY (MALAYSIA) SDN BHD
 12th Floor, Wisma On-Tai, 161-B Jalan Ampang
 50450 Kuala Lumpur
 Tel: 03-2619136, 2613345

F.E. ZUELLIG (MALAYSIA) SDN BHD
 11th Floor, Wisma Damansara, Jalan Semantan
 P O Box 10251, 50708 Kuala Lumpur
 Tel: 03-2535022
 Telex: MA 31299 FEZKL
 Fax: 03-2550896
 Contact: Dr Loh Teik Kee (Department Manager)

Animal health and feed additives

FARMACHEM ENTERPRISE
 35-37 JALAN 5/109B, Taman Bukit Desa
 58100 Kuala Lumpur
 Tel: 03-7815354, 7815355

GER-MAL SDN BHD
 1 Jalan 13/6, 46200 Petaling Jaya, Selangor
 Tel: 03-7555566
 Telex: MA 37316 MELCH
 Fax: 03-7570658
 Contact: Boon Yon Nyin (Company Manager)

HAUSMANN INTERNATIONAL PTE LTD
 395 Ponggol Road, Singapore 1954
 Tel: 02-2852696

HOECHST MALAYSIA SDN BHD
 12th Floor, Wisma Damansara, Jalan Semantan
 P O Box 10540, 50716 Kuala Lumpur
 Tel: 03-2549100
 Telex: MA 30370 HOE
 Fax: 03-2559420
 Contact: D. Strilchuk (Manager)

Feed additives/veterinary products

INTERLAC INDUSTRIAL (S) PTE LTD
 30 Liu Fang Road, Singapore 2262
 Tel: 02-2656833

LAZULI SDN BHD
 19 Jalan SS 5A/11, Taman Subang
 47301 Petaling Jaya, Selangor
 Tel: 03-7749244, 7749336

LIANG HAI TRADING CO (PTE) LTD
 842 Upper Bukit Timah Road, Singapore 2367
 Tel: 02-7691443

LINTRACHEM ENTERPRISE SDN BHD
8 Jalan SS 14/1A, Subang Jaya
47500 Petaling Jaya, Selangor
Tel: 03-7330405

LIVE (VETERINARY) SDN BHD
115 Taman A.S.T., 1st Mile Labu Road
70200 Seremban, Negeri Sembilan
Tel: 06-715575

NG & LIM COMPANY
64 Lorong Zaaba, Taman Tun Dr. Ismail
60000 Kuala Lumpur
Tel: 03-7181366

ORIENTAL AGRICULTURAL PRODUCTS SDN BHD
73 Jalan SS 20/11, Damansara Kim
47400 Petaling Jaya, Selangor
Tel: 03-2548330

PFIZER PTE LTD
Lot 4, Jalan 13/6
46200 Petaling Jaya, Selangor
Tel: 03-7556833

RANGE CORPORATION SDN BHD
16A Lorong Datuk Sulaiman Satu
Taman Tun Dr. Ismail, 60000 Kuala Lumpur
Tel: 03-7194926

RHONE POULENC MALAYSIA SDN BHD
Lot 8, Jalan 19/1, P O Box 150
46710 Petaling Jaya, Selangor
Tel: 03-7551355
Telex: MA 37651 MANBK1
Fax: 03-7552209

ROOSTER AGRI-VET SDN BHD
M.M.A. Building, 124 Jalan Pahang
53000 Kuala Lumpur
Tel: 03-2923905, 2989278

SUMMIT CO (M) SDN BHD
Lot 6, Jalan 19/1
46300 Petaling Jaya, Selangor
Tel: 03-7572244

SWIFT FILMO SINGAPORE PTE LTD
315 Outram Road, #12-08 Tan Boon Liat Building
Singapore 0316
Tel: 02-2231411

TRIZON ENTERPRISE SDN BHD
33 Jalan SS 2/30, S.E.A. Park
47300 Petaling Jaya, Selangor
Tel: 03-7753658

Listing - Companies Alphabetical

AG MINERALS SDN BHD

21M Jalan SS 21/1A, Damansara Utama
47400 Petaling Jaya, Selangor
Tel: 03-7190955 (3 lines)

AGRIQUEST SDN BHD

78B Jalan SS 22/21, Damansara Jaya
47400 Petaling Jaya, Selangor
Tel: 03-7195272, 7195273

AGRITECH ENTERPRISE SDN BHD

22 Jalan SS 4C/5, Taman Rasa Sayang
47301 Petaling Jaya, Selangor
Tel: 03-7033226, 7035239

AGROMATE (M) SDN BHD

45-2, 2nd Floor, Jalan 2/115A,
Taman Pagar Ruyong
Jalan Kuchai Lama, 58200 Kuala Lumpur
Tel: 03-7829288, 7829505

AJINOMOTO (M) BHD

Lot 5710 Jalan Kuchai Lama, Petaling
58200 Kuala Lumpur
Tel: 03-7832433

ALFA LAVAL (M) SDN BHD

Jalan Sepana 15/3, P O Box 83
40700 Shah Alam, Selangor
Tel: 03-5594511

ALUMINIUM COMPANY OF MALAYSIA BHD

Lot 3 Persiaran Waja, Bukit Raja Industrial Estate,
P O Box 233, 41720 Klang, Selangor
Tel: 03-3412311

APPLIED AGRICULTURAL RESEARCH SDN BHD

Locked Bag 212, Sungai Buloh P.O.
47000 Sg. Buloh, Selangor
Tel: 03-6561152/6561206

AROGRO SDN BHD

18 Lorong Hujung Emas Dua
Old Klang Road, 58200 Kuala Lumpur
Tel: 03-5598581/5590124

ASEAN BINTULU FERTILIZER SDN BHD

12th Mile, Tanjong Kidurong Road
P O Box 482, 97008 Bintulu, Sarawak
Tel: 086-52300 (13 lines)

ASIATIC DEVELOPMENT BHD

10th Floor, Wisma Genting
Jalan Sultan Ismail, 50250 Kuala Lumpur
Tel: 03-2613733

B-TRAK SDN BHD

Lot 84 Jalan SS 15/4D, Subang Jaya
47500 Petaling Jaya, Selangor
Tel: 03-7334622, 7334604

BEHN MEYER & CO (M) SDN BHD

4th Floor, Resource Plaza, 4 Lorong Persiaran
Barat, P O Box 402, Jalan Sultan, 46750 Petaling
Jaya, Selangor
Tel: 03-7561983, 7561233

BEHN MEYER & CO (PTE) LTD

100 Pasir Panjang Road
P O Box 2000, Singapore 5
Tel: 02-4736633

BORNEOSEW MEDICAL TRADING (M) SDN BHD

105A, Jalan SS 14/1, Subang Jaya
47500 Petaling Jaya, Selangor
Tel: 03-7340772/7340775

CHYE KHIANG SENG (M) SDN BHD

Wisma C.K.S., 155 Jalan Kapar
P O Box 211, 41720 Kelang, Selangor
Tel: 03-3413221, 3413220

CIBA-GEIGY (MALAYSIA) SDN BHD

5 Jalan SS13/6C, Subang Jaya,
47500 Petaling Jaya
P O Box 1005, Jalan Semangat,
46860 Petaling Jaya
Tel: 03-7330761, 7338970

CROP PROTECTION (M) SDN BHD

Lot 746, 4 1/2 Miles Jalan Kapar
P O Box 84, 41710 Kelang, Selangor
Tel: 03-3911301 (6 lines)

DU PONT FAR EAST INC. Malaysia Branch

6th Floor, Wisma Budiman, Persiaran Raja Chulan
50200 Kuala Lumpur
Tel: 03-2323522

DUNLOP AGRO-MANAGEMENT SDN BHD

73300 Batang Melaka, Negri Sembilan
H/Q Postal Add.: P O Box 11395,
50744 Kuala Lumpur
Tel: 06-456323; 03-9486811

DUNLOP ESTATES BHD

Batu 7, Jalan Kajang-Puchong, 43000 Kajang
P O Box 11395, 50744 Kuala Lumpur
Tel: 03-9486811

EASTERN AGENCIES (M) SDN BHD

Lot 18, Jalan 19/1, 46300 Petaling Jaya
Selangor
Tel: 03-7576122

F. E. ZUellig (M) SDN BHD

11th Floor, Wisma Damansara, Jalan Semantan
Damansara Heights, P O Box 10251,
50708 Kuala Lumpur
Tel: 03-2545022

FERTITRADE (M) SDN BHD

45 Jalan 2/115A, Taman Pagar Ruyung
Jin Kuchai Lama, 58200 Kuala Lumpur
Tel: 03-7830971/2

FPM SDN BHD

Lot 115, Johore Port Authority Area
Pasir Gudang, 81700 Johor
Tel: 07-512801, 512802

GAZZAZ SDN BHD

32A, Jalan 52/18, New Town Centre, P O Box 374
Jln Sultan, 46740 Petaling Jaya, Selangor
Tel: 7569822/7550011/7550205

GER-MAL SDN BHD

1 Jalan 13/6, 46200 Petaling Jaya
Selangor
Tel: 03-7555566 (10 lines)

**GUTHRIE MALAYSIA TRADING CORPORATION
SDN BHD**

Wisma Guthrie, 21 Jalan Gelenggang,
Damansara
Heights, P O Box 12516, 50716 Kuala Lumpur
Tel: 03-2541644

HALEX (M) SDN BHD

11-1 Jalan Petaling, Kaw. Perindustrian Dato Onn
80350 Johor Bahru, Johore
Tel: 07-371543, 373309; 03-9301610

HARRISONS & CROSFIELD (M) SDN BHD

9 Jalan 222, 46100 Petaling Jaya
Selangor
Tel: 03-7567266

HARRISONS MALAYSIAN PLANTATIONS BERHAD

P O Box 11043
50734 Kuala Lumpur
Tel: 03-2619022

HEVEA PALM ADVISORY SERVICES SDN BHD

97A Jalan SS 21/1A, Damansara Utama
47400 Petaling Jaya, Selangor
Tel: 03-7189429, 7189561

HEXTAR CHEMICALS SDN BHD

23C Jalan Satu, Kaw. 16, Berkeley New Town
Centre
41300 Kelang, Selangor
Tel: 03-3412484, 3412489

HIF TECH SDN BHD

115B, Kawasan 16, Berkeley Town Centre
41300 Kelang, Selangor
Tel: 03-3412269, 3412278

HMPB CONSULTANCY SERVICES (M) SDN BHD

15th Floor, Menara PNB, Jalan Tun Razak
P O Box 11043, 50734 Kuala Lumpur
Tel: 03-2615377

HMPB LATEX SDN BHD

P O Box 205, Pejabat Pos Jalan Kelang Lama
58000 Petaling, Kuala Lumpur
Tel: 03-7929633

HOECHST MALAYSIA SDN BHD

12th Floor, Wisma Damansara, Jalan Semantan
P O Box 10540, 50716 Kuala Lumpur
Tel: 03-2549100

HONG LEONG EQUIPMENT SDN BHD

Lot 223 Jalan Utas 15/7, Shah Alam Industrial
Estate, P O Box 73, 40700 Shah Alam, Selangor
Tel: 03-5593533, 5595885

HOWARD ALAT PERTANIAN SDN BHD

7482 Jalan Dua, Taman Selayang Baru
12km Jalan Ipoh, P O Box 8, 68100 Batu Caves
Tel: 03-6186637, 6186608

HUP HENG (KL) SDN BHD

221-225 Jalan Pudu
55100 Kuala Lumpur
Tel: 03-2482955, 2482966

ICI AGROCHEMICALS (MALAYSIA) SDN BHD

8th Floor, Wisma Sime Darby
Jalan Raja Laut, 50350 Kuala Lumpur
Tel: 03-2919366

ICI FERTILIZERS (MALAYSIA) SDN BHD

8th Floor, Wisma Sime Darby
Jalan Raja Laut, 50350 Kuala Lumpur
Tel: 03-2919366

INAGRO SDN BHD

Lot 598/1640, Kawasan Perusahaan PKNS
Pandamaran, 42000 Port Klang, Selangor
Tel: 03-3685728/3685729/3685732

INTAN KARANG SDN BHD

Lot 11, Jalan 13/6
45200 Petaling Jaya, Selangor
Tel: 03-7572151 7572152

IRRITEKNIK SDN BHD

119A Jalan SS 21/37, Damansara Utama
47400 Petaling Jaya, Selangor
Tel: 03-7172685

JURU RUBCOIL SDN BHD
50B Jalan Tapah, Off Jalan Goh Hock Huat
41400 Kelang, Selangor
Tel: 03-3422751, 3422750

KAM NAM & SONS HOLDINGS SDN BHD
Lot 9616 Jalan Kuchal Lama, 58200 Kuala Lumpur
P O Box 86, Jin Klang Lama, 58700 Kuala Lumpur
Tel: 03-7831782, 7835703

KENSO CORPORATION (M) SDN BHD
Suite 2401, 24th Floor, Plaza See Hoy Chan
Jalan Raja Chulan, 50200 Kuala Lumpur
Tel: 03-2387944

KUBOTA AGRICULTURAL MACHINERY SDN BHD
Lot 14A Jin Perusahaan 4, Batu Caves Ind. Estate
68100 Batu Caves, Selangor
Tel: 03-6882967 (4 lines)

LI-HOE ENGINEERING & TRADING SDN BHD
59-65, Harper Light Industrial Area
41400 Klang, Selangor
Tel: 03-3422959/3422982

**MALAYSIA INTERNATIONAL TRADING CORP.
SDN BHD (MITCO)**
3rd Floor Menara Boustead, Jalan Raja Chulan
50200 Kuala Lumpur
Tel: 03-2309722, 2381133

MALYSIAN VEGETABLE OIL REFINERY SDN BHD
Lot 220 Jin Timah Tiga, Pasir Gudang Ind. Estate
81700 Johor Bharu, Johore
Tel: 07-511557, 511571

MONSANTO (M) SDN BHD
116 Jalan Semangat, P O Box 1042
Jalan Semangat
46860 Petaling Jaya, Selangor
Tel: 03-7575933

**MOTION SMITH (DIVISION OF MECOMB MALAYSIA
SDN BHD)**
Lot 20 Jalan 225, 46100 Petaling Jaya
Selangor
Tel: 03-7743422

MUDA FIBRE MANUFACTURING SDN BHD
10th Floor, Wisma MCA, Jalan Ampang
50450 Kuala Lumpur
Tel: 03-2619055

MULTI-PURPOSE COMMODITY TRADING SDN BHD
Batu 7 Jalan Kajang-Puchong, 43000
Kajang, Selangor
P O Box 11453, 50746 Kuala Lumpur
Tel: 03-9486811

MULTICOM AGRICULTURAL PRODUCTS AGENCY
Lot 10798 Leboh Raya Petai
Pandamaran Light Industrial Area,
42000 Port Klang
Tel: 03-3684623

NAFAS (BAHAGIAN JENTERA)
Lot 9 Jalan 241, Section 51-A
46100 Petaling Jaya, Selangor
Tel: 03-7766622

NORSAN FISHING NET INDUSTRIES SDN BHD
Lot 3427, 3rd Mile, Kelang-KL Federal Highway
41300 Kelang, Selangor
Tel: 03-5595200

PACIFIC CHEMICALS BHD
Jalan Utas, Kawasan Perindustrian Shah Alam
40000 Shah Alam, Selangor
Tel: 03-5591211

PA CONSULTING SERVICES MALAYSIA SDN BHD
5th Floor, Wisma Getah Asli II
148 Jalan Ampang, 50450 Kuala Lumpur
Tel: 03-2612322

PANTAI MAJU SDN BHD
788 Jalan SS 22/21, Damansara Jaya
47400 Petaling Jaya, Selangor
Tel: 03-7195272, 7195273

PEAT-TECH (MALAYSIA) SDN BHD
Lot 3-18, 3rd Floor, Wisma HLA
Jalan Raja Chulan, 50200 Kuala Lumpur
Tel: 03-2416461/2487737

PELADANG KIMIA SDN BHD
2nd Floor, Bangunan HINO, Jalan 223
Section 51A, 46100 Petaling Jaya, Selangor
Tel: 03-7561844

PERBADANAN KHIDMAT PERTANIAN FELDA
Karung Berkunci 204, Pejabat Pos Jalan Gurney
54990 Kuala Lumpur
Tel: 03-2987772, 2987672

**PERKHIDMATAN KOMPUTER PERLADANGAN
SDN BHD**
10-16th Floor, Menara PNB, Jalan Tun Razak
50400 Kuala Lumpur
Tel: 03-2619022

PERLIS PLANTATIONS BHD
17th Floor, Wisma Jerneh
38 Jalan Sultan Ismail, 50250 Kuala Lumpur
Tel: 03-2412077

PERTUBAHAN PELADANG KEBANGSAAN (NAFAS)
2nd Floor, Wisma Peladang
Jalan Bukit Bintang, 55100 Kuala Lumpur
Tel: 03-2482066

PETRONAS (Fertilizer Marketing Dept.)
14th Floor Menara Dayabumi, Jalan Sultan
Hishamuddin, P O Box 12444,
50778 Kuala Lumpur
Tel: 03-2748568

PHILIPPINE PHOSPHATE FERTILIZER CORPORATION
6F, Glass Tower Bldg., 115 Alvarado St., Legaspi
Village, Makati 1200, Metro Manila, Philippines
Tel: 8179431-34

POSIM INDUSTRIAL EQUIPMENT SDN BHD
14-2 Jalan Vivekananda, Brickfields
50470 Kuala Lumpur
Tel: 03-2746911, 2746988

PREMIUM SEEDS SDN BHD
97A Jalan SS 21/1A, Damansara Utama
47400 Petaling Jaya, Selangor
Tel: 03-7189429, 7189561

RHONE POULENC MALAYSIA SDN BHD
Lot 8, Jalan 19/1, P O Box 150
46710 Petaling Jaya, Selangor
Tel: 03-7551355

SAHADEVAN PUBLICATIONS SDN BHD
13 Jalan Dato Lee Fong Yee
70000 Seremban, Negeri Sembilan
Tel: 06-71646, 718436

SAILCOS LABORATORIES SDN BHD
14A Jalan SS 25/22, Taman Mayang
47301 Petaling Jaya, Selangor
Tel: 03-7038511, 7038532

SAJAI PLANTATION SERVICES SDN BHD
76C, Jalan SS 22/21, Damansara Jaya
47400 Petaling Jaya, Selangor
Tel: 03-7196696

SCOTT & ENGLISH (M) SDN BHD
Lot 17, Jalan 51A/227, P O Box 162
46100 Petaling Jaya, Selangor
Tel: 03-7562122

SEN CHING KIMIA SDN BHD
TB 3555, Ground Floor, Block F,
Pertama Commercial
Centre, Apas Road W.D.T. 265,
91009 Tawau, Sabah
Tel: 089-761192

SERBA KIMIA SDN BHD
2nd Floor, Bangunan HINO, Jalan 223,
Section 51A
46100 Petaling Jaya, Selangor
Tel: 03-7561844

SHORGA SDN BHD
Lot 3427, 3rd Mile, Kelang-KL Federal Highway
41300 Kelang, Selangor
Tel: 03-5595200

SIME DARBY PLANTATIONS
6th Floor, Wisma Sime Darby, Jalan Raja Laut
50350 Kuala Lumpur
Tel: 03-2936333

SIME DARBY SERVICES
6th Floor, Wisma Sime Darby
Jalan Raja Laut, 50350 Kuala Lumpur
Tel: 03-2936333

SPHERE CORPORATION SDN BHD
Lot 5, Kawasan M.I.E.L., Pandamaran Industrial
Estate, 42000 Port Klang, Selangor
Tel: 03-3687177 (5 lines)

SPORTS TOTO MALAYSIA BHD
16th Floor, Menara Kewangan,
Jalan Sultan Ismail
P O Box 10822, 50726 Kuala Lumpur
Tel: 03-2304511

SUPREME PIPING CO, SDN BHD
1 Jalan Walter Grenier
55100 Kuala Lumpur
Tel: 03-2432750/2421187

TAIKO PLANTATIONS SDN BHD
1 Jalan S.P. Seenivasagam, 30000 Ipoh
P O Box 167, 30720 Ipoh, Perak
Tel: 05-517844/519422

TCIM SDN BHD
9 Jalan Kemajuan, 46200 Petaling Jaya
Selangor
Tel: 03-7553288, 7553076

TECK SENG MACHINERY (M) SDN BHD
27 Jalan Segambut Pusat, Segambut
51200 Kuala Lumpur
Tel: 03-6267255, 6266246

TEGO SDN BHD
11th Floor Wisma Jerneh, Jalan Sultan Ismail
50250 Kuala Lumpur
Tel: 03-2415066

TRACTORS MALAYSIA

11th Floor, Wisma Tractors, 7 Jalan SS 16/1
Subang Jaya, 47500 Petaling Jaya, Selangor
Tel: 03-7346688

TRANSAMMONIA A.G.

541 Orchard Road, # 10-04
Liat Towers, Singapore 0923
Tel: 02-2355584

UMW INDUSTRIAL POWER SDN BHD

P O Box 30, Jalan Utas, Batu Tiga Industrial Est.
40700 Shah Alam, Selangor
Tel: 03-5595113

UMW INDUSTRIES SDN BHD

Jalan Utas, Batu Tiga Industrial Estate
P O Box 52, 40700 Shah Alam, Selangor
Tel: 03-5591201

UNION HARVEST SDN BHD

2nd Floor, Bangunan Jurukur, 64-66 Jalan 52/4
46200 Petaling Jaya, Selangor
Tel: 03-7572122

UNITED BINTANG MACHINERY SDN BHD

Lot 1 Jalan Perusahaan Satu, Batu Caves Light
Industrial Estate, 68100 Batu Caves, Selangor
Tel: 03-6896600, 6896633

UNS KIMIA SDN BHD

Tingkat 4, 91 Bangunan Bakti
Jalan Dang Wangi, 50100 Kuala Lumpur
Tel: 03-2925120

VAN LEER (MALAYSIA) SDN BHD

10 Jalan Kilang, P O Box 18
46700 Petaling Jaya, Selangor
Tel: 03-7916155

WELLCOME MALAYSIA SDN BHD

No. 7 Lorong SS 13/3F, Subang Jaya
47500 Petaling Jaya, Selangor
Tel: 03-7334350

YINPOLIN AGRICULTURE SDN BHD

48A Jalan 3, Kawasan 16, Taman Intan
41300 Klang, Selangor
Tel: 03-3418055 (5 lines)

YONG GUAN & CO

31 Jalan Medan Midah, Taman Midah
56000 Kuala Lumpur
Tel: 03-9313633, 9313720

ZEENEX (MALAYSIA) SDN BHD

88A Jalan Mega Mandung, Kompleks Bandar
5th Mile, Jalan Klang, 58000 Kuala Lumpur
Tel: 03-7839266 (4 lines)

Embassies, Agricultural Attaches/Representatives in Malaysia

AUSTRALIA

Mr. Ian Smith
Counsellor (Commercial) and Trade
Commissioner
Australian High Commissioner
6 Jalan Yap Kwan Seng
50450 Kuala Lumpur.
Tel: 2423122, 2423458
Telex: MA 30260
Fax: 2439870

AUSTRIA

Mr. Christopher Noe-Nordberg
Austrian Trade Commissioner
10th Floor Kompleks Kewangan
Jalan Raja Chulan
P O Box 10555
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Tel: 2614724, 2614836

BANGLADESH

Mr. Rafiqulbari (1st Secretary)
High Commission Of The People's
Republic of Bangladesh
204-1 Jalan Ampang
50450 Kuala Lumpur
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BELGIUM

Mr. P. De Bruyn
Royal Embassy of Belgium
4th Floor Bangunan Sateras
152 Jalan Ampang
50450 Kuala Lumpur
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Telex: MA 30044 AMBEL

BOLIVIA

Dr. Francisco Blacutt
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12 Lorong Yap Kwan Seng
50450 Kuala Lumpur
Tel: 2425146, 2425139
Telex: MA 31399

BRITAIN

Mr. J.B. Thompson
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Economic & Commercial
British High Commission
P.O. Box 11030
Wisma Damansara
Jalan Semantan
50732 Kuala Lumpur
Tel: 2541533
Telex: MA 30245 A/B UKREP
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BRUNEI

Pengiran Zainal (3rd Secretary Counsellor
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Brunei High Commission
113 Jalan U Thant
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BULGARIA

I. Dotzoc
Trade Commissioner & Charge D'Affairs
332B-15B GCB Court
Jalan Ampang
50450 Kuala Lumpur
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BURMA

Mr. U Sein Win
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5 Taman U Thant 1
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Tel: 2424085, 2423863
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Mr. Paulo A.P. Pinto
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22 Persiaran Damansara Endah
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50776 Kuala Lumpur
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CANADA

Mr. Mark Ramoff
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7th Floor Plaza MBF
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CHILE

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2nd Secretary & Consul
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Arthaloka Building 14th Floor
2 Jalan Jenderal Sudirman
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CHINA

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35 Jalan Chan Chin Mool
Setapak
53200 Kuala Lumpur
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CZECHOSLOVAKIA

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DENMARK

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22nd Floor Bangunan Angkasaraya
123 Jalan Ampang
P O Box 10908
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EGYPT

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28 Lingkungan U Thant
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FINLAND

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P.O. Box 10575
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Mr. H. Boese
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29 Jalan Ampang Hillr
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GERMAN FEDERAL REPUBLIC OF

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HUNGARY

Mr. Robert Paar
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Kim Rasima Said, kav
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Tel: 58721

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223 Jalan Tun Razak
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Commercial Attache
Embassy of Italy
99 Jalan U Thant
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Off Jalan Ampang
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SULTANATE OF OMAN

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YUGOSLAVIA

Mr. D. Kitic
Trade Commissioner
Yugoslavia Trade Centre
7th Floor Menara Boustead
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50200 Kuala Lumpur
Tel: 2439724

HRU series IV: ... the latest series of quality proven DxP oil palm planting materials produced by HRU which combines the best features of its earlier materials into one, features which are highly sought after in the oil palm industry in Malaysia.

HRU series IV ITS FEATURES AND MERITS

*High oil yield per hectare

Oil yield is the economic product of the oil palm. With its good fruit & bunch characteristics & oil extraction, *HRU series IV*, palms produce more oil for the same bunch weight i.e. more profits with less harvesting & milling costs.

HRU series IV



*Slow stem growth

This characteristic feature of *HRU series IV* confers the following important benefits to the plantation owner:

Longer economic crop life

Lower crop losses from inefficient harvesting i.e. easier harvesting of mature and older palms.

*High early yields

This ensures a fast return on investment.

*Smaller palms

Smaller palms allow planting at the upper limit of the optimum range of planting density which means an even higher early yield.

Smaller palms with high yields mean more efficient palms i.e. agricultural inputs go to produce more oil instead of vegetative growth.

Smaller palms are less prone to lodging and hence more suitable to peat and drainage problem areas.

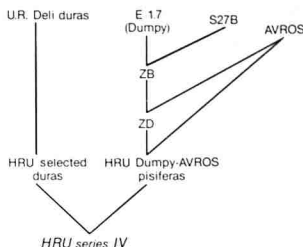
SIRIM certified seeds

Seeds produced by HRU bear the SIRIM certification mark. In fact the selection standards set by HRU easily surpass the requirements for SIRIM certification.

HRU series IV HOW WAS IT BRED?

The synthesis of the desirable attributes of the oil palm into *HRU series IV* is a consequence of good foresight, combined with years of intensive and extensive hybridization, evaluation and selection at HRU.

The lineage of *HRU series IV* DxP is:



The progenitors of *HRU series IV* have the following merits:

- U.R. Deli — high oil yields and uniform big bunches
- E1.7 Dumppy — short palm with large bunch size and good fruit quality.
- S27B — high bunch yield and smaller palm size.
- AVROS — high early yield with very good fruit quality and oil extraction.

ORDERING PLANTING MATERIALS FROM HRU

The following oil palm planting materials are available:

- germinated seeds.
- small polybag seedlings.
- large polybag seedlings.

Please address all orders and enquiries to:

The Director-In-Charge, H.R.U. Sdn. Bhd.
Jalan Langat, P. O. Box 2009, 41990 Klang, Selangor.
Malaysia. Tel. No.: 03 3312144/3312228/3312615

Estates Listed Alphabetically by State

Name of Estate	Address	Manager
■ JOHOR		
Adela Palm Oil Mill	P O Box 73, 81907 Kota Tinggi	The Manager
Apalim Sdn Bhd	17A Jln-Glasiar, Tmn. Tasok, 80200 Johor Bharu	The Manager
Agro Enterprise	23 (Top Floor), Jln Gerasang, 85000 Segamat	Pee Teck Hu
Aik Lim Plantation Sdn Bhd	Mukim of Sermin, 85000 Segamat	The Manager
Air Putih Estate	Sungai Tiran, Johor Bharu	The Manager
Amber Estate	P O Box 102, 81400 Senai	Khee Tian Yam
Anbok Estate	P O Box 103, 81600 Pengerang	Lim Ju Hong
Asahi Estate	P O Box 80, 81907 Kota Tinggi	Mad Halim Hj Ashari
Asan Babuk Estate	K B 102, 86100 Air Hitam	Mohd Yusoff Hamzah
Atlas Paloh Rubber Estate	Mukim Cha'ah Bahru, 83000 Batu Pahat	The Manager
Avon River Estate	48 Miles, Jalan Kluang, 86900 Mersing	The Manager
Ayer Manis Estate	Peti Surat 508, 84009 Muar	Lum Cheng Loke
Ayer Molek Estate	Batu Anam Post Office, 85000 Segamat	The Manager
B S Oil Palm Plantations Sdn Bhd	P O Box 85, 85007 Segamat	Tengku Abdi, Rashid Tengku Kassim
Bakri Estate	Jalan Bakri, Locked Bag 503, 84009 Muar	Keo Yong Chuan
Balau Estate	K B 519, 81909 Kota Tinggi	Zainuddin Ali Har
Ban Hong Estate	K B No 102, 84600 Pasir	Ong Te Hiong
Ban Hong San Estate	1st Floor, 9 Jln Ismail, 86000 Kluang	Chong Soo Yoo
Ban Leo Estate	22 Miles Jalan Ayer Hitam, 81000 Mukim Kulai	The Manager
Batang Melaka Estate	19 Jalan Gerasang, 85000 Segamat	The Manager
Batu Anam Estate	85100 Batu Anam	Chai Yow Tiong
Batu Pahat Plantations Co S/B	6-2 Jalan Fatimah, 83000 Batu Pahat	The Manager
Bomban Estate	29 Miles Ayer Hitam Road, Ayer Bernam	The Manager
Berut Estate	P O Box 105, 86100 Rengas	Ruan Ra
Beradin Estate	P O Box 102, 86609 Paloh	Chik Lai Siang
Boon Low Estate Sdn Bhd	Jalan Seoleng, 81400 Senai	The Manager
Ban Hong Estate Sdn Bhd	P O Box 105, 81000 Senai	The Manager
Ban Leo Song Estate	TST No 3, 81759 Masai	Don Ngit Kong & Don Siew Yen
Bukit Badak Estate	P O Box 108, 81850 Layang-Layang	Neo Eng Soon
Bukit Berut Estate	P O Box 513, 86009 Kluang	John Abraham
Bukit Bujang Estate	P O Box 60, 85007 Segamat	The Manager
Bukit Bujang Estate	85000 Segamat	The Manager
Bukit Castle Estate	Peti Surat 5, 86700 Bahang, Kluang	Tao Hui Fung
Bukit Cakuk Estate	c/o KB149 Teroh Utara, K B 516, 86009 Keluang	Katar Jamin
Bukit Dato' Estate	B/K No 514, 85009 Segamat	Chin Swee Keong
Bukit Gambir Estate	116 Bukit Gambir, 84000 Muar	The Manager
Bukit Kelompok Estate	K B 512, 81909 Kota Tinggi	Ahmad Tajuddin Mohd Mustafa
Bukit Lawang Estate	P O Box 93, 86007 Kluang	Baharuddin Abdul Rashid
Bukit Layang Estate	Ulu Tiran Post Office, 81800 Johor Bharu	The Manager
Bukit Paloh Estate	Bag Berkunci 107, 86609 Paloh	Thomas Cheryan
Bukit Pengalan Estate	84000 Muar	The Manager
Bukit Pulai Estate	P O Box 107, 81759 Masai	Lim Tin Koo
Bukit Serampang Estate	K B No 506, 84900 Tanjak	Hj Aishah Razak Khalid
Bukit Tinggi & Bulin Estate	Teluk Semangat, 81900 Kota Tinggi	The Manager
C.E.P. Niyor Estate	Bag Berkunci 514, 86009 Keluang	K Arulandi
C.E.P. Rengas Estate	Bag Berkunci 106, 86300 Rengas	Abdul Malik b. Mohd Azin
Canaan Estate	50 Jalan Ah Tong, 85200 Jementah	The Manager
Demas Estate	P O Box 101, 81850 Layang-Layang	Mahmood Bakar
Cha'ah Estate	P O Box 102, 85400 Cha'ah	Sengap Simeh
Cha'ah Palm Oil Mill	P O Box 104, 85400 Cha'ah	The Manager
Chamak Estate	R B 505, 86009 Kluang	Toh Choo Hooi
Chan Ning Estate	Bag Berkunci 512, 86009 Keluang	Lee Kim Tong
Chan Sit Plantation Sdn Bhd	Tanjung Sembong VII, 83000 Batu Pahat	The Manager
Chellam Estate	P O Box 105, 81800 Ulu Tiran	Subeswarian Chellam
Chonak Estate	86000 Kluang	The Manager
Chong Lim Estate	41 Jalan Maharani, 84000 Muar	The Manager
Chong Boon Song Estate	9 (1st Floor) Jalan Ismail, 86000 Kluang	The Manager
Chong Lee Estate	38 Jalan Awang, 85000 Segamat	The Manager
Chiat Lee Estate	41 Jln Maharani, 84000 Muar	Ng Tart Meng
Chin Glap Estate	6-2 Jalan Fatimah, 83000 Batu Pahat	The Manager
Chin Lian Rubber Estate Sdn Bhd	Gemas Bahru, 73400 Gemas	The Manager
Choon Swee Estate	Mukim Sungai Balang, 84000 Muar	The Manager
Choong Seng San Estate Sdn Bhd	Grauek, 84700 Muar	The Manager
Chuan Moh San Estate	P O Box 509, 85007 Segamat	Boon Yon Chuan
Chye Song Estate Sdn Bhd	P O Box 62, 81907 Kota Tinggi	The Manager
Citi Engineers Sdn Bhd	Foh Chong Building, Johor Bahru	The Manager
Claire Estate	P O Box 101, 85400 Chaah	The Manager
Coronation Estate	K B 504, 86009 Kluang	Kim Nai Hoek
Craigliner Estate	Peti Surat 101, 84100 Bukit Pasir	E W Peters
Dara Lam Soon Palm Oil Mill	P O Box 516, 85007 Segamat	The Manager

Telephone	Agency	Oil Palm	Rubber	Cocca	Coconut	Others	Total Ha	Remarks
07-361659/371560	PSLOA	2207	0	0	0	0	2207	
07-911888		3882	209	245	0	0	4336	
06-224717		88	0	0	0	0	88	
07-831408	Eastern Plantn. Agency (J) S/B	1559	0	24	0	0	719	
07-591545	Lee Plantations (Pte) Ltd	559	59	0	0	0	618	
01-760110	Plantation Agencies Sdn Bhd	747	0	0	0	0	747	
03-2419044	Boustead Estates Agency Sdn Bhd	1451	0	0	0	4	1455	Immature
07-784079	Eastern Plantation Agency (J) SB	549	0	0	4	4	557	Sago
06-224132		0	0	0	0	0	0	Figures n.a
07-651128		0	0	0	0	0	0	Figures n.a
07-931238	Sime Darby Plantations	93	334	8	0	0	435	
01-950045	Sykt. Lulang LGPP Sdn Bhd	1658	0	0	0	0	1658	
06-966626	Lee Plantations (Pte) Ltd	0	316	0	0	0	316	
07-821130	Eastern Plantation Agency (J) SB	65	0	182	0	0	247	
06-939248	Taiko Plantations Sdn Bhd	612	0	0	0	0	612	
07-712117/723494		13	38	0	0	0	51	
07-714052		0	0	0	0	0	125	
06-461216		0	0	0	0	0	433	
07-989211	The United Malacca Rub. Est. Bhd	0	660	0	0	0	660	
07-488235/441659		1200	300	0	0	0	1500	
07-785177	H.M.P. Bhd	455	237	0	0	0	692	
07-783216	M.P. Evans (M) Sdn Bhd	857	157	57	0	0	1071	
07-591036		0	0	0	0	0	0	Figures n.a
07-561444		108	315	0	0	0	423	
07-511310		233	0	0	0	0	233	
07-787206	Kumpulan Guthrie Sdn Bhd	3096	0	112	0	0	3208	
07-722040	H.M.P. Bhd	1878	234	0	0	0	2112	
07-917288	Boustead Estates Agency Sdn Bhd	2793	0	0	0	0	2793	
07-651611/651612		0	0	0	0	0	0	Figures n.a
07-781257	Eastern Plantation Agency (J) SB	2153	0	0	0	0	2153	
07-909231	Taiko Plantations Sdn Bhd	240	0	0	0	0	240	
06-935312		47	1220	0	0	0	1267	
07-818084	Eastern Plantation Agency (J) SB	0	0	0	0	0	132	
01-333941	Eastern Plantation Agency (J) SB	2292	0	0	136	0	2428	
07-783126	Eastern Plantn. Agency (J) S/B	2031	0	0	0	0	2031	
	Sime Darby Plantations	397	0	0	0	0	397	
		1000	439	17	0	0	1456	
07-511231	Kumpulan Guthrie Sdn Bhd	0	0	0	0	0	0	Figures n.a
06-932239	Seong Thyo Plantations Sdn Bhd	1190	0	0	0	0	1190	
07-651128	Dunlop Estates Bhd	1419	1229	0	0	72	2720	
07-721066	Sime Darby Plantations	0	0	0	0	0	0	Figures n.a
07-785143	Sime Darby Plantations	1177	357	10	0	0	1544	
07-971214/5		3043	0	0	0	0	3043	
01-730456	Kumpulan Guthrie Sdn Bhd	0	202	0	0	0	202	
07-961225	Kumpulan Guthrie Sdn Bhd	1495	333	0	0	0	1828	
	Kumpulan Guthrie Sdn Bhd	2808	0	0	0	0	2808	
	Kumpulan Guthrie Sdn Bhd	2810	0	0	0	0	2810	
07-783360	Boustead Estates Agency Sdn Bhd	261	565	0	0	0	826	
07-901207	Sime Darby Plantations	1569	906	0	0	0	2475	
03-395385/395/299		0	0	0	0	0	0	Figures n.a
05-611433	Cheilan Investments Sdn Bhd	115	0	0	0	0	115	
07-783360		216	610	0	0	0	826	
07-713494/712117	Syt. Song Pelaboran Sdn Bhd	0	0	0	0	123	123	
		0	36	0	0	0	36	
		0	0	0	0	0	96	
		472	243	0	0	0	715	
		0	0	0	0	0	793	
07-981270		287	12	0	0	0	299	
06-921861		0	0	0	0	0	45	
07-909264/909237		0	0	0	0	0	440	
07-891304		298	336	49	0	20	703	
07-54546		0	0	0	0	0	847	
07-961963	Socfin Co Bhd	0	0	0	0	0	0	Figures n.a
07-723796	Kian Hoe Plantations Bhd	979	241	0	0	0	1220	Figures n.a
06-934117	Sime Darby Plantations	1400	555	320	0	0	2275	
	Dara Lam Soon Sdn Bhd	4040	0	0	0	0	4040	

Name of Estate	Address	Manager
■ Johor Cont.		
Dian Heng Sdn Bhd	Makim of Johor Lama, 81900 Kota Tinggi	The Manager
ESPEK-Sungai Antut Palm Oil Mill	32 Km Jalan Kota Tinggi, 86810 Makil Pos Jemalung	Nasir b Aban
ESPEK-Ulu Keratong I	18-B, Ting. 1, Bang. WVN Logan, 85000 Segamat	En. Abnab b Hj Mahfuz
ESPEK-Ulu Keratong II	18-B, Ting. 1, Bang. WVN Logan, 85000 Segamat	Yacob b Khemis
ESPEK-Ulu Keratong III	18-B, Ting. 1, Bang. WVN Logan, 85000 Segamat	En. Tukiman b Mahmud
ESPEK-Ulu Keratong IV	18-B, Ting. 1, Bang. WVN Logan, 85000 Segamat	Hassan B Osman
ESPEK-Ulu Keratong Palm Oil Mill	18-B, Ting. 1, Bang. WVN Logan, 85000 Segamat	Izhar b Mahfuz
East Sea Estate Sdn Bhd	Lot 5584-5585 Senai, 81000 Kulai	The Manager
Eldred Estate	K B 102, 86500 Bekok	Coco In Fah
Ellar Estate	Box Berkunci 515, 86009 Kluang	S. Nadarajan
Eng Hin Estate	10 Jalan Lambak, 86000 Kluang	The Manager
Eng Hap Plantations	83000 Batu Pahat	The Manager
Eng Kee Estate	K B 502, 84900 Tangkak	Yeo Ser Tay
Enggung Estate	K B 503, 86009 Kluang	Mi Ridzwan Md Taib
Estet Pekabon Kecil Sg. Amat	Kilometer 37, Jln Kota Tinggi, 86810 Jemalung	Hassan Othman
Estet Pekabon Kecil Sg. Chales	P O Box 3, 86700 Kahang, Kluang	Sulaiman Haji Abdul Rahman
Felcra 1/2 Mile Paloh	T.S.F. No 2, Paloh, 86000 Kluang	The Manager
Felcra Ban Foo Estate	81800 Ulu Tiram	The Manager
Felcra Batu 67 Estate	86000 Kluang	The Manager
Felcra Benang Air Estate	Peti Surat 626, 85007 Segamat	Mhd Yusoff b. Hj Mhd # Mar:
Felcra Bukit Kepong I Estate	P O Box 4, 85300 Labis	The Manager
Felcra Gajusan Simpang Rengas	K B 101, 86200 Simpang Rengas	Mi Ghazali b. Omar
Felcra Kuala Kahang II Estate	Locked Bag No. 120, 81000 Kulai	The Manager
Felcra Kundang Ulu I, II & III	84000 Muar	The Manager
Felcra Paya Kepar Estate	P O Box 4, 85300 Labis	The Manager
Felcra Peta Temasuk	P O Box 3, 85300 Labis	Zakaria bin Abu Bakar
Felcra Peta Temasuk Estate	85000 Segamat	The Manager
Felcra Sekinjang Estate	P O Box 31-C, 85007 Segamat	The Manager
Felcra Simpang Rengas Estate	P O Box 101, 86200 Simpang Rengas	The Manager
Felcra Sungai Ara I, II & III	P O Box 5, 81907 Kota Tinggi	The Manager
Felda Bukit Permai Estate	81850 Layang-Layang	Alias b. Ismail
Foh Cheong Estate	P O Box 97, 86710 Johor Bahru	Siew Tiang Ching
Foo Kuan Chew & Sons Sdn Bhd	D-7 Jalan Seoklah China, 81000 Kulai	The Manager
Fook Lee Hoq Plantations S/B	288 Jln Abiad 1, Tmn. Pelangi, 80400 Johor Bharu	Chan Hong Chiew
Fraser Estate	K B No 102, 81000 Kulai	Poo See Yak
Gan Theng Estate	81550 Gelang Patah	The Manager
Gelang Patah Estate	P O Box 5, 81557 Johor Bahru	Sim Beck Yong
Gemas Bahru Estate	85000 Segamat	The Manager
Gin Tien Oil Palm Estate	86000 Kluang	The Manager
Gomali Estate	K B No 102, 85109 Btj Anan	Goo Too Ming
Good Plantation Sdn Bhd	35-36 (1st Floor) Jalan Ibrahim, 80000 Johor Bahru	The Manager
Greenhill Plantations (Kluang)SB	906 Jalan Mering, 86000 Kluang	The Manager
Guan Heng Estate	12 1/4 Mile Jalan Masai, 81750 Masai	The Manager
Gunong Mas Estate	Box Berkunci 103, 86500 Bekok	Choh Mui Kee
Gunong Pulai Estate	P O Box 1, 81759 Masai	Yoonn Tak You
Guntong Estate	P O Box 513, 81907 Kota Tinggi	The Manager
Gunung Sulayang Estate	P O Box 93, 86007 Kluang	Syed Ali b. Syed Idros
Madapan Estate	Box Berkunci 105, 81850 Layang Layang	Khalid Abdul Rahman
Han Brothers Estate	95 Tan Leng Ann Garden, 85000 Segamat	The Manager
Han Yang Estate	P O Box 105, 81759 Masai	Paul Arndeman
Hay Estate	86300 Rengas	The Manager
Heah Joo Seang (Telok Senjat)	P O Box 513, 81907 Kota Tinggi	The Manager
Heng Lian Development Sdn Bhd	Tebrau, 80250 Johor Bharu	The Manager
Hock Hi Plantation Sdn Bhd	7 Jalan Haji Taib, 84000 Muar	The Manager
Hock Lee Estate	Bekok, 86500 Segamat	The Manager
Hock Lim Estate	K B 101, 81759 Masai	Low Joon Chong
Hock See Hin Estate	137 Jalan Abdullah, 84000 Muar	The Manager
Hoe Eng Oil Mill (Muar) S/B	Ulu Sungai Johore, 81900 Kota Tinggi	The Manager
Hoe Lee Plantations Co	43 Jalan Maharani, 84000 Muar	The Manager
Hosan Estate	106 Jalan Perwira 11, 81300 Sgaidi	Chuan See Poo
Hong Leong Oil Palm Estate	Ulu Tiram, 81800 Makin Plantong	The Manager
Hou Guan Estate	Senai, Kulai	The Manager
Hup Hoe Estate	Dakit Gembir, 84000 Muar	The Manager
Hup Soon Estate	Batu Anson, 85000 Segamat	The Manager
Jaya Estate	81900 Kota Tinggi	The Manager
Jeontan Plantation Sdn Bhd	7 Jalan Haji Taib, 84000 Muar	The Manager
Jemontah Estate	19 Jalan Salleh, 84000 Muar	The Manager
Jeran Realty	Kampung Tengah, Sungai Terap, 84000 Muar	The Manager
Johor (Masai) Plantations	81750 Masai	The Manager
Johore Labia Estate	P O Box 101, 85400 Chah	The Manager
Johore Oil Palm Estate	Locked Bag No. 531, 86009 Kluang	The Manager
Joiner Estate	10 1/2 Miles Jalan Kota Tinggi, Johor Bharu	The Manager
Joo Yew Estate	25 Jalan Haji Abu, 84000 Muar	The Manager
Jorak Estate	36 Jln Rahmat, Wisma Yapan, 83000 Batu Pahat	Lim Kew Lin
Junta Palm Oil Mill Estate	Triang Post Office, Triang	The Manager

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
07-912457/837		0	0	0	0	0	0	Figures n.a
01-330581	Estet. Pekabun Kecil Sdn Bhd	0	0	0	0	0	0	Figures n.a
07-912019/01-336234	Estet. Pekabun Kecil Sdn Bhd	1970	0	0	0	0	0	Figures n.a
07-912019/01-336227	Estet. Pekabun Kecil Sdn Bhd	2404	0	0	0	0	2404	Figures n.a
07-912019/01-336237	Estet. Pekabun Kecil Sdn Bhd	1443	0	0	0	0	0	Figures n.a
07-912019/01-336235	Estet. Pekabun Kecil Sdn Bhd	1434	0	0	0	0	1434	Figures n.a
01-332810	Estet. Pekabun Kecil Sdn Bhd	0	0	0	0	0	0	Figures n.a
07-229953/954		0	0	0	0	0	0	Figures n.a
07-901205	Boustead Estates Agency Sdn Bhd	1413	414	0	0	0	1827	
07-721058	Sime Darby Plantations	452	463	0	0	0	915	
07-711560		0	0	0	0	0	48	
07-442011		0	0	0	0	0	0	Figures n.a
06-991287		389	189	0	0	0	578	
07-730107	Eastern Plantation Agency (J) SB	1709	0	0	0	0	1709	
07-701217		1508	0	0	0	0	1508	
07-781201		713	0	0	0	0	713	
07-783272	FELCRA	606	677	0	0	0	1283	
07-841678	FELCRA	0	0	0	0	0	0	Figures n.a
07-715167	FELCRA	0	0	0	0	0	0	Figures n.a
07-913656	Felcra	521	0	0	0	0	521	
06-930232	FELCRA	0	0	0	0	0	0	Figures n.a
07-786655		386	736	0	0	0	1122	
07-661103	FELCRA	0	0	0	0	0	0	Figures n.a
06-935323	FELCRA	0	0	0	0	0	0	Figures n.a
06-930232	FELCRA	0	0	0	0	0	0	Figures n.a
07-9951314	FELCRA	806	0	0	0	0	806	
07-951314	FELCRA	0	0	0	0	0	0	Figures n.a
07-909277	FELCRA	0	0	0	0	0	0	Figures n.a
07-786655	FELCRA	0	0	0	0	0	0	Figures n.a
07-818050	FELCRA	0	0	0	0	0	0	Figures n.a
07-787217	FELDA	608	486	0	0	0	1094	
07-576121/568107	Foh Chong & Sons Sdn Bhd	279	429	6	0	0	714	
07-136644		85	0	0	0	0	85	
07-611506	Taiso Plantations Sdn Bhd	2883	0	0	0	0	2883	
07-811241		0	0	0	0	0	0	Figures n.a
07-501239	The United Malacca Rub. Est. Bhd	976	114	106	0	0	1196	
07-941264		0	0	0	0	0	0	Figures n.a
07-711036/712146		0	0	0	0	0	0	Figures n.a
07-989164/5	Dunlop Estates Bhd	3302	0	0	0	273	3575	
07-221707		90	0	0	0	0	90	
07-712443		0	0	0	0	0	0	Figures n.a
07-991213	Sime Darby Plantations	861	0	0	0	0	861	
07-671140		566	0	0	0	0	566	
07-221148	Boustead Estates Agency Sdn Bhd	0	0	0	0	0	0	Figures n.a
01-333941		1921	0	0	0	0	1921	
07-787102	Sime Darby Plantations	1122	0	0	0	0	1122	
07-912478		0	0	0	0	0	45	
07-511514	Plantation Agencies Sdn Bhd	509	856	0	0	0	1365	
07-787283	Guan Lee Plantations Sdn Bhd	0	0	0	0	0	0	Figures n.a
07-221148	Telok Sengat Estates Group	1670	1035	92	0	0	2797	
06-922786		0	0	0	0	0	132	
06-921121/122		0	0	0	0	0	0	Figures n.a
07-511245	Hock Lim Estate Sdn Bhd	55	290	0	0	0	345	
06-9228239		0	0	0	0	0	124	
06-938248/295		0	0	0	0	0	0	Figures n.a
06-921121/122		0	0	0	0	0	437	
07-561975		776	0	0	0	19	795	
06-935316		0	0	0	0	0	0	Figures n.a
07-334721		0	0	0	0	0	149	
03-921963		0	0	0	0	0	0	Figures n.a
06-22113/222498		0	0	0	0	0	160	
07-226303	KEKORA	0	0	0	0	0	0	Figures n.a
07-922786		0	0	0	0	0	0	Figures n.a
06-921026		0	0	0	0	0	156	
07-783250		0	0	0	0	0	109	
07-511311	Keck Seng (M) Sdn Bhd	405	0	0	0	0	405	
07-961204/209	Socfin Co Bhd	9268	0	16	0	0	9284	
07-783121/2	Highlands & Lowlands Bhd	0	0	0	0	0	0	Figures n.a
07-841371		0	0	0	0	0	139	
06-922388		37	10	14	0	0	61	
07-451269		723	60	0	0	0	783	
	Regional Agriculture Corp S/B	1620	0	0	0	0	1620	

Name of Estate	Address	Manager
■ Johor Cont.		
Kahang Estate	K B No 519, 86009 Kluang	Tey Boon Ching
Kali Melaya Estate	Box Berkunci 115, 86609 Paloh	Tiong Ming Du
Kambu Estate	P O Box 69, 81907 Kota Tinggi	The Manager
Kampung Tuli Estate	Bukit Kepong, 84000 Muar	The Manager
Karai Nayar Estate	P O Box 707, 80730 Johor Bahru	K Jayarajah
Kebun Rengan Estate	K B 109, 86300 Rengas	Gin Kim Guan
Kebun Seletak Sdn Bhd	P O Box 31, Kulai, 81000 Johor Bahru	The Manager
Kock Seng Oil Palm Estate	P O Box 1, 81750 Masai	The Manager
Kojora Estate	Ulu Sungai Johor, 81900 Kota Tinggi	The Manager
Kokaykan Estate	K B No 103, 86609 Paloh	Lee Mok Thai
Kelan Estate	K B 103, 81000 Kulai	V Alagappan
Kemedak Estate	K B 525, 85009 Segamat	Abdul Rahman Sulaiman
Kempas Klebang Estate	Box Berkunci 105, 86009 Paloh	Goh Boon Peng
Keng Hong Plantations Bhd	45 Jalan Meriam, 84000 Muar	The Manager
Kepong Estate	Bukit Kepong, 84000 Muar	The Manager
Kg. Aur Oil Palm Plantations	P O Box 85, 85007 Segamat	Saari b Yusof
Kg. Sekijang Rubber Estate	Locked Bag No. 515, 85007 Segamat	The Manager
Kg. Simpang Renggan Estate	Kg. Simpang Renggan, 86300 Renggan	The Manager
Kian Lee Estate	17 Jln Lumbak, 86000 Kluang	Tai Boon Chen
Kim Hick Estate	Masai Post Office, 81750 Masai	The Manager
Kim Loong Estate	K B 106, 81800 Ulu Tiram	Gool Seong Gue
Kit Lee Plantations Bhd	1201A Johor Tower, 15 Jln Gereja, 80100 Johor Bahru	The Manager
Kluang Estate	P O Box 64, 86007 Kluang	Han Teng Juan
Kluang Lien Hap Estate	21-22 Jln Dato Tion Siow Khor, 86000 Kluang	Liu Kong Song
Koh Fuy Teck Sdn Bhd	7 Jalan Puteri, 83000 Batu Pahat	The Manager
Kong Chow Estate	P O Box 108, 81300 Seudai	The Manager
Kong Kong Estate	K B 102, 81759 Masai	Teow Sol Eng
Koperasi Polis Johor Bhd	P O Box 28, 86007 Kluang	The Manager
Kota Bahagia Estate	P O Box 29, 85007 Segamat	Hj Mond Yunus b. Hj Mond Aris
Kota Estate	P O Box 29, 85007 Segamat	The Manager
Kota Tinggi Oil Palm Plantn Bhd	P O Box 1, 81750 Masai	The Manager
Kuala Myang Estate	86600 Mersing	The Manager
Kuala Pergas Rubber Plantn Ltd	P O Box 64, 86007 Kluang	The Manager
Kukup Estate	82300 Kukup	The Manager
Kulai Baru & Masai Baru Estate	Rm 1508, 15th Flr, Merlin Tower, 80000 Johor Bahru	H L Tang
Kulai Besar Estate	P O Box 105, 81000 Kulai	Mohd Amin b. Haji Mohd
Kulai Besar Estate (N)	K B 103, 86200 Simpang Renggan	Khoi Lian Hong
Kulai Estate	Box Berkunci 108, 81000 Kulai	Ony Kong Saan
Kulai Leong Boo Estate	22 Lorong 2, 81000 Kulai	The Manager
Kulai Palm Oil Mill	W/P Lembaya Taib Andax, 81000 Kulai	The Manager
Kulai Young Estate	P O Box 106, 81000 Kulai	Looi Eng Kooi
Kampolan Melayu Estate	P O Box 47, 81907 Kota Tinggi	Mahz b. Othman
Kundang Estate	c/o Tanjakn Estate, P O Box 503, 84900 Tanjakn	Hachin Hj Abu Bakar
Labis Bahru Estate	P O Box 517, 85009 Segamat	P M S Murthy
Labis Oil Palm Estate	3 Jalan Bunga Raya, 85100 Labis	The Manager
Lan Choon Ann Oil Palm Estate	4 Miles Jalan Besar, 83700 Yong Peng	The Manager
Lan Len Estate	Jalan Labis, Locked Bag 106, 83700 Yong Peng	Keo Yong Chuan
Lan San Estate	P O Box 107, 81300 Seudai	Law Ah Cheng
Lambak Elmies Estate	P O Box 510, 86009 Kluang	S Ramakrishnan
Lansdon Group Estate	Panchor, 84000 Muar	The Manager
Lendak Estate	K B No 108, 86609 Paloh	Chengng Kim Seng
Layang Estate	P O Box 105, 81850 Layang-Layang	Chengng Sian Onn
Lee Choon Tuan Realty Sdn Bhd	256 12nd Floor Jalan Mersing, 86000 Kluang	The Manager
Lee Kah San Estate	38 Jalan Muar, 85200 Jementah	Tan Hick @ Chen Shing Shen
Lee Kim Bok Estate	86600 Paloh	The Manager
Lee Pineapple Co (Pte) Ltd	P O Box 107, 81300 Seudai	The Manager
Lenja Estate	K B 103, 84600 Pasoh, Muar	Si To Ok Sin
Lenja Plantations Bhd	10, 2nd Floor Jalan Meriam, 84000 Muar	Si To Ok Sin
Lian Hee Estate & Co	Beok, 86500 Segamat	The Manager
Lian Hee Estate & Co	c/o 41A Jalan Besar, 84700 Griek, Muar	The Manager
Lian Hee Plantation Co	Rimba, 82000 Pontian	The Manager
Lian Hap (Fontian) Estate	105 & 106 Jalan Gemawang, 85000 Segamat	The Manager
Lian Hap Mfg Co Sdn Bhd (Estate)	Jalan Kong Kong, 81750 Masai	The Manager
Lian Hap Oil Palm Plantn. Bhd	58 Jalan Sulaiman, 84000 Muar	The Manager
Lian Seng Estate Co	P O Box 102, 81750 Masai	The Manager
Lim & Lim Plantations Bhd		
Lim E Chuk Estate	1630 Jalan Tempinis, 83000 Batu Pahat	The Manager
Lim Plantations	Makim Layang Layang, 86000 Kluang	The Manager
Lim Seng Sim Estate	56 & 11th Mile Jalan Mersing, 86000 Kluang	The Manager
Linden Estate	P O Box 103, 81300 Seudai	Issail Bezzin
Lon Kim Hee Estate	Gelang Patah, 81550 Johor Bahru	The Manager
Lum Palm Oil Mill Sdn Bhd	P O Box 80, 85007 Segamat	The Manager
Lum Trading Co Sdn Bhd	P O Box 45, 85007 Segamat	Pun Foo Tsing
Lyou Brothers Estate	56 Jalan Meriam, 84000 Muar	The Manager
Mado's Sermin Estate	P O Box 61-C, 85007 Segamat	W S Walker
Mados Estate	P O Box 103, 81800 Ulu Tiram	W S Walker

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
01-332094	Dunlop Estates Bhd	2362	0	0	0	58	2420	
07-783081	Sime Darby Plantations	1031	43	0	0	0	1074	
06-934205		791	0	0	0	0	791	Figures n.a
07-671002		0	0	0	0	0	0	
		541	144	0	0	0	685	
07-785228		48	455	0	0	0	503	
07-851144		0	0	0	0	0	441	Figures n.a
07-66311		0	0	0	0	0	0	Figures n.a
07-229672		0	0	0	0	0	0	Figures n.a
07-783343	Taiko Plantations Sdn Bhd	2727	0	0	0	0	2727	
07-631505	H.M.P. Bhd	1651	0	0	0	0	1651	
01-760674	Eastern Plantation Agency (J) SB	1610	0	185	0	0	1795	
07-783011	Sime Darby Plantations	1964	511	0	0	0	2475	
06-921076		115	4	0	0	0	119	
06-921963		0	0	0	0	0	0	Figures n.a
01-950054	Sykt. Lading LKPP Sdn Bhd	1448	0	0	0	0	1448	Figures n.a
07-909245		0	0	0	0	0	0	Figures n.a
07-719190		219	0	0	0	0	219	
07-541414		0	0	0	0	0	417	
		185	195	0	0	0	380	
07-711066	Kluang Estates (1977) Sdn Bhd	194	0	0	0	0	194	
		476	252	0	0	0	728	
		64	178	0	0	0	242	
07-442428		84	34	0	0	0	118	
07-561442		72	0	0	0	0	72	
07-511234		845	67	0	0	0	912	
07-712076		867	0	0	0	0	867	
09-455284	Boustead Estates Agency Sdn Bhd	0	4036	0	0	0	4036	
09-55284	Barlow Boustead Est. Agency S/B	4036	0	0	0	0	4036	
07-891005		0	0	0	0	0	388	
07-791689		0	0	0	0	0	528	
09-978317	Kluang Estates Sdn Bhd	0	505	0	0	0	505	
07-890236/217	Pontian United Plantations Bhd	613	0	11	0	0	624	
07-242212		85	61	0	0	0	146	
07-63241/631109	Asiatic Development Berhad	2697	239	0	0	0	2936	
07-661045	Asiatic Development Berhad	468	206	0	0	0	674	
07-631104	Sime Darby Plantations	1525	0	603	0	0	2128	
07-631485		74	0	6	0	0	80	
07-631609	FELSA	4404	0	0	0	0	4404	
07-631804	Boustead Estates Agency Sdn Bhd	1379	78	76	0	0	1533	
07-811980	Plantation Agencies Sdn Bhd	1288	0	81	0	1	1370	
06-851050	H.M.P. Bhd	422	0	0	0	0	422	
07-911624	Plantation Agencies Sdn Bhd	1333	720	0	0	0	2053	
07-951919		67	0	0	0	0	67	
03-311660		0	0	0	0	0	0	Figures n.a
07-471981	Lee Plantations (Pte) Ltd	281	0	0	0	0	281	
07-811125	Lee Plantations Pte Ltd	639	957	104	0	0	1700	
07-721043	Kampulan Guthrie Sdn Bhd	2177	203	401	0	0	2781	
07-936147	Harrison Mission Plantations Bhd	1595	88	0	0	0	1683	
07-783018	Taiko Plantations Sdn Bhd	2754	0	0	0	0	2754	
07-787101	Sime Darby Plantations	1916	0	25	0	0	1941	
07-712958		28	0	0	0	0	28	
07-932206/932313	Chop Ghee Hup Guan	0	142	0	0	0	142	
06-921438		0	0	0	0	0	0	Figures n.a
07-501125		925	606	191	0	0	1722	
06-939237	M/S Syarikat Son	450	152	0	0	12	614	
06-939237		442	168	0	0	12	622	
		0	0	0	0	0	116	
07-935255		82	0	0	0	0	82	Figures n.a
		0	0	0	0	0	0	
07-911784		2100	0	0	0	0	2100	Figures n.a
07-86311		0	0	0	0	0	0	Figures n.a
07-511234		845	67	0	0	0	912	
07-441782		0	0	0	0	0	43	Figures n.a
07-881631		0	0	0	0	0	0	Figures n.a
07-712867		0	0	0	0	0	0	
07-561232	Western Plantation Agency (J) SB	195	375	0	0	0	570	Figures n.a
07-811135		0	0	0	0	0	0	
		2025	0	0	0	0	2025	
01-710023		2063	0	0	0	0	2063	
06-922736		0	0	0	0	0	43	
07-228899	Mado's Enterprise Sdn Bhd	5000	0	0	0	0	5000	
07-611319	Mado's Enterprise Sdn Bhd	922	0	0	0	0	922	

Johor Cont.

Mahi Estate	c/o 15 Jalan Padang, 81900 Kota Tinggi	A. K. Das
Manor Estate	P O Box 1, 86007 Kluang	Lee Fock Lai
Matang Estate	K B No 101, Jemantah Pos, 85200 Jemantah Segamat	Wang Nam
Mawil Bahru Plantations Sdn Bhd	1 1/2 Miles Jalan Mawil Lama, 81900 Kota Tinggi	The Manager
Malaka Heng Seng Rubber Est.	86800 Mersing	The Manager
Melville/Orao Estate	85000 Segamat	The Manager
Mengkibul Estate	P O Box 507, 86009 Kluang	The Manager
Mersing Estate	107 Jalan Jemulang, 86800 Mersing	Tang Jang Leng
Midlands Estate	Bog Kerinci 104, 81000 Kulai	The Manager
Mini Estate Parit Seray	Sungai Pinggan, 82000 Pontian	M. Nagarajah The Manager
Mount Austin Estate	K B 706, 80990 Johor Bahru	Boon Weng Siew
Maar Hap Seng Tapicos Sdn Bhd	Kahang, 86700 Kluang	The Manager
Maar Itan Estate	P O Box 508, 84007 Maar	Lim Cheng Loko
Maar River Estate	K B 501, 85009 Segamat	V D Nair
Makin Jarak Estate	84000 Maar	The Manager
Mangka Estate	K B 524, 85009 Segamat	Stowen Tieng King Kiong
Murni Jaya 11 & 111 Estate	Layang-Layang, 86000 Kluang	The Manager
Nagappa Estate	P O Box 101, Jemantah, 45200 Segamat	The Manager
Nan Heng Estate	K B 502, 81909 Kota Tinggi	The Manager
Nanyo Estate	P O Box 513, 81907 Kota Tinggi	The Manager
Nanyo Kluang Estate	K B 511, 86009 Kluang	Q I. Than
New Kok Ann Estate	81550 Gelang Patah	The Manager
New Paloh Estate	P O Box 109, 86009 Paloh	Tan Choo Woon
New Pajoh Estate	B/K No 505, 85009 Segamat	M. Bovensthiran
New Scudai Estate	R 1/2 Miles Jalan Scudai, 80200 Johor Bahru	The Manager
Ngee Juan Estate	37 Jalan Mohamediah, 84000 Maar	Han Wei Bao
Ngin Kong Realities Sdn Bhd	19 Jalan Tengku Mahkota Ismail, 86000 Kluang	The Manager
Nitar Palm Oil Mill	P O Box 7, Kluang, 86700 Kluang	Tau Seem Liang
Niyor Estate	K B 502, 86009 Kluang	Sim Hock Soon
Nordanal Estate	84500 Panchor, Maar	
North Labis Estate	P O Box 501, 85100 Labis	Ng Kow Chai
Ophir Estate	80 Jalan Payemas, 84900 Tangkak	The Manager
Padang Kahang Estate	Kahang, 86700 Kluang	The Manager
Pagoh Estate	c/o P O Pagoh, 84600 Pagoh, Maar	Uthman Ismail
PAKloh Estate	K B 516, 86009 Kluang	Lui Ai Tong
Pakloh Palm Oil Plantation	86000 Kluang	The Manager
Palanappa Estate	84000 Maar	The Manager
Paloh Estate	K B No 106, 86609 Paloh	Lee Khik Tiong
Palong/Mangka/Kemodak Estate	K B 530, 85009 Segamat	C.O.H. Hartley
Paol Estate	K B 509, 86009 Kluang	Lau Kok Chin
Pandan Estate	P O Box 103, 81750 Masai	The Manager
Pang & Sons Estate	6 Jalan Choo Kong, 85303 Labis	The Manager
Parit Sulong Estate	6-2 Jalan Fatimah, 81000 Batu Pahat	The Manager
Pasak Estate	K B 507, 81909 Kota Tinggi	The Manager
Pasir Logok Estate	K B 504, 81909 Kota Tinggi	Wong Han Phin
Paya Lang Estate	85100 Batu Anson, Segamat	Choo Wee Yee
Pekan Estate	K B 102, 81820 Layang-Layang	P. Gabablan
Pengasap Estate	4 Jln Gansau, Tan Kulam Air, 80200 Johor Bahru	The Manager
Pengarang Estate	P O Box 103, 81600 Pengarang	Tan Siew Yow
Pengkalen Bukit Estate	K B 103, 84500 Panchor, Maar	Too Hong Siew
Pernas Estate	P O Box 701, 80990 Johor Bahru	Gen Yek Joo
Perti Tenggara Estate Sdn Bhd	P O Box 180, 80906 Johor Bahru	The Manager
Pen. Bukit Estate	P O Box 101, Panchor, 84500 Maar	The Manager
Plenton Catholic Mission Estate	2101 Jalan Masai, 81750 Plentong	Peter Chang Chew Chin
Plentong Kecil Estate	Johor Bahru	The Manager
Plentong Oil Palm Estate	Plentong	The Manager
Pontian United Plantations Bhd	Rukup, 82300 Pontian	The Manager
Porim Estate	Locked Bag No. 512, 86007 Kluang	The Manager
Pukin Estate	P O Box 82, 85007 Segamat	The Manager
Pulai Sebatang Estate	P O Box 108, 81300 Scudai	The Manager
Quak Joon & Sons Sdn Bhd	6-2 Jalan Kolam Ayer, 85000 Segamat	The Manager
R.E.M. Estate	K B 501, 81909 Kota Tinggi	Zainal Mohd Yassin
R.R.I.M. Estate	K B 503, 81909 Kota Tinggi	Dr Hj Zainal Ariffin Bahari
Rancangan Tanah Biliwaanis Est.	K B 502, 85300 Labis	Mohamed Haniffah
Rengas Estate	P O Box 104, 86300 Rengas	Syed Hashim B. Syed Abd Rahman
Rengas Malay Estate	P O Box 517, 86009 Kluang	Chuah Choy Sin
Ringgit Plantations Sdn Bhd	Lot 1456 Sungai Kluang, Rengit, 81100 Batu Pahat	The Manager
Runar Naras Estate	c/o Pandan Postal Agent, Johor Bahru	The Manager
SKPP	K B 501, 85009 Segamat	A. Chandran
Sgaji Estate	P O Box 504, 84900 Tangkak	G. Parameswaran
Santi Estate	P O Box 103, 81600 Pengarang	Ng Kok Wah
Saru Estate	31 Jalan Mohamediah, 84000 Maar	The Manager
Sayor Estate	86300 Rengas	The Manager
Scudai Estate	K B 108, 81300 Scudai	Osman Ismail
Sedanak Estate	P O Box 726, 80990 Johor Bahru	Goh Pey Song

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
07-832631	A Randas	176	0	0	0	0	176	
07-783244/5		2163	0	0	0	0	2163	
07-971129	Dunlop Estates Bhd	546	556	0	0	0	1102	
07-898209		0	0	0	0	0	0	Figures n.a
06-224768		0	0	0	0	0	0	Figures n.a
07-951009	Guan Lee Plantations Sdn Bhd	0	0	0	0	0	1615	
07-722057	Yule Catto Plantations Sdn Bhd	646	196	16	0	0	858	
07-791458	Newland Realty Sdn Bhd	307	104	0	0	0	411	
07-632800	Sime Darby Plantations	1993	0	0	0	0	1993	
07-871489		0	0	0	0	0	0	Figures n.a
541323		1595	1355	219	0	0	3169	
07-781226		0	0	0	0	0	0	Figures n.a
06-966627		184	235	0	0	0	419	
07-941203	H.M.P. Bhd	549	928	0	0	0	1477	
06-921026		0	0	0	0	0	0	Figures n.a
07-917299	Eastern Plantation Agency (J) SB	1865	0	0	0	0	1865	
07-229284		0	0	0	0	0	0	Figures n.a
07-971129		426	676	0	0	0	1102	
07-611024	Eastern Plantation Agency (J) SB	2902	0	170	0	0	3072	
07-221148	Boustead Estates Agency Sdn Bhd	9	0	0	0	0	0	Figures n.a
07-712599		439	325	0	0	0	764	
07-811128		0	0	0	0	0	583	
07-783360	Boustead Estates Agency Sdn Bhd	418	0	0	0	0	418	
07-909236	Taiko Plantations Sdn Bhd	152	1357	0	0	0	1509	
07-621238		0	0	0	0	0	841	
07-712032		0	0	0	0	0	56	Figures n.a
		0	0	0	0	0	0	
	PELJA	5350	0	0	0	0	5350	
07-721032	Chin Bee Plantations Sdn Bhd	1080	432	0	0	0	1512	
06-961840	H.M.P. Bhd	1685	0	0	0	0	1685	
07-951334	H.M.P. Bhd	361	1478	71	0	0	1910	
06-981322		0	0	0	0	0	94	Figures n.a
		0	0	0	0	0	0	
	Eastern Plantation Agency (J) SB	0	131	0	0	0	131	
	Boustead Estates Agency Sdn Bhd	1415	0	0	0	0	1415	
07-789255		0	0	0	0	0	0	Figures n.a
07-712394		0	0	0	0	0	0	
06-921947		0	0	0	0	0	485	
07-781321	Taiko Plantations Sdn Bhd	1990	0	0	0	0	1990	
07-957299	Eastern Plantation Agency (J) SB	1833	0	0	0	0	1833	
07-789101/2/3		4591	0	0	0	0	4591	
		0	0	0	0	0	413	
07-951914	Peng & Sons Realty Sdn Bhd	0	101	0	0	0	101	
07-452240		0	0	0	0	0	205	
07-811160	Eastern Plantation Agency (J) SB	892	15	0	0	0	907	
07-611611/3,611616/9	Eastern Plantation Agency (J) SB	1855	0	0	200	0	2055	
07-989170/179		2263	1016	0	0	227	3506	
07-721097	Kumpulan Guthrie Sdn Bhd	3226	0	0	0	0	3226	
		0	0	56	0	0	56	
07-812204	Plantation Agencies Sdn Bhd	1905	0	0	0	0	1905	
06-936239	Kumpulan Guthrie Sdn Bhd	792	947	0	0	0	1739	
07-511335	Dunlop Agro-Management Sdn Bhd	35	347	0	0	0	382	
07-228615/622		5009	1025	0	0	0	6034	
06-936239		0	0	0	0	0	3434	
07-541121		99	7	0	0	0	106	Figures n.a
07-221554		0	0	0	0	0	0	Figures n.a
07-66130		0	0	0	0	0	0	Figures n.a
07-870236		347	0	0	0	0	347	
07-312333/134/135	Sy Pukin Ladang Kelapa Sawit S/B	2111	162	154	0	0	2427	
07-917466		14	145	0	0	0	159	
07-561442		0	0	0	0	0	83	
07-912195		1480	69	0	0	0	1549	
07-810300	Eastern Plantation Agency (J) SB	0	910	0	0	0	910	
07-81277		391	0	0	0	0	391	
07-909274	Eastern Plantation Agency (J) SB	974	938	470	0	0	2382	
07-785101	Yule Catto Plantations Sdn Bhd	778	0	0	0	0	778	
07-789152	Ladang Kemang Waly Sdn Bhd	0	0	0	0	0	0	Figures n.a
07-611076		0	0	0	0	0	408	
01-610597	Dunlop Estates Bhd	1194	0	0	0	64	1258	
06-932331/932332		197	640	1568	0	136	2541	
07-245012	Plantation Agencies Sdn Bhd	1337	264	245	0	0	1986	
06-921241		0	0	0	0	0	45	
07-785150		0	0	0	0	0	0	Figures n.a
07-561442	Lee Plantations Pte Ltd	715	281	0	0	0	996	
07-661341	Yule Catto Plantations Sdn Bhd	2515	251	0	0	0	2766	

Name of Estate	Address	Manager
■ Johor Cont.		
See Ah Hong Estate	7 Jalan Rahmet, 86000 Kluang	The Manager
See Hai Estate	9 Jalan Mersing, 86000 Kluang	The Manager
See Sun Estate	P O Box 108, 86300 Rengas	U Wang Dzung
Segamat Estate	K B No 501, 85009 Segamat	Zainal Anwar Ariffin
Segamat Oil Palm Plantation	K B No 521, 85009 Segamat	R Chandran
Senai Estate	K B 529, 86009 Kluang	Mohamed Sozer
Senangam Kredit Sdn Bhd	81900 Kota Tinggi	The Manager
Senbrong Estate	K B 104, 81850 Layang-Layang	Mohdiaz Sarir
Senbrong Realty Sdn Bhd	5, 1st Floor, Jalan Ros, 85000 Segamat	The Manager
Sempoerna Palm Oil Mill	Kota, 81600 Pengarang	The Manager
Senai Estate	K B 103, 81400 Senai	The Manager
Seng Hoe Estate	Mukim Pulai, Johor Bharu	Wong Chong Boon
Seng Hong Song Plantations S/B	P O Box 110, 86100 Rengas	The Manager
Seng Leong Song Estate	K B 110, 86300 Rengas	The Manager
Sengji Palm Oil Mill	P O Box 33, 81907 Kota Tinggi	Richard Ang Chai Teng
Sepang Loi Estate	P O Box C-21, 85007 Segamat	The Manager
Sermin Estate Sdn Bhd	9th Flr, Tun Abd, Razak Complex, Johor Bahru	The Manager
Seron Estate	P O Box 501, 84900 Tangkak	The Manager
Sg Bekok Estate	K B No 101, 86500 Bekok	Gan Kim Guan
Sg Kluang Estate	P O Box 28, 86007 Kluang	Ranli b, Othman
Sg Rapan Estate	K B 514, 81909 Kota Tinggi	Lee Choo Chai
Sg Sembong Estate	P S 21 Kawang N/V, 86007 Kluang	Chan Woon Hei
Sj Simpang Kiri Estate	K B 101, 85400 Chahah	Kerwan Thandi
Sj Tampak	K B No 117, 86609 Paloh	Othman Ismail
Shanal Estate	P O Box 1, 81300 Sudaib	Tan Hin Chee
Siang Estate	K B 515, 81909 Kota Tinggi	Lim Kong Wa
Sim Yow Song (M) Sdn Bhd	12 1/4 Miles, Muar-Panchor Rd, 84000 Muar	Sq Yui Koon
Simpang Kiri Estate	Parit Separap, Mukim 4, 81000 Batu Pahat	Sim See Kee
Simpang Rengas Estate	K B 101, 86300 Rengas	The Manager
Simpang Rengas Pineapple Estate	K B 107, 86200 Simpang Rengas	Abad Tarmizi b, Adnan Omar
Sin Choon Lian Estate	Kanykar Senangar, Parit Sulong, 83500 Batu Pahat	Lee Sing Kim
Sin Hai Estate	P O Box 502, 85009 Segamat	The Manager
Sin Lian Oil Palm Plantatn. Bhd	Jalan Kang Kong, 81750 Mssai	Chong Kee Chin
Sinar Harapan Estate	8 Miles Jalan Desaru, 81900 Kota Tinggi	The Manager
Sindora Selatan Estate	K B 519, 86009 Kluang	The Manager
Sindora Utara Estate	K B 539, 86009 Kluang	Taharin Stafico
Sing Pong Lee Estate	Parit Tonpan, 83700 Yong Peng	The Manager
Sing Mah Plantation	Batu 54, Jalan Johor, 86100 Ayer Hitam	Khoi Lian Hong
Sin Heng Estate	Rengas, 86300 Kluang	The Manager
Soga Estate	47 Jalan Changai, 81000 Batu Pahat	The Manager
Song Lin Estate	P O Box 102, Rengas, 86300 Kluang	The Manager
Soon Hsat Estate	17 Miles, 86609 Paloh	The Manager
Southern Malay Estate	K B 103, 86300 Rengas	The Manager
Sri Gading Estate	P O Box 510, 81009 Batu Pahat	Henry Tan
Stesen Institut Penyelidikan	Getah Malaysia, 81900 Kota Tinggi	Tan Tong Koh
Sungei Bagan Rubber Co (M) Bhd	P O Box 64, 86007 Kluang	The Manager
Sungei Kachur Estate	Peti Surat 11, 81907 Kota Tinggi	Ali b, Jaafar
Sungei Labis Estate	P O Box 1, 85300 Labis	Abu Haniffah Abdul Wahid
Sungei Layang Estate	Ulu Tiram Post Office, 81800 Johor Bharu	The Manager
Sungei Labak Estate	Peti Surat 8, 81907 Kota Tinggi	Mohd Alias b, Muzar
Sungei Melayu Estate	65-B Jalan An Fook, 80000 Johor Bharu	The Manager
Sungei Raya Estate	K B 511 83009 Batu Pahat	Yoi Chee Booi
Sungei Tawing Estate	K B 511, 86009 Kluang	M Nazamathan
Sungei Gerchang Estate	P O Box 101, 85400 Chahah	The Manager
Sungei Kahang Estate	K B 101, 86700 Kahang, Kluang	Lim Teik Hoe
Sungei Mssai Estate	P O Box 8, 81757 Mssai	Lim Kong Wa
Sungei Ponds Estate	P O Box 103, 81550 Gelang Patah	Hui Kong Fern
Sungei Planting Estate	K B 704, 83990 Johor Bharu	Eng Teik Boon
Sungei Senarat Estate	K B 103, 85100 Batu Aman, Segamat	Raymond Teow Sun Kong
Sungei Tiram Estate	K B 102, 81800 Ulu Tiram	Lim King Hei
Sungei Tukong Estate	81750 Mssai	The Manager
Sweo Estate	Johor Bharu	The Manager
Sweo Lam Estate	K B 107, 81000 Kulai	Watt Yiew Pyn
Sykt. Kin Hoe	154 Jalan Meriah, 84000 Muar	The Manager
Sykt. Kia Kin Kilang Batu Batu	79 Jalan Muar, Parit Sulong, 83500 Batu Pahat	The Manager
Sykt. Paloh Enterprises Sdn Bhd	4 Miles Jalan Yong Peng, 86600 Paloh	The Manager
Sykt. Pembinaan Wsh Heng Sdn Bhd	65 Taman Tiram Jaya, 81800 Ulu Tiram	The Manager
Tai Hong Estate	3rd Mile, Jalan Tai Hong, 81900 Kota Tinggi	The Manager
Tai Tak Estate	P O Box 509, 81907 Kota Tinggi	Tan Ah Boon
Talisman Estate	TST No 3, 86609 Paloh	Pahm Seng Shiong
Tan Ah Chew & Others	Lot No 887 Pengarang, 81900 Kota Tinggi	The Manager
Tan Chun Su Estate	169 Jalan Abdul Rahman, 84000 Muar	The Manager
Tan Song San Realty Sdn Bhd	26 Jalan Temenggong, 86600 Paloh	The Manager
Tanah Merah Estate	P O Box 505, 84900 Tangkak	Day Song Pang
Tangkah Estate	P O Box 503, 84900 Tangkak	Hashim Hj Abu Bakar

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
07-714629		46	0	0	0	0	46	
07-71261		0	41	0	0	0	41	
07-785234	Taiko Plantations Sdn Bhd	208	367	0	0	0	575	
07-911214	Dunlop Estates Bhd	454	1554	0	0	106	2114	
01-610597	Dunlop Estates Bhd	1200	0	0	0	0	1200	
07-725122	Eastern Plantation Agency (J) SB	1767	0	0	0	0	1767	
07-821548		0	0	0	0	0	0	Figures n.a.
07-787116	Kumpulan Guthrie Sdn Bhd	1002	692	76	0	0	1770	
07-912799/981064		63	0	0	0	0	63	
	Ajalise Sdn Bhd	3886	0	0	0	0	3886	
	Lee Plantations Pte Ltd	479	1812	0	0	0	2291	
	Chip Hoe Enterprise Sdn Bhd	0	0	0	0	0	0	Figures n.a.
07-785124		232	0	5	0	0	237	
07-785124		232	0	0	0	0	232	
	FELDA	8268	0	0	0	0	8268	
07-957437	Eastern Plantation Agency (J) SB	987	0	0	0	0	987	
	Kumpulan Bertan Plantations Bhd	1031	0	0	0	0	1031	
06-981218		45	371	0	0	0	416	
07-901210	Taiko Plantations Sdn Bhd	619	0	0	0	0	619	
07-722076	Eastern Plantation Agency (J) SB	720	0	0	0	0	720	
07-221679	Eastern Plantation Agency (J) SB	2100	355	0	0	0	2455	
07-781287	Eastern Plantation Agency (J) SB	1560	0	0	0	0	1560	
07-961261	Eastern Plantation Agency (J) SB	989	0	0	0	0	989	
07-783006	Taiko Plantations Sdn Bhd	1588	0	0	0	0	1588	
07-561548	Lee Plantations Pte Ltd	209	79	49	0	0	337	
01-761564	Eastern Plantation Agency (J) SB	1941	0	0	0	0	1941	
03-6369411/2		125	178	0	0	0	303	
06-222856/224943		549	580	0	0	0	1129	
07-785116	Kumpulan Guthrie Sdn Bhd	573	89	0	0	2812	3474	Pineapples
07-786068/786028		0	0	0	0	0	0	Figures n.a.
06-224717		543	441	0	0	1	985	
07-941219		0	0	0	0	0	0	Figures n.a.
07-66111		0	0	0	0	0	0	Figures n.a.
07-891491		0	0	0	0	0	0	Figures n.a.
01-761606	Eastern Plantation Agency (J) SB	1723	0	0	0	0	1723	
01-761606	Eastern Plantation Agency (J) SB	1816	0	0	0	0	1816	
06-922707		0	0	0	0	0	0	Figures n.a.
07-784109	Asiatic Development Berhad	649	0	0	0	0	649	
07-911262		0	0	0	0	0	0	Figures n.a.
07-441943		0	0	0	0	0	147	
07-785133		0	0	0	0	0	207	
06-223792		0	0	0	0	0	0	Figures n.a.
07-786188	Southern Realty (M) Sdn Bhd	1099	0	0	0	0	1099	
07-488234		3778	15	0	0	0	3785	
07-831277		0	1034	0	0	0	1034	
09-978117	Kluang Estates Sdn Bhd	364	694	0	0	0	1058	
01-761406		817	0	0	0	0	817	
07-951809	Kumpulan Guthrie Sdn Bhd	827	763	0	0	0	1590	
01-761406	Eastern Plant. Agency (J) S/B	495	0	0	0	0	495	
07-224825		1765	0	0	0	0	1765	
07-488237		1724	0	0	0	0	1724	
07-783121	Kumpulan Guthrie Sdn Bhd	2209	0	0	0	0	2209	
07-961962	Socfin Co Bhd	0	0	0	0	0	0	Figures n.a.
07-781234	Gergaji Management Sdn Bhd	1552	563	40	0	0	2155	
07-511239	Lee Plantations Pte Ltd	35	151	0	0	0	186	
07-501246		1718	0	0	0	0	1718	
07-341128	Lee Plantations Pte Ltd	453	312	24	0	0	789	
07-989219	H.M.P. Bhd	558	1350	0	0	0	1908	
07-611877	Southern Realty (M) Sdn Bhd	657	202	0	0	36	895	
07-66324		0	0	0	0	0	1042	
07-591550		0	0	0	0	0	0	Figures n.a.
07-631124	H.M.P. Bhd	2035	242	0	0	0	2277	
		0	0	0	0	0	0	Figures n.a.
07-466230		100	0	0	0	0	100	
07-783262/048		0	0	0	0	0	0	Figures n.a.
07-612673		207	0	0	0	0	207	
07-784107/130		0	0	0	0	0	190	
81134/39/43		3138	660	32	0	0	3830	
07-722546	Yong Peng Realty Sdn Bhd	430	0	0	0	0	430	
		0	0	0	0	0	0	Figures n.a.
06-921259		0	0	0	0	0	85	
07-783358		0	0	0	0	0	0	Figures n.a.
06-981310	Asiatic Development Berhad	499	739	645	0	0	1883	
06-932231/2	H.M.P. Bhd	606	741	0	0	0	1347	

■ Johor Cont.

Tangkak Quarry Estate	P O Box 503, 84900 Tangkak	The Manager
Tanjung Sembunyi Estate	P O Box 14, 83007 Batu Pahat	The Manager
Tebrau Estate	K B 510, 81109 Johor Bahru	Ismail Batain
Tekoh Bah Hong Estate	Layang-Layang, 81850 Kluang	The Manager
Teluk Segamat Group Estate	P O Box 511, 81909 Kota Tinggi	B P Bedford
Temilang Berchong Estate	K B 104, 84600 Pasir, Muar	T C B Iskandar
Ten Lot Estate	P O Box 12, 81907 Kota Tinggi	The Manager
Teo Trading Sdn Bhd	1/4 Miles Jalan Batu Pahat, 86100 Air Hitam	The Manager
Tereh Selatan Estate	K B 537, 86009 Kluang	Se Kim Wan
Tereh Utara Estate	K B 536, 86009 Kota Tinggi	Katar Jamin
Tertinggi Estate	K B No 118, 86609 Paloh	Lim Men Jang
Tey Ah Kau	14 Jalan Lembak, 86000 Kluang	The Manager
Ty Seorcong Estate	P O Box 14, 6-2 Jln Pahlawan, 83000 Batu Pahat	Low Choon Wah
Tiang Guan Estate	P O Box 49, 83007 Batu Pahat	The Manager
Tinor Estate	Bag Berkunet 114, 86609 Paloh	Mau Jit Jew
Tiong Kiat Estate	Paloh, 86600 Kluang	The Manager
Tong Hing Estate	K B 103, 81759 Masai	Osulki HJ Nasir
Tun Dr Ismail Estate	K B 102, 86200 Simpang Rengas	Mohd Ali Bawal
Tung Loan Estate	142 Jalan Lumba Kuda, 80300 Johor Bahru	The Manager
Tung Len Estate	Senai, 81400 Kulai	The Manager
Tunjuk Laut Estate	K B 517, 86909 Kota Tinggi	Liong Ting
Ulu Cenang Estate	Locked Bag No. 114, 81000 Kulai	The Manager
Ulu Papan Estate	Peti Surat No 66, 81907 Kota Tinggi	Haji Jamaludin b. Keria
Ulu Remis Estate	P O Box 103, 81850 Layang-layang	Chiah Hai Cheng
Ulu Sanglang Estate	Kulai, 81000 Johor Bahru	The Manager
Ulu Sebel Estate	P O Box 113, 81000 Kulai	Sheikh Ismail Hassan
Ulu Sebel Palm Oil Mill	T S T No. 22, 81000 Kulai	Kok Pok Yew
Ulu Tiram Estate	K B 710, 80990 Johor Bahru	Jimmy Tan Ksy Woo
Uluac Estate	P O Box 64, 85007 Segamat	Ramli b. Sarip
Union Estate	P O Box 101, 81700 Yong Peng	N Arulampalan
United M'yan Pineapple Estate	7 Mile Jalan Seudai, 80200 Johor Bahru	The Manager
United Malacca Rubber Ests Bhd	85100 Batu Anam, Segamat	Chan Yow Fong
United Malacca Rubber Ests Bhd	P O Box 5, 81557 Gelang Patah	Sin Boek Yong
United Malayan Agri. Corp. Bhd	P O Box 64, 85007 Segamat	Syed Hashim b. Syed Abd Rahman
Viswanathan Estate	P O Box 52, 81907 Kota Tinggi	P R Viswanathan
Voules Estate	K B No 506, 85009 Segamat	S Sambasivamurthy
Welch Estate	P O Box 102, 85200 Jementah, Segamat	J Peters
Weli Realty Sdn Bhd	14 Jalan Bakri, 84000 Muar	The Manager
Wessington Estate	Locked Bag No. 101, 86300 Rengas	The Manager
Woh Hong Estate	171 Jln Limau, Tan Tiran Baru, 81800 Ulu Tiram	Chooing Ming Kong
Woon Chong Sam Estate	86800 Mersing	The Manager
Yap Plantations	38 Jalan Lembak, 86600 Paloh	The Manager
Yayaan Johor Estate	K B 119, 81000 Kulai	Fawzi Ahmad
Yiu Plantations Sdn Bhd	18 1/2 Miles, 81900 Kota Tinggi	The Manager
Yong Chit Palm Oil Estate	4 Miles Jalan Mersing, 81900 Kota Tinggi	The Manager
Yong Peng Estate	P O Box 101, 81700 Yong Peng	N Arulampalan
Yong Peng Estate	c/o No 5, 1st Floor Jln Ros, 85000 Segamat	Dato Lim Bah
Yong Peng River Estate	P O Box 1, 81700 Yong Peng	Onq Hook Song
Yoo Yuen & Co Pte Ltd	Terbau	The Manager
Yow Hoe Bus Co Bhd	21-2 Jalan Genuang, 85000 Segamat	The Manager
Yukong Estate	P O Box 702, Johor Bahru	The Manager
Yule Catto Plantations Sdn Bhd	P O Box 507, 86007 Kluang	Alex Walker

■ KEDAH

Amir & Ml Nasir Kongsian Estate	c/o P O Box 4, 08007 Sungai Potani	The Manager
Anak Kulim Estate	09009 Kulim	Lau King Lian
Badenoch Estate	Peti Surat W D 304, 09300 Kuala Ketil	S. Veppan
Bagan Sena Estate	Peti Surat No 202, 09009 Kulim	Pun Kaw Chai
Bakai Estate (Lee Rubber Estate)	P O Box 203, 09300 Kuala Ketil	Tuan Haji Osman b. Ismail
Ban Aun Estate	09400 Padang Serai	The Manager
Ban Chuan Hatt Estate	1561 Jalan Kota, 05000 Alor Setar	The Manager
Ban Eng Estate	08100 Bendor	The Manager
Ban Hup Song Estate	P O Box 5, 09400 Padang Serai	The Manager
Ban Tong Plantation Sdn Bhd	Junjong, Karangan, 09007 Kulim	The Manager
Bandar Hai Estate	13 Jln Badlishah, 09200 Baling	Tan Geok Tang
Batu Lintang Estate	09800 Sertang	Zainal Abidin b. Muhammad
Batu Pekaka Estate	P O Box 306, 09300 Kuala Ketil	M. A. Joshua
Berjaya Estate	Bayan Sarak, 34950 Bandar Bahru	The Manager
Booy Estate Sdn Bhd	Sungai Ketapang, 08300 Gurun	The Manager
Bukit Karang	09400 Padang Serai	The Manager
Bukit Lembu Estate	Peti Surat 41, 08009 Sg Patani	S. Rappasamy, PJK
Bukit Mertajam Estate	P O Box MD 309, 09009 Kulim	Ali Wazlan b. Mohamed
Bukit Perak Estate	Wakil Pos Sungai Tiang, 06750 Pendang	Hj Ml Taib b. Hj Hassan
Bukit Selarong Estate	09400 Padang Serai	Abdul Matallib b Hj Nih P. Shanmagan

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
06-932231		0	0	0	0	0	221	
07-454235		0	0	0	0	0	0	Figures n.a
07-333270	Eastern Plantation Agency (J) SB	875	369	0	3	3	1250	Coffee
07-229284		0	0	0	0	0	0	Figures n.a
07-221148	Boustead Estates Agency Sdn Bhd	2641	679	237	0	11	3568	
06-939231	Kumpulan Guthrie Sdn Bhd	1100	459	0	0	0	1559	
		0	0	0	0	0	0	Figures n.a
07-784130/107		0	0	0	0	0	0	Figures n.a
07-722755	Eastern Plantation Agency (J) SB	2408	0	213	0	0	2621	
07-781126	Eastern Plantation Agency (J) SB	2978	0	0	0	0	2978	
07-783331	Taiko Plantations Sdn Bhd	1598	0	0	0	0	1598	
07-719188		48	0	0	0	0	48	
07-488235		1399	94	0	0	0	1493	
07-441175		0	0	0	0	0	0	Figures n.a
07-783311	Sime Darby Plantations	1055	0	0	0	0	1055	
07-783147		0	0	0	0	0	496	
511504		1303	447	30	0	0	1780	
07-787870	Kumpulan Guthrie Sdn Bhd	2294	0	84	0	0	2378	
07-224215		0	0	0	0	0	0	Figures n.a
07-334721		0	0	0	0	0	112	
07-518055	Eastern Plantation Agency (J) SB	2713	0	0	0	0	2713	
07-681240	Kejora Management Service S/B	0	0	0	0	0	0	Figures n.a
01-760252		1887	702	0	0	0	2589	
07-787107/21	Kumpulan Guthrie Sdn Bhd	2254	0	241	0	0	2495	
07-229284		0	0	0	0	0	0	Figures n.a
07-681235		4013	0	0	0	0	4013	
07-681235	Johore Tenggara Oil Palm Sdn Bhd	12244	0	0	0	0	12244	
07-681235	Eastern Plantation Agency (J) SB	2286	0	18	0	0	2304	
01-730330	Yule Catto Plantations Sdn Bhd	1700	0	0	0	0	1700	
07-471878	Kumpulan Guthrie Sdn Bhd	280	0	0	0	0	280	
07-361281		0	0	0	0	0	187	
07-989211	Unitae Sdn Bhd	0	675	0	0	0	675	
07-501239	Unitae Sdn Bhd	977	114	106	0	0	1197	
		1700	0	0	0	0	1700	
07-831162		66	0	0	0	0	66	
07-909234	Taiko Plantations Sdn Bhd	220	1352	0	0	0	1572	
07-971131	H.M.P. Bhd	1133	290	0	0	0	1423	
06-921088		0	0	0	0	0	138	
07-785116	Kumpulan Guthrie Sdn Bhd	0	0	0	0	0	0	Figures n.a
		208	0	0	0	0	208	
07-781596		0	0	0	0	0	0	Figures n.a
07-716197		0	0	0	0	0	0	Figures n.a
01-761706	Eastern Plantation Agency (J) SB	1794	0	0	0	0	1794	
07-50501		0	0	0	0	0	0	Figures n.a
07-443638		0	0	0	0	0	0	Figures n.a
07-471208	Kumpulan Guthrie Sdn Bhd	2082	1331	0	0	0	3413	
07-912799		64	0	0	0	0	64	
07-471916		186	372	4	0	0	562	
		0	0	0	0	0	143	
07-911204		0	0	0	0	0	48	
		0	0	0	0	0	0	Figures n.a
07-711611		3458	1694	143	0	0	5295	
		0	0	0	0	0	93	
04-572344	Kumpulan Guthrie Sdn Bhd	0	1492	0	0	0	1492	
04-463014	Sime Darby Plantations	373	1333	0	0	0	1706	
04-546226	Dunlop Estates Bhd	510	600	0	0	52	1162	
04-463343		81	704	142	0	0	927	
		0	0	0	0	0	164	
04-721881		0	0	0	0	0	73	
04-364421		0	0	0	0	0	0	Figures n.a
		0	0	0	0	0	146	
04-511252		0	0	0	0	0	141	
		13	120	0	0	0	133	
04-547131	Taiko Plantations Sdn Bhd	902	493	0	0	0	1395	
04-463234/463259	Boustead Estates Agency	648	918	0	1	0	1566	
	Chin Tit Boon	0	0	0	0	0	139	
		0	0	0	0	0	118	
		0	106	0	0	0	106	
04-481021	Plantation Agencies Sdn Bhd	0	722	0	0	0	722	
03-2419044	Boustead Estates Agency Sdn Bhd	2226	1511	0	0	0	3737	
04-410404	Harrissons M'sian Plantations Bhd	0	4161	0	0	0	4161	
04-545233	Kumpulan Guthrie Sdn Bhd	637	1242	83	12	0	1974	

Name of Estate	Address	Manager
■ Kedah Cont.		
Bukit Sembilan & Riverside Ests	09300 Kuala Ketil	Lim Yeng Chin
Bukit Sidin Estate	09009 Kulim	P G Naidu
Bukit Teban Estate	3450 Permatang Pasir	Leong Heng Khoo
Buntar Estate	09850 Serdang	Leong Heng Khoo
Central Kedah Estate	08100 Bedong	V. E. Subramaniam
Cheng Hock Estate	P O Box 79, 05700 Alor Setar	Kong Cheng Hock
Chong Eng Estate	Chong Eng Sawmill, Bekor Arang, 08000 Sungai Petani.	The Manager
Dublin Estate	09700 Karangan	The Manager
EMPER-ty, Genting	38 Pekan Baru, 06010 Changlun	Suteris b. Anand
Eng Choon Estate	09600 Lunas	The Manager
Eng Min Estate	Sungai Bata, 08100 Bedong	The Manager
Erico Estate	Sungai Krub, 09700 Karangan	The Manager
Evergreen Estate	09100 Baling	The Manager
Gin Koon Estate	09800 Serdang	Mrs. Saad b. Raml
Goh Kim Hsat Estate	89 Main Road, 09600 Lunas	The Manager
Gracelyn Estate	Sungai Lalang, 08100 Bedong Post	The Manager
Guan Lee Estate	10 Jalan Bek, 08000 Sungai Petani	The Manager
Guan Lee Estate	Arau	The Manager
Haji Ariffin Estate	72-G Jalan Kempong Bharu, 08000 Sungai Petani	The Manager
Harvard Estate	08100 Bedong	S. Ramasrishnan
Haledale Estate, Sg Petani	Batu 4 Jln Kuala Ketil, 08000 Sungai Petani	Siglapah K/O Kandasamy
Hendon Estate	c/o Selama Estate, 09000 Serdang	The Manager
Heng Song Rubber Estate	Bukit Junun, 06700 Pendang	The Manager
Henrietta Estate	POMD 2, 09400 Padang Serai	Koh Tian Soo
Hin Giap Estate	197 Jalan Aseel, 09000 Kulim	The Manager
Hock Boon Guan Estate	28 Jalan Tun Abdul Halim, 05100 Alor Setar	The Manager
Hock Hoo Song Estate	32 Kota Sarang Semut, 06800 Alor Setar	The Manager
Hock Kim Estate	c/o Hock Eng Estate, 11300 Tasek Glapar, S, Perai	Wong Fook Guan
Hock Luan Bhd	11 Jalan Kempong Bharu, 08000 Sungai Petani	The Manager
Hock Soon Estate	59-D Jln Tuang, Teluk Anson, 05200 Alor Setar	The Manager
Island Oil Palm Plantations S/B	Bekor Arang, 08000 Sungai Petani	The Manager
Jangkong Estate Sdn Bhd	Karangan, 09000 Kulim	Chong Boon Jock & Chong Hoo Joo
Jentaya Estate	Batu 8, Jalan Jeniang, 08100 Gurun	Mat Hj Syed
K.M.S. Estate	08000 Sungai Petani	The Manager
Kweng Song Estate	528 Jalan Kuala Ketil, 08000 Sungai Petani	The Manager
Kiet Loong Estate	1 Jalan Jempur, 05460 Alor Setar	Lee Kiet Soon
Kilang Getah Bedong	08100 Bedong	Harizan b. Mohd Rizza
Kim Seng Estate	P O Box 204, 09300 Kuala Ketil	Gani Chek Peng
Kuala Ketil Estate	09300 Kuala Ketil	Raja Idris/ Raja Shahrizan
Kuala Muda Rubber Estate	08009 Sungai Petani	Tan Kang Wye
Kupang Estate	09200 Baling	Lim Peng Hor
LAPP Kedah	Jalan Tunku Ibrahim, 05000 Alor Setar	The Manager
Ladang Getah Sungai Toh	Pawang, 08100 Bedong	K. Krishnasamy
Ladang Jerai	08100 Bedong	Knoo Swee Guan, PJK
Ladang Padang Bahuh	P O Box 10, 08007 Sg. Petani	S. Kanapathy
Ladang Peribadikan Kedah	P O Box 1, 08007 Sungai Petani	Syed Ali b. Syed Jan Al-Jediri
Ladang Sungai Dingin	P O Box 201, 09700 Karangan	Isahmet Khoo Heng Thor
Lee Guan Rubber Estate Ltd	Kuala Dingin, Selama, 09810 Serdang	The Manager
Lee Hap Estate Sdn Bhd	34950 Amdar Bahru	The Manager
Lee Hys Realty Sdn Bhd	Semeling, 08100 Bedong	The Manager
Leanta Plantation Sdn Bhd	Gurun/Teloi Kiri, 08000 Sungai Petani	The Manager
Lee Plantations (Bakai)	P O Box 201, 09300 Kuala Ketil	The Manager
Lee Komajuan Penanang Padil Kedah	Jalan Tunku Ibrahim, 05000 Alor Setar	Mohd Kassim b. Mural
Lim Cheong Sdn Bhd	19 3/4 Miles Jitra-Changlun Rd, 06010 Changlun	The Manager
Lim Heng Tong Estate	19 Jalan Kempong Bharu, 08000 Sungai Petani	The Manager
Lo Pau Kim Estate	201-A Jalan Tunku Putra, 09000 Kulim	The Manager
Lok Teik Chooi	34950 Cina, 05000 Alor Setar	Lok Beng Han
Lubok Anak Batu Estate	09300 Kuala Ketil	The Manager
Lubok Sogintah Estate	09300 Kuala Ketil	The Manager
Malakoff (Stathard) Estate	09300 Kuala Ketil	The Manager
N.S.AI Estate	08100 Bedong	The Manager
Nam Hap Song Estate	Kuala Selama, 34950 Bandar Bahru	The Manager
Nam Han Co Estate	25 1/2 Miles Jalan Kulim, 34950 Bandar Bahru	The Manager
Neoh Eng Guan Tikan Batu Estate	Kuala Muda, 08009 Sungai Petani	The Manager
Padang Muiha Plantation	P O Box MD 202, 09400 Padang Serai	Wan Asi Min
Padang Sera Estate	15 1/2 Miles Jalan Kulim, 09400 Padang Serai	The Manager
Patani Para Estate	08009 Sungai Petani	Tan Jin Sawe
Paya Kamunting Estate	Jitra, North Kedah, P O Box 22, 06007 Jitra	Lian Chee Keong
Pelan Estate	09009 Kulim	K Chandrasekharan
Perb. Komajuan N. Kedah	P O Box 3, 08007 Sungai Petani	Zahari Mohd. Nusi
Perkuburan Orang Cina	21 Jalan Merbok, 08000 Sungai Petani	The Manager
Perladangan Madi Sdn Bhd	Teloi Kiri, 08000 Kuala Muda	The Manager
Pin Koh Estate	09800 Serdang	The Manager
Pinang Tunggal Estate	40th Milestone, Jln Kuala Ketil, 08000 Sungai Petani	Chiah Han Song
Rakyat Laka Temin Estate	Jitra Post Office, 06009 Jitra	Zakiffly b. Ali

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
04-481001/463214	Asiatic Development Berhad	78	896	0	0	0	1074	
04-546228	Plantation Agencies Sdn Bhd	334	792	0	0	0	1126	
04-561628	Taiko Plantations Sdn Bhd	96	139	0	0	0	235	
04-547248	Taiko Plantations Sdn Bhd	761	230	0	0	0	991	
04-481128		49	10	72	0	0	131	
04-728828		0	44	0	0	0	44	
04-412551		0	0	0	0	0	56	
04-546231/6	Kumpulan Guthrie Sdn Bhd	126	4090	6	0	0	4222	
04-741225/01-336286	Estet Pakebun Kecil Sdn Bhd	0	1386	0	0	0	1386	
		0	0	0	0	0	133	
04-641263		0	0	0	0	0	90	
04-546213		331	0	0	0	0	331	
04-343342/342670		0	0	0	0	0	153	
05-517844	Taiko Plantations Sdn Bhd	352	574	0	0	0	926	
		0	0	0	0	0	44	
		0	0	0	0	0	78	
		0	0	0	0	0	62	
04-755268		0	0	0	0	0	158	
04-413014	KPM Khidmat Sdn Bhd	9	360	0	0	0	369	
04-461026/7	Kumpulan Guthrie Sdn Bhd	0	2301	0	0	0	2301	
		0	137	0	0	0	137	
04-804140		0	0	0	0	0	263	
04-462241		14	373	0	0	0	387	
04-545124	Dunlop Estates Bhd	1185	121	0	0	147	1453	
04-572454		64	11	0	0	0	75	
		0	39	0	0	0	39	
04-791215		0	0	0	0	0	181	
	Plantation Agencies Sdn Bhd	0	120	0	0	0	120	
		0	0	0	0	0	341	
04-721903		0	0	0	0	0	85	
04-412551/751		810	0	0	0	0	810	
04-546228		107	0	0	0	0	107	
04-464294	Austral Enterprises Bhd	1648	438	0	0	0	2086	
		0	0	0	0	0	1680	
		0	79	0	0	0	79	
04-412813/413506		0	113	0	0	0	113	
04-722540		0	0	0	0	0	0	Figures n.a
04-481026/7	Kumpulan Guthrie Sdn Bhd	0	0	0	0	0	0	
04-463248	Kim Seng Realty Sdn Bhd	174	462	0	0	17	653	
04-463237	Harrisons M'sian Plantations Bhd	0	1612	0	0	0	1612	
04-411017	Taiko Plantation Sdn Bhd	61	493	0	0	0	554	
04-401224	Taiko Plantations Sdn Bhd	60	494	0	0	0	554	
04-723811/635		0	100	0	0	0	100	
04-461309	Plantation Agencies Sdn Bhd	93	1978	0	0	7	2078	
04-481026/7	Kumpulan Guthrie Sdn Bhd	0	2189	0	0	0	2189	
04-412352	Kumpulan Guthrie Sdn Bhd	316	1461	0	0	0	1770	
04-413201		19	1330	0	0	0	1349	
04-546233	Kumpulan Guthrie Sdn Bhd	502	3710	0	0	0	4212	
04-804067		145	0	0	0	0	145	
05-984267		0	0	0	0	0	83	
04-461233		0	0	0	0	0	235	
04-61145		0	0	0	0	0	0	Figures n.a
04-463343		0	0	0	0	0	1043	
04-713850		0	279	0	0	0	279	
04-741223		0	0	0	0	0	404	
04-413149		0	0	0	0	0	266	
04-571087		65	95	0	0	0	160	
04-723391		53	0	0	0	0	53	
04-463241		0	0	0	0	0	288	
04-463302		0	0	0	0	0	1041	
04-521223		0	0	0	0	0	1004	
04-461275		0	0	0	0	0	106	
04-511182		0	0	0	0	0	0	Figures n.a
04-365048		0	0	0	0	0	0	Figures n.a
		0	0	0	0	0	320	
04-545212	The East Asiatic Co (M) Bhd	126	2072	0	0	0	2198	
04-721741/726781		0	0	0	0	0	0	Figures n.a
04-463119	Sime Darby Plantations	0	795	0	0	0	795	
04-771875	Asiatic Development Berhad	0	717	0	0	0	717	
04-546227	Taiko Plantations Sdn Bhd	780	1374	215	0	0	2369	
04-413201	Harrisons Malaysian Plantations	15	1417	0	0	0	1432	
04-412812		0	0	0	0	0	46	
		0	0	0	0	0	0	Figures n.a
		0	0	0	0	0	0	Figures n.a
04-65893/67404	Bahman Hydraulic Tin Bhd	77	1321	0	0	0	1399	
04-412936	Harrisons M'sian Plantations Bhd	0	2608	0	0	0	2608	
04-741221		0	0	0	0	0	0	

Name of Estate	Address	Manager
■ Kedah Cont.		
Riverside Estate	08100 Bedong	Liew Yong Chin
S.I.M.C. Estate	08100 Bedong	V. E. Subramaniam
SRS Sungai Batu Estate	Kg. Sungai Taika, 09800 Serdang	The Manager
Saudagar Din Bros Ltd	35-B Jalan Lengggar, 05460 Alor Setar	The Manager
Sourboro Estate	P O Box 10, 08007 Sungai Petani	The Manager
Selama Estate	09800 Serdang	Johory Yoo Kok Kiong
Selamat Ajer Putah Co	Padang Lantai, 08330 Gurun	The Manager
Seng Hong Estate	Lunas, 09600 Kulim	The Manager
Sim Thye Rubber Plantations	Hospital Road, 09000 Kulim	The Manager
Sin Huat Estate	Kuala Dingin, 09810 Solama	The Manager
Somw Estate	09800 Serdang	Hj Mohd Zain/Hj Abi Rahim A. Y.
Soon Anu Estate	Padang Cina, 09000 Kulim	The Manager
Soon Eng Hooi And Sons Sdn Bhd	106 Jalan Raya, 09600 Lunas	Soon Eui Keng
Soon Lee Estate	08500 Kuala Muda	The Manager
Southern Plantations Co	Sungai Tawar, 09100 Baling	The Manager
Stothard Estate	09300 Kuala Ketil	Onq Cheah Yoo
Sungai Bongkoh Estate	P O Box 1, 08100 Bedong	The Manager
Sungai Pedu Estate	08500 Kuala Muda	The Manager
Sungai Raya Estate	07000 Pulau Langkawi	Anthony Das Lucas
Sungai Tawar Estate	Tawar, 09100 Baling	The Manager
Sungei Ular Estate	P O Box 40 313, 09009 Kulim	The Manager
Tanjong Pau Estate	06000 Jitra	The Manager
Teh Ah Yau Palm Oil Estate	Sungai Tawar, 09100 Baling	The Manager
Thim Khoo Estate	09800 Serdang	The Manager
Thye Group	P O Box 20, 08007 Sungai Petani	A. P. Icob
Thye Sing Estate	Sungai Ular, 09000 Kulim	The Manager
Tok Barat Estate	Mukim Pulai, 09100 Baling	The Manager
Victoria Estate	09400 Padang Serai	P. Aranalai
Wellesley Lunas Estate	09600 Lunas	Simon s/o Francis
Yong Tiong Realty Sdn Bhd	Bandar Baru 25 1/2 Miles, 09000 Kulim	The Manager
■ KELANTAN		
An Lin Lee Estate	c/o Soon Cheong S/B, P O Box 10, 15700 Kota Bharu	The Manager
Ang Khai Seng Estate	2614 Jalan Che Su, 15000 Kota Bharu	The Manager
Arab Daalang Estate	1944/E Jalan Pergason, Kota Bharu	The Manager
Aw Hoo Chiu	74 Temangan Town, 18500 Machang	The Manager
Bocah Taku Estate	3861 Jalan Hamzah, 15050 Kota Bharu	The Manager
Bukit Badang Estate	3598 Jalan Ismail, 15000 Kota Bharu	The Manager
Bukit Bahah Estate	23rd Mile Machang, 18500 Machang	The Manager
Bukit China Estate	c/o P O Box 1, 15700 Kota Bharu	The Manager
Bukit Muka Estate	38 Pekan Tanah Merah, 17500 Tanah Merah	The Manager
Bukit Panau Estate	3926 Jalan Telipok, 15100 Kota Bharu	The Manager
Chow Meng Estate	18000 Kuala Krai	The Manager
Chiong Seng Co Sdn Bhd	189-191 Jalan Limbongan, 16800 Pasir Puteh	The Manager
Chong Teck Chuan Estate	1895-A Jalan Ismail, 15000 Kota Bharu	The Manager
Chua Rubber Estate Sdn Bhd	18300 Gua Musang	The Manager
Foo Chow Yong Estate	3604 Jalan Temenggong, 15000 Kota Bharu	The Manager
Foo See Moi Estate	509 Jalan Hillir Pasar, 15000 Kota Bharu	The Manager
Gan Thian Hai Estate	135 Jalan Hiburan, 17500 Tanah Merah	The Manager
Gua Musang Estate	Chin Teck Plantations, 18300 Gua Musang Est	Gen Tok Watt
Hock Seng Estate	3338 Jalan Sultanah Zainab, 15000 Kota Bharu	The Manager
Hoe Seng Bee Estate	1237 Jalan Hillir Pasir, 15000 Kota Bharu	The Manager
Hua San Estate	c/o Soon Cheong S/B, P O Box 10, 15700 Kota Bharu	Chong Sip Yu
Jernoh Estate	35 Jalan Pasir Hillir, 17500 Tanah Merah	The Manager
Kee Brothers Estate	3643 Jin Tongku Petra, Semerak, 15000 Kota Bharu	The Manager
Kelapa Sawit Sungai Tasan Estate	c/o Kuala Pertang Estate, 18000 Kuala Krai	The Manager
Keong Chew Estate	1895-A Jalan Ismail, 15000 Kota Bharu	The Manager
Kerilla Estate	17509 Tanah Merah	Raghibir Singh
Khong Leong Estate	8 Main Road, 17500 Tanah Merah	The Manager
Kuala Gris Estate	18000 Kuala Krai	Mohd Taib b. Mohamad
Kuala Hsu Estate	18000 Kuala Krai	Tan Leng Teo
Kuala Hidang Estate	18000 Kuala Krai	Chiang Keng Leong
Kuala Pahi Estate	18000 Kuala Krai	Hj Zainal Ariffin
Kuala Pergau Estate	18500 P O Machang	Foo Teck Kim, JP
Kuala Pertang Estate	18000 Kuala Krai	G C Edwards
Lapan Kabu Estate	Pahi, 18000 Kuala Krai	Chow Fook Seng
Lian Aik Estate	75 Temangan Town, 18400 Temangan	Aw Tai Seng
Meng Meng Estate	1961-A Jin Dato Pati, 15000 Kota Bharu	Lee Aik Tong
Monykabang Estate	18000 Kuala Krai	Mi Kardin b. Mat Nor
Merlata Oil Palm Estate	Ulu Kelantan	The Manager
Paku Estate	Temenggong	The Manager
Pasir Besar Estate	18400 Temangan P.O.	Lau Kin Hai

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
04-481001	Asiatic Development Bhd	0	262	0	0	0	262	
04-481128	Perlis Plantation Bhd	0	553	0	0	0	553	
04-43104		0	0	0	0	0	0	Figures n.a.
04-713387		0	0	0	0	0	457	
04-412352		165	1643	0	0	0	1808	
04-547245	Asiatic Development Berhad	593	1212	0	0	0	1805	
04-462318		0	0	0	0	0	282	
04-22936		0	0	0	0	0	0	Figures n.a.
04-572657		0	0	0	0	0	112	
04-740260		32	34	0	0	0	66	
04-547348	Harrisons M'sian Plantations Bhd	244	633	34	0	0	912	
04-544233		0	0	0	0	0	0	Figures n.a.
04-544227		55	0	99	0	0	154	
04-544233		0	0	0	0	0	228	
		0	0	0	0	0	0	Figures n.a.
04-463218	Boustead Estates Agency Sdn Bhd	344	626	0	0	0	970	
04-461311		0	0	0	0	0	968	
04-62283	General Produce Agency Sdn Bhd	0	0	0	0	0	0	Figures n.a.
04-768214	Plantation Agencies Sdn Bhd	0	759	0	6	0	765	
04-24979/65533		0	0	0	0	0	0	Figures n.a.
04-572855	Socfin Co Bhd	0	2258	0	0	0	2258	
04-743264		0	0	0	0	0	869	
04-61000/9		0	0	0	0	0	0	Figures n.a.
04-547387		0	0	0	0	0	0	Figures n.a.
04-481080	Plantation Agencies Sdn Bhd	93	1978	0	0	7	2078	
04-571087		0	0	0	0	0	51	
		0	0	0	0	0	58	
04-545235	Harrisons M'sian Plantations Bhd	241	868	0	0	0	1109	
04-544226		442	124	0	0	0	566	
		0	0	0	0	0	0	Figures n.a.
09-782244	Goh Pang Chuan	0	895	0	0	0	895	
		0	0	0	0	0	42	
		0	0	0	0	0	46	
09-951367		25	56	0	0	0	81	
		0	41	0	0	0	41	
		0	0	0	0	0	49	
	KPM Khidmat Sdn Bhd	60	5	0	0	0	65	
		0	0	0	0	0	152	
		0	0	0	0	0	69	
		0	0	0	0	0	91	
		0	0	0	0	0	43	
09-761123		66	24	0	0	0	90	
		0	0	0	0	0	410	
		0	0	0	0	0	0	Figures n.a.
09-782312		0	0	0	0	0	61	
		0	0	0	0	0	95	
		0	0	0	0	0	51	
09-901982	Sin Thye Management Sdn Bhd	1376	0	0	0	0	1376	
		0	0	0	0	0	305	
		0	0	0	0	0	79	
09-782244	Goh Pang Chuan	0	212	0	0	0	212	
		0	0	0	0	0	81	
		0	0	0	0	0	58	
09-966220	Bank Pertanian Malaysia	199	0	0	0	0	199	
		0	0	0	0	0	493	
09-956323	Taiko Plantations Sdn Bhd	562	1533	0	0	0	2095	
		0	0	0	0	0	106	
09-785333	Taiko Plantation Sdn Bhd	664	421	64	0	3	1152	Rubber Nursery
09-966308	Taiko Plantations Sdn Bhd	0	520	0	0	0	520	
09-966260	Plantation Agencies Sdn Bhd	116	464	0	0	0	580	
09-966029	Dunlop Estates Bhd	294	401	0	0	11	706	
	Kluang Estates (1977) Sdn Bhd	219	353	0	0	0	572	
09-966220	Taiko Plantations Sdn Bhd	804	276	0	0	0	1080	
09-966327	Bousteads Estate Agency	1447	546	0	0	10	2003	
09-51367	Bousteads Estate Agency Sdn Bhd	41	0	0	0	0	41	
09-782261		7	129	4	0	0	140	
09-966242	H.M.P. Bhd	723	183	0	0	0	906	
		0	0	0	0	0	0	Figures n.a.
	Taiko Plantations Sdn Bhd	0	0	0	0	0	0	Figures n.a.
		299	52	0	0	0	351	

Name of Estate	Address	Manager
■ Kelantan Cont.		
Pasir Gajah Estate	18000 Kuala Krai	Rashidi b. Omar
Pasir Jinggi Estate	P O Box 117, 15710 Kota Bharu	Kan Kim Hai
Sg Bagan Estate	18500 Machang	Foo Teck Kim
Sg Durian Estate	187-E Jln Dato Pati, 17509 Kota Bharu	Chia Boon Chin
Sg Sokor Estate	17509 Tanah Merah	Wan Chin Yu
Sg Tasan Estate	c/o Kuala Bertang Estate, 18000 Kuala Krai	Saafain b. Jusoh
Sg Toku Estate	Bukit Aba, 18000 Kuala Krai	Eyu Toong Po
Sg Terah Estate	18100 Gaa Musang	Nik Mohd Yusoff Al-Haj
Sungai Nal Estate	P O Box 1, 15000 Kota Bharu	The Manager
Sungai Rakit Estate	39 1/2 Jalan Kuala Krai, 18000 Kuala Krai	The Manager
Syarikat Chua Rubber Estate	18300 Gaa Musang	Chua Paoy Chai
Sykt. Chiong Song Sdn Bhd	189-191 Jalan Limbongan, Parit Putih	The Manager
Taku Estate	18000 Kuala Krai	Tan Kong Hean
Tebing Tinggi & Ulu KUALI Est	KUALI BARU, 17500 Tanah Merah	Fing Kong Teck
Tong Ann Estate	2834 Jalan Ismail, 15000 Kota Bharu	Chua Chong Chon
Yayasan Estate	c/o Kuala Portang Estate, 18000 Kuala Krai	G C Edmonds
Yuen Hing Rubber Plantation Co	118J-N Jalan Ismail, 15000 Kota Bharu	The Manager
■ KUALA LUMPUR		
Aik Guan Hin Co	c/o 3 1/4 Miles, Jalan Cheras, 56100 Kuala Lumpur	The Manager
Aspatra Estate	213 Jalan Pekeliling, 50400 Kuala Lumpur	The Manager
Ayer Angat Estate	Bang. Ming Penthouse, Jln Bct Nanas, 50250 Kuala Lumpur	The Manager
Ban Hin Estate	72 Jalan Imbi, 55100 Kuala Lumpur	The Manager
Batu Bali Chinese Estate	567 Jln Tiong, 3rd Mile Ipoh Rd., 51100 Kuala Lumpur	The Manager
Batu Caves Estate	850 Medan Busan, off Jln Masjid India, 50100 K.L.	The Manager
Batu Estate	9th Floor Bangkok Bank, Jalan Bandar, 50000 Kuala Lumpur	The Manager
Bedford Estate	Roon 301, 1rd Floor, 86 Jln Masjid India, 50100 K.L.	The Manager
Bentong Perling	145B Jalan Birch, 52000 Kuala Lumpur	The Manager
Bidor Tahan Estate	15 Jalan Raja Chulan, 50200 Kuala Lumpur	The Manager
Bukit Kiara Estate	c/o 19 Jalan Ampang, 50450 Kuala Lumpur	The Manager
Bukit Nilai Estate	c/o Tan Ton Huat & Partners, Wisma Putra	The Manager
Cheong Wing Chan Estate	3 Lorong Sultan, 50000 Kuala Lumpur	The Manager
Cheras Estate	65-67 Jalan Barat, 55100 Kuala Lumpur	The Manager
Chew Kuan Neo Estate	3 1/4 Miles Jalan Kelang, 58000 Kuala Lumpur	The Manager
Chip Khuan Estate	P O Box 186, 53700 Kuala Lumpur	The Manager
Cheong Kow (Serdang) Estate	84-S Jalan Cheras, 56100 Kuala Lumpur	The Manager
Chow Fah Estate	3 Sultan Lane, 50000 Kuala Lumpur	The Manager
Chuan Huat Estate	4 High Street, 52000 Kuala Lumpur	The Manager
Damansara Jaya Sdn Bhd	8th Mile Damansara Road, 60000 Kuala Lumpur	The Manager
Daud Estate	113D Jalan Tunku Abd. Rahman, 50100 Kuala Lumpur	The Manager
Dunber Estate	374 Jalan Tunku Abd. Rahman, 50100 Kuala Lumpur	The Manager
Dundoo Estate	366 Circular Road,	The Manager
Edgrec Estate	24 Jalan Silang, 50050 Kuala Lumpur	The Manager
Espek Palm Oil Mill Sdn Bhd	5th Flr. Bgn Ibu Pejabat RISDA, Jalan Ampang, 50450 Kuala Lumpur	The Manager
Espek Palm Oil Mill Sdn Bhd	5th Flr. Bgn Ibu Pejabat RISDA, Jalan Ampang, 50450 Kuala Lumpur	The Manager
Femco Estate	46B-68 Jalan Ipoh, 51200 Kuala Lumpur	The Manager
Fourth Mile Estate	P O Box 180, 53700 Kuala Lumpur	The Manager
Gaik Liew Estate	2 Jalan Bukit Nanas, 50250 Kuala Lumpur	The Manager
Gan Theng Estate	85 Jalan Bandar, 50000 Kuala Lumpur	The Manager
Gonggang Estate	175 Jalan Ampang, 50450 Kuala Lumpur	The Manager
Harwhorden Estate	P O Box 1014, 53800 Kuala Lumpur	The Manager
Hock Soon Estate	Bang. Ming Penthouse, 2 Jln Bukit Nanas, 50250 K.L.	The Manager
Hong Aik Estate	2 Jalan Silang, 50000 Kuala Lumpur	Loong Sow Ching
Hong Bee Estate	Jalan Bndar, 50000 Kuala Lumpur	The Manager
Hool Lum Estate	6116 Blue Boy Mansion, Jln Tong Shin, 50200 Kuala Lumpur	The Manager
Hool Yip Estate	83 Jalan Lasser Ampang, 50450 Kuala Lumpur	The Manager
Hup Bee Estate	46 Jalan Pudu, 55100 Kuala Lumpur	The Manager
Indrajit Kaur Estate	Gombak, 53000 Kuala Lumpur	The Manager
Kan Song Realty	8th Mile Jalan Bentong,	The Manager
Kampung Petcha Estate	19 Ampang Road, 50450 Kuala Lumpur	The Manager
Kancing Realty	5th Floor Wisma Teck Lee, 38 Jalan Tun Perak, 50050 K.L.	The Manager
Kelton Estate	Yee Song Aml Sdn Bhd, P O Box 399, 53800 Kuala Lumpur	The Manager
Khan San Estate	11 Jalan Silang, 50050 Kuala Lumpur	The Manager
Kim Wing Estate	200 High Street, 52000 Kuala Lumpur	The Manager
Kok Fai Yin Estate	11 Cross Street, 2nd Floor,	The Manager
Kv. Al. R.M.R. Kepong Estate	75 Ampang Street, 50450 Kuala Lumpur	The Manager
Leah Ping Estate	393A Jalan Tunku Abdul Rahman, 50100 Kuala Lumpur	The Manager
Lim Pak Tow Estate	150 Jalan Lake Yew, 55200 Kuala Lumpur	The Manager
Lim Yew Kong Estate	45 Kemuning Street, 50300 Kuala Lumpur	The Manager
Matong Development Sdn Bhd	6,03B, 6th Flr. Wisma Central, Jalan Ampang, 50450 Kuala Lumpur	The Manager
My Chin Sui/Sons Rubber Est. S/B	19 Jalan Ampang, 50450 Kuala Lumpur	The Manager
Pak wing Inv. Estate	10-14 Jalan Bndar, 50000 Kuala Lumpur	The Manager
Perbadanan Ladang Tabung Hj. S/B	6th Flr. Bgn. Bank Rakyat, 140 Jln Ipoh, 51200 Kuala Lumpur	The Manager
Rempu Malay Estate	11 Jalan Sultan, 50000 Kuala Lumpur	The Manager

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
09-966308	Taiko Plantations Sdn Bhd	265	624	0	0	0	889	
09-784446		0	133	0	0	0	133	
09-978317	Kluang Estates (1977) Sdn Bhd	344	695	0	0	0	1039	
		183	266	0	0	0	449	
01-975936	Taiko Plantations Sdn Bhd	588	276	0	0	0	864	
	Taiko Plantations Sdn Bhd	199	0	0	0	0	199	
09-785333	Taiko Plantations Sdn Bhd	1094	0	0	0	0	1094	
09-901248	Sykt Ladang Sg Terah	0	5929	0	0	0	5929	
		0	0	0	0	0	42	
09-966200		0	0	0	0	0	53	
09-901248		335	0	0	0	0	335	
09-761123		66	24	0	0	0	90	
09-966359	Taiko Plantations Sdn Bhd	0	626	0	0	0	626	
09-956124	Seen Song Group	186	874	0	0	0	1060	
		77	100	0	0	0	177	
	Taiko Plantations Sdn Bhd	61	30	0	0	0	91	
09-781794		80	150	0	0	0	230	
03-618660		0	0	0	0	0	70	
03-289079		0	0	0	0	0	82	
-		0	0	0	0	0	442	
-		0	0	0	0	0	55	
-		0	0	0	0	0	80	
03-985066		0	0	0	0	0	211	
03-672843		0	0	0	0	0	165	
03-989415		600	200	300	0	0	1100	
03-421390		0	0	0	0	0	69	
-		0	0	0	0	0	568	
-		0	0	0	0	0	632	
-		0	0	0	0	0	246	
03-225395/283039		0	0	0	0	0	1506	
03-331131		0	0	0	0	0	719	
		0	0	0	0	0	80	
03-280811		22	0	0	0	0	22	
-		0	0	0	0	0	80	
-		0	0	0	0	0	57	
-		0	0	0	0	0	41	
03-782045		0	0	0	0	0	584	
-		0	0	0	0	0	164	
-		0	0	0	0	0	71	
-		0	0	0	0	0	221	
-		0	0	0	0	0	45	
-		2025	0	0	0	0	2025	
-		8100	0	0	0	0	8100	
-		0	0	0	0	0	54	
-		0	0	0	0	0	86	
-		0	0	0	0	0	71	
-		0	0	0	0	0	562	
-		0	0	0	0	0	83	
03-635526		0	0	0	0	0	634	
		0	0	0	0	0	62	
03-2387489		180	0	0	0	0	180	
-		0	0	0	0	0	534	
-		0	0	0	0	0	100	
-		0	0	0	0	0	89	
-		0	0	0	0	0	166	
03-661316		0	0	0	0	0	0	
03-634859		0	0	0	0	0	408	
-		0	0	0	0	0	188	
03-985238		0	0	0	0	0	45	
03-207033		0	52	0	0	0	52	
-		0	0	0	0	0	46	
-		0	0	0	0	0	80	
03-286926		0	144	0	0	0	144	
03-668141		0	0	0	0	0	53	
03-980149/983461		0	0	0	0	0	55	
03-484884		0	0	0	0	0	82	
03-985018		0	0	0	0	0	299	
03-416611		61	0	0	0	0	61	
03-225877/78/79/80		3551	917	1856	0	0	6324	
09-221436		0	156	0	0	0	156	
03-987767		12353	0	0	0	0	12353	
03-286946		0	0	0	0	0	584	

Figures n.a

Name of Estate	Address	Manager
■ Kuala Lumpur Cont.		
Sang Lee Estate	101 Jalan Bandar, 50000 Kuala Lumpur	The Manager
Sagaria Estate	P O Box 295 & 1070, 53800 Kuala Lumpur	The Manager
Sin Yow Seng Estate	72 Jalan Bandar, 50000 Kuala Lumpur	The Manager
Sionne Estate	38 Leboh Ampang, 50100 Kuala Lumpur	The Manager
Sykt. Peladang Luth	6th Floor Bangunan Bank Rakyat, 140 Jln Ipoh, 51200 Kuala Lumpur	The Manager
Tan Khay Estate	7 Doraisamy Street, 50300 Kuala Lumpur	The Manager
Waterfall Estate	c/o 42 Rowang Tin Area, Gombak, 53000 Kuala Lumpur	The Manager
Yap Han Soo Estate	44-4 Jalan Pudu Lama, 50200 Kuala Lumpur	The Manager
■ MALACCA		
Ayer Malak Rubber Co Bhd	22 Jalan Hang Jebat, 75200 Malacca	Ignatius Ong Ah Hoo
Ayer Panas Estate	16 Miles, Bemban Pos, 77200 Malacca	Tan Hoon Cher
Ayer Salak Rubber Plantation	75250 Ayer Salak	The Manager
Ayer Tengah Estate	140 Jalan Temenggong, 75000 Malacca	The Manager
Bekoh Estate	K B 1801, 77109 Pejabat Pos Asahan	Lim Tan Jan
Bentan Estate	77000 Jasin	The Manager
Bereshong Sdn Bhd	Lot H S (D) 218 Ayer Panas, 77000 Jasin	The Manager
Bertan Estate	76100 Durian Tunggal	Mohd Daud b. Mohd
Bukit Asahan Estate	77100 Asahan	Azizi Meer Ngah
Bukit Katil Estate	7th Mile Bukit Katil Road, 75450 Bukit Katil	The Manager
Bukit Kledek Estate	77100 Asahan	J P Ho
Chai Soon Hin Estate	21 1/2 Miles Selandar, 77000 Jasin	The Manager
Cheng Estate	Alor Gajah, 78000 Malacca	Mgo Kok Chai
Chian Chee Kiang Estate	389 Jalan Tenggara,	The Manager
Chu Bee Sdn Bhd	Kenang, 77000 Jasin	The Manager
Diamond Jubilee	77000 Jasin	The Manager
Felcra Lembah Kesang I Estate	d/a Pej Pos Merlimau, 77300 Malacca	The Manager
Gadok Estate	73000 Tampin	The Manager
Getah Bekoh Estate	Locked Bag No. 1801, 77100 Asahan	The Manager
Gin Aik Sdn Bhd	75460 Bukit Lintang/Ayer Malak	The Manager
Guan Chai Hin (Jus Division)	76470 Selandar	The Manager
Guan Chai Hin (Nyalas Division)	76470 Selandar	The Manager
Ho Seng San Estate	10 Jalan Bendahara, 75100 Malacca	The Manager
Hock Lal Estate	Lendu, 78000 Alor Gajah	The Manager
Hock Soon Hong Estate	5539-C Tanjung Lerah, Malacca	The Manager
Hong Tong Estate	78300 Masjid Tanah	The Manager
Hup Lee Estate	3730 Jalan Kesang, 77000 Jasin	The Manager
Jasin Estate	Bag Berkunci 1703, 77009 Jasin	Kou Hwee Gee
Jasin Lulang Estate	K B No J1705, 77009 Jasin	Mi Lai Wah
Jiddi Jonez Enterprises Sdn Bhd	Ayer Panas, 77000 Jasin	The Manager
Kempan Devon Estate	77300 Merlimau	Michael Ieh Ah Moo
Kemuning Estate	Gemenchoh Division, 76460 Tebing P O	Chin Kian Hing
Kuala Kepis Estate	140 Jalan Temenggong, 75000 Malacca	The Manager
Lau Leong (Nyalas & Chabau) Est.	10 Jalan Bendahara, 75100 Malacca	Lau Boon Kwee
Lau Leong (Tanjung) Estate	10 Jalan Bendahara, 75100 Malacca	Low Kim Ting
Lau Leong Estate/Sungai Dua Est.	10 Jalan Bendahara, 75100 Malacca	Low Bong Hong
Lau Leong Malaka Realty Sdn Bhd	10 Jalan Bendahara, 75100 Malacca	Lau Ikon Kim
Lendu Estate	78000 Alor Gajah	Ding Toy Hwah
Lendu/Bembia Estates	Locked Bag No. 1603, 78000 Alor Gajah	Ding Toy Hwah
Lian Hin Estate	78000 Alor Gajah	The Manager
Lian Huat Estate	364 Jalan Bachang, Malacca	The Manager
Lian Teck Rubber Estate	21 Miles, 76470 Selandar	The Manager
Lion Shing Oil Palm Estate	66 Jalan Bunga Raya, 75100 Malacca	The Manager
Lim Kok Min Estate	239-D Bandar Hilir, 75000 Malacca	The Manager
Machap Estate	Alor Gajah P O, 78000 Malacca	Chiu Kim Koh
Malaka Pinda Estate	Alor Gajah P O, 78000 Malacca	Chiu Kim Koh
Masjid Tanah Estate	Masjid Tanah P O, 78300 Malacca	Chong Seng Hoo
Merlimau Estate	77300 Merlimau	K. Senevaseerajan
Mudak Sdn Bhd	Ayer Panas, 77000 Jasin	The Manager
New Keru Estate	Keru, 78000 Alor Gajah	The Manager
New Tanjung Olak Estate	140 Jalan Temenggong, 75000 Malacca	The Manager
Nora Ee Sdn Bhd	Air Panas, 77000 Jasin	The Manager
Nyalas Estate	77100 Asahan P O	Chong Kow Chui
Ong Guan Neo Estate	5419-0 Jalan Paya Ikan, Bukit Baru	The Manager
Ong Hin Tiang Estate	139 Jalan Tun Tan Cheng Lock,	The Manager
Pegoh Estate	78000 Alor Gajah	Tan Siak Koi
Poh Hong Plantation Sdn Bhd	Nyalas	The Manager
Rin Estate	10 Jalan Bendahara, Malacca	The Manager
Selandar Estate	Selandar P O, 76470 Malacca	Chew Lin Peng
Selatan Bahru Estate	77300 Merlimau	S. Ratnam

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
03-283895		0	0	0	0	0	1602	
03-2811324		0	0	0	0	0	0	Figures n.a
03-283323/933		0	0	0	0	0	328	
03-287440		0	0	0	0	0	118	
03-987767		970	0	0	0	0	970	
03-985071		0	0	0	0	0	155	
-		0	0	0	0	0	383	
03-285739		0	0	0	0	0	52	
07-969238	Ayer Molek Rubber Co Bhd	296	134	0	0	0	430	
-		120	128	5	0	0	253	
		0	0	0	0	0	87	
		65	325	0	0	0	390	
06-586059	Boustead Estates Agency Sdn Bhd	309	888	0	0	0	1197	
		0	0	0	0	0	1196	
06-226516/517		0	0	0	0	0	0	Figures n.a
06-581006	Kumpulan Guthrie Sdn Bhd	0	1084	0	0	0	1084	
06-586004	Kumpulan Guthrie Bhd	1309	1734	0	0	0	3043	
06-934235		0	0	0	0	0	206	
06-461231	Boustead Estates Agency Sdn Bhd	95	746	0	0	0	841	
06-224362/993		0	0	0	0	0	0	Figures n.a
06-561216	Asiatic Development Berhad	210	645	0	0	0	855	
06-222914		0	0	0	0	0	171	
06-931240		0	0	0	0	0	0	Figures n.a
06-591502	London Asiatic Rubber & Prod. Co	2796	0	0	0	0	2796	
06-391294	PELERA	0	0	0	0	0	0	Figures n.a
06-411031		413	73	0	0	0	486	
06-586059	Boustead Estates Agency Sdn Bhd	104	1067	0	0	0	1171	
06-222549		0	0	0	0	0	1008	
06-224362		41	0	0	0	0	41	
06-224362		70	50	0	0	0	120	
06-586045/222842		87	360	0	0	0	447	
06-223775		0	0	0	0	0	0	Figures n.a
06-42332		46	0	0	0	0	46	
06-541212		50	236	0	0	0	286	
06-591313		12	167	5	0	0	184	
06-591243	Sime Darby Plantations	339	402	0	0	0	741	
06-591205	Dunlop Estates Bhd	386	828	1059	0	109	2382	
06-226516/226517		366	0	0	0	0	366	
06-391305	Sime Darby Plantations	456	255	1072	0	0	1783	
06-466244	Kumpulan Guthrie Sdn Bhd	311	165	0	0	0	476	
		0	208	0	0	0	208	
06-222842		0	115	0	0	0	115	
06-222842		0	212	0	0	0	212	
06-222842		0	258	0	0	0	258	
06-222842		210	7012	0	0	0	7222	
06-561219	M. P. Evans (M) Sdn Bhd	0	187	0	0	0	187	
	M. P. Evans (M) Sdn Bhd	0	152	0	0	0	152	
06-561255		0	114	0	0	0	114	
06-561212		0	0	0	0	0	309	
		0	0	0	0	0	52	
06-222686		166	0	0	0	0	166	
06-225073		0	0	0	0	0	63	
06-561361	The United Malacca Rub. Est. Bhd	680	172	0	0	0	852	
06-561226	The United Malacca Rub. Est. Bhd	544	124	40	0	0	708	
06-541216	The United Malacca Rub. Est. Bhd	300	93	0	0	5	398	
06-391406	Sime Darby Plantations	0	609	1318	0	0	1927	
06-226516/226517		0	0	0	0	0	0	Figures n.a
		0	0	0	0	0	116	
		0	149	0	0	0	149	
06-222987		0	0	0	0	0	0	Figures n.a
06-586030	Unitac Sdn Bhd	303	485	0	0	0	788	
		0	97	0	0	0	97	
06-581018		0	0	0	0	0	645	
06-561206	Sime Darby Plantations	0	982	207	0	0	1189	
06-922268		0	0	0	0	0	131	
06-222842		0	598	0	0	0	598	
06-591272	The United Malacca Rub. Est. Bhd	217	0	0	0	0	217	
06-391218	Sime Darby Plantations	160	791	0	0	0	951	

Name of Estate	Address	Manager
■ Malacca Cont.		
Seri Jasin Sdn Bhd	Lot HS (D) 216 & 217, Air Panas, 77000 Jasin	The Manager
Serkan Estate (Leading Division)	77009 Jasin	Low Ah Hing
Sin Choon Lian Estate	140 Jalan Temenggong, 75000 Malacca	Tan Kian Sing
Sindora Realty Sdn Bhd	25 Jalan Hang Jebat,	The Manager
Sing Lian Estates	Garing Division, 76100 Durian Tunggal	Toe Kian Keong
Sri Linggi Sdn Bhd	78207 Kuala Linggi	The Manager
Sungai Bahru Estate	Locked Bag No. 1651, 78300 Masjid Tanah	Shari b. Osman
Sykt. Sri Lingga Sdn Bhd	32 Miles Kuala Linggi, 78207 Kuala Sungai Baru	Muzlan b Dek Setia Hj Abd Ghu
Tanah Nining Division Estate	21 Miles, 76000 Alor Gajah	The Manager
Tampin Estate	Batang Malacca P O, 73300 Malacca	Chow Lin Peng
Tebolang Estate	76460 Tebong	The Manager
Tebong Estate	Tebong P O, 76460 Tebong	Kennan Manayah
Teck Trading	38 Jalan Munshi Abdullah, 75100 Malacca	The Manager
Tong Hap Hwat Estate	74 Jalan Kampong Hulu, 75200 Malacca	Chua Koon Thy
Tong Leng Estate	87 Jalan Kampong Hulu, 75200 Malacca	The Manager
Yeo Family Estate	88 Jalan Panjans, 75000 Malacca	The Manager
Yew Watt Hin Estate	Serkan, 77300 Marlimau	The Manager
■ NEGRi SEMBILAN		
Atherton Estate	71100 Siliu	C. Paranthaman
Ayer Belerang Estate	71400 Padas	The Manager
Ayer Hitam Estate	72109 Bahau	Boo Poo Phat
Bahau Estate	72109 Bahau	David S.K. Das
Bahau Oil Palm Estate	Jempoh, 72100 Bahau	The Manager
Bahru Sykt. Kerjasama Estate	Jempoh, 72100 Bahau	The Manager
Bar Bee Rubber Estate	Air Kuning Selantan, 73410 Gemas	The Manager
Banau Estate	74 Paul Street, Seremban	The Manager
Batang Jelai Estate	73500 Rompin	Sat Wee Nan
Batu Kikir Estate	Seremban	The Manager
Batu Tiga Estate	3 1/2 Miles Jalan Tampin, 70450 Seremban	The Manager
Benar/Tarun Estate	c/o Lenggong Estate, 71759 Lenggong	Zainal Anasir b Hj Zainal Ariffin
Butan Estate	Nilai P O, 71800 Nilai	Lim Keng Fong
Bradwell/Sagga Estate	71100 Siliu	How Wee Hook
Bukit Bertan Estate	71150 Linggi	Lim Sui Hin
Bukit Belandok Estate	71009 Port Dickson	Lim Eng Kee
Bukit Pilah Estate	73500 Rompin via Gemas	Kim Cheong Ming
Bukit Pondok Estate	71009 Port Dickson	The Manager
Bukit Rotan Estate	73000 Tampin	The Manager
Bukit Tinggi Estate	27 Jalan Besar, Bahau, 73500 Rompin	Lim Ah Yoon
Bute & Dominion Estate	Nilai P O, 71890 Nilai	Azalli b. Ariffin
CMA Plantation Sdn Bhd	92 Jalan Gurney, 72109 Bahau	Tang Yoo Hong
Cairo Estate	Nilai Post Office, 71800 Nilai	The Manager
Chemkong Estate	71309 Rantau	Lim Kian Sing
Cheng Brothers Estate	Rantau Post Office, 71150 Linggi	The Manager
Cheng Wing Chan Estate	Batu 4 1/2, Jalan Rompin, 72109 Bahau Post	Gideon Chan Siew Kong
Chinpal Estate	73410 Ayer Kuning Selantan	Ng Kong Lin
Chua Poh Koon Estate	Lejong Ulu, 71350 Kota	The Manager
Clonlea Realty Sdn Bhd	39 Jalan Clonlea, 73000 Tampin	The Manager
Dataran Sagar Sdn Bhd	Lot 849, 71000 Port Dickson	The Manager
Dusun Labu Valley Estate	71809 Nilai	S.S. Maniam
ESPEK-Ledang Abdullah Kadir	72400 Durian Lipis	Mohd Nopi b Hassan
ESPEK-Palong I	d/a Perj. Pos Bahau, 72109 Bahau	Hassan Aziz b Mohd Johan
ESPEK-Palong II	d/a Perj. Pos Bahau, 72109 Bahau	Kamarudin b Mohd Jawi
Esplan Realty Sdn Bhd	Makin Triang Hilir, Jelebu	The Manager
Eng Bee Rubber Estate	Makin of Pasir Panjang, 71000 Port Dickson	The Manager
Eng Sing Estate	Seremban	The Manager
Fortrose Estate	73400 Gemas	The Manager
Gadok Estate	73009 Tampin	Chia Baba
Gambang Palm Oil Estate Sdn Bhd	15 Jalan Dato' Lee Fong Yoo, 70000 Seremban	The Manager
Geddis Estate	72100 Bahau	The Manager
Gemas Lim Chin Moh Realty S/B	1 Batu Anan Road, 73400 Gemas	The Manager
Gennehoh Division Estate	Air Kuning, 73000 Tampin	The Manager
Glenaly Estate	72100 Bahau	The Manager
Goh Iau Sheng Construction	36 Main Road, 73000 Tampin	The Manager
Gomah Estate	Gemas Post Office, 73400 Gemas	The Manager
Gomali Estate	Gemas Post Office, 73400 Gemas	The Manager
Good Century Oil Palm Sdn Bhd	Rompin, 73400 Gemas	The Manager
Goodwood Estate	c/o Jeram Padang Estate, 72100 Bahau	Wong Tang Kah
Grancia Estate	c/o Lenggong Estate, 71759 Lenggong	Mohd Yunus b. Hj Ahmad
Gunong Pertanian Estate	Gunong P'tanian Ind. Est., 72300 Simpang Portang	Thomas Simon
Heng Lian Plantations	Mikin Lim, 71000 Port Dickson	The Manager
Hillside Estate	Locked Bag No 35, 70990 Seremban	Thun Quek Luan
Hock Soon Heng Estate	Seberok, 71300 Rantau	The Manager
Inas Estate	NSDC-Guthrie Plantations S/B, 72009 Kuala Pilah	Lim Koon Hock

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
06-226516/517		0	0	0	0	0	0	Figures n.a
06-591200	Kumpulan Guthrie Sdn Bhd	382	445	0	0	0	827	
06-24717		277	72	0	0	0	349	
06-225386		0	0	0	0	0	0	Figures n.a
06-983403		260	448	9	0	0	717	
06-541301	Harrissons M'sian Plantations Bhd	0	0	0	0	0	0	Figures n.a
06-541403		0	861	0	0	0	861	
06-984298		673	0	0	0	0	673	
06-461501	The United Malacca Rub. Est. Bhd	0	0	0	0	0	0	Figures n.a
06-466244		108	188	0	0	0	296	
06-466226		0	0	0	0	0	0	
06-223810/225810	Asiatic Development Berhad	542	1125	0	57	0	1724	
06-223022		0	0	0	0	0	0	
06-581042		0	47	0	0	0	47	
06-561226		0	0	0	0	0	0	
		40	0	0	0	0	40	
		0	0	0	0	0	355	
06-641234	Sime Darby Plantations	948	1328	0	0	0	2276	
05-517844/519422	Taiko Plantations Sdn Bhd	0	346	0	0	0	346	
06-841126/841127	Dunlop Estates Bhd	1054	965	0	0	2	2021	Nursery
06-787216		1000	1703	167	0	164	3034	
06-774146	Plantation Agencies Sdn Bhd	0	0	0	0	0	0	Figures n.a
06-879229		0	0	0	0	0	143	Figures n.a
06-720084		31	21	0	0	0	52	
06-876237/876227	Taiko Plantations Sdn Bhd	883	1253	0	0	0	2136	
		0	0	0	0	0	52	
06-712572		0	0	0	0	0	0	Figures n.a
06-8110032	Dunlop Estates Bhd	200	120	0	0	0	320	
06-691120	Sykt Pengurusan Ladang Sdn Bhd	125	426	0	0	0	551	
06-641388	H.M.P. Bhd	369	1607	0	0	0	1976	
06-666242	Sime Darby Plantations	241	208	0	0	0	449	
06-671399	Kumpulan Guthrie Sdn Bhd	1756	550	26	0	0	2332	
06-876214		0	1744	0	0	0	1744	
03-941644	Kumpulan Guthrie Sdn Bhd	0	0	0	0	0	0	Figures n.a
06-979355		0	0	0	0	0	168	
		0	171	0	0	23	194	Fruits
03-8461240/8138248	Asiatic Development Berhad	404	587	0	0	122	1113	Guava 24 Durian 98
06-841091	Perak Motor Co Sdn Bhd	435	0	0	0	0	435	
06-784242	Plantation Agencies Sdn Bhd	8	221	0	0	0	229	
06-651209	Dunlop Estates Bhd	140	531	0	0	41	712	
06-670221		0	0	0	0	0	241	
03-2305122/2305123	H.M.P. Bhd	701	756	0	0	9	1466	Orchard
06-461228	Osta Management Sdn Bhd	0	772	0	1	0	773	
06-411461		0	0	0	0	0	41	
03-949572		0	0	0	0	0	0	Figures n.a
06-691342	Sime Darby Plantations	0	0	0	0	201	201	Fruits
06-894236	Estet Pekan Kecil Sdn Bhd	139	1308	0	0	0	1447	
06-842694	Estet Pekan Kecil Sdn Bhd	575	1346	0	0	0	1921	
06-842952	Estet Pekan Kecil Sdn Bhd	794	1361	0	0	0	2155	
03-310611		0	0	0	0	0	334	
06-74646		0	0	0	0	0	63	
		0	0	0	0	0	0	
		0	0	0	0	0	1004	Figures n.a
06-411031	Taiko Plantations Sdn Bhd	413	73	0	0	0	486	
06-725886		77	0	0	0	0	77	
		289	0	0	0	0	289	
07-981121/122		98	50	0	0	0	148	
06-222536		0	0	0	0	0	483	
06-774011		0	0	0	0	0	2075	
06-417321		0	0	0	0	0	41	
07-989164/5	Dunlop Estates Bhd	0	0	0	0	0	0	Figures n.a
07-933164/165	Dunlop Estates Bhd	3188	0	0	0	387	3575	
06-73916	Taiko Plantations Sdn Bhd	0	0	0	0	0	0	Figures n.a
		0	202	0	0	0	202	
03-8110032	Dunlop Estates Bhd	133	81	0	0	0	214	
01-335635(10-12noon)	Plantation Agencies Sdn Bhd	688	0	0	0	0	688	
		0	0	0	0	0	0	Figures n.a
06-722037	Dunlop Estates Bhd	130	516	0	0	17	663	
		0	0	0	0	0	0	Figures n.a
06-813300		184	1413	0	0	0	1597	

Name of Estate	Address	Manager
■ Negri Sembilan Cont.		
Jemina & Sungai Sendayan	71100 Siliu	Wong Ann Jin
Jeran Padang Estate	72100 Bahau	Wong Tang Koh
Johol Estate	73100 Johol P O	Yeh Kee Lin
Juasoh Estate	72000 Kuala Pilah	So Ah Chai
Kampung Bahau Estate	27 Jalan Tuan Sheikh, Seremban	The Manager
Kolpin Estate	72109 Bahau	Mohd Tahir b. Zaiful Abidin
Konayan Estate	71 Jalan Temiang, 70200 Seremban	The Manager
Kondong Estate	5 Miles Jalan Telian, 71300 Rembau	The Manager
Kovrin Estate	Jempol, 72100 Bahau	The Manager
Khoo Swee Han Estate	71000 Port Dickson	The Manager
Khoo Swee Klap Sdn Bhd	71250 Pasir Panjang	The Manager
Kiat Lee Brothers Co	Gemencheh, 73000 Tampin	The Manager
Kilang Papan Kota Sdn Bhd	606 (1st Floor) Jalan Seremban, 72000 Kuala Pilah	The Manager
Kim Pong Estate	8 Miles Pantai Village, Seremban	The Manager
Kirby Estate	71900 Labu	Radzuan Mohd Muzan
Koh Tong Leong Sdn Bhd	2 Miles Tampin Road, 73400 Gemas	The Manager
Kok Poo Estate	72109 Bahau	Mohd Hashim
Kombok Estate	71209 Rantau	K. Ratnaraajah
Kuala Jelali Estate	72109 Bahau	David S.K. Das
Labu Estate	71900 Labu	C Rajasingam
Ladang Bhru Syarikat Kerjasama	72109 Bahau	R S Kurusagarani (Asst-in-charge)
Lee Liong & Sons Plantn. S/B	10 Miles Kopis, 72000 Kuala Pilah	The Manager
Lenggong Estate	71759 Lenggong	Mohd Yunus b Hj Ahmad
Leong Hin San Sdn Bhd	71200 Rantau	Chong Seong Hoe
Low Choo Estate	557 Tebat Kering, 72000 Kuala Pilah	The Manager
Lim Brothers Estate	31 Jalan Tunku Hassan, 70000 Seremban	The Manager
Lim Si King Estate	73400 Gemas	The Manager
Linggi Oil Palm Estate	Mukim Telian Bintanjar, 73000 Tampin	The Manager
Lingau/Terentang Estate	71209 Rantau P O	P Anusailai
Lochan Estate	71800 Nilai	The Manager
Malacca Plantations Sdn Bhd.	7 Jalan Tunku Hassan, 70000 Seremban	The Manager
Malay Rompin Estate	72100 Bahau	Tan Tian Seng
Mann Estate	71000 Port Dickson	The Manager
Marlow Estate	Titian Bintanjar, 71300 Rembau	The Manager
MSDC - Guthrie Plantations S/B	Kepis Project, 72000 Kuala Pilah	K. Santheran
Nam Bee Co Sdn Bhd	Air Kuning, 73000 Tampin	The Manager
New Labu Estate	71809 Nilai	Siew Hong Kin
New Rompin Estate	73500 Rompin via Gemas	Kim Chong Ming
Pajan Estate	71700 Mentin	Chong Min Liong
Parit Tinggi Estate	72000 Kuala Pilah	The Manager
Paroi Estate	c/o Linaam Estate, 71209 Rantau P O	P Anusailai
Paola Rubber Estate	P O Box 100, 70710 Seremban	Noorul Haq Mohd Ayub
Pelin Estate	Kundur, 71300 Rembau	Chong Seong Hoe
Perhentian Tinggi Estate	71459 Sungai Gadut	Dina Toy Hiah
Pertang Estate	72309 Simpang Portang Post	Louis Siau
Poh Koh Estate	Seremban	The Manager
Port Dickson Lukut Estate	71000 Port Dickson P O	Chang Sen Fin
Port Oil Palm Estate	71000 Port Dickson	The Manager
Regent Estate	Gemencheh, 71300 Rembau	The Manager
Repah Estate	73309 Batang Melaka P O	Wang Jun Yano
Sagga Estate	73009 Tampin	Mohd b. Abd Razwan
Say Chiu Estate	71100 Siliu	The Manager
Senama Estate	72000 Kuala Pilah	The Manager
Senawang Estate	72100 Bahau	The Manager
Senawang Estate	Seremban	The Manager
Sengkang Estate	71259 Pasir Panjang, P. Dickson	Ong Chooing Soon
Sepang Valley Estate	71800 Nilai P O	Tan Han Yong
Seremban Estate	71450 Sg Gadut	Tan Han Yong
Serting Estate	Yayasan Negri Sembilan, 72109 Bahau	O Owen
Sialang Estate	72109 Bahau	Wu Kow Chai
Siliu Estate	71100 Siliu	P Theppenthiran
Sin Seng Estate	Seremban	The Manager
Soon Lee Estate	Pasir Panjang, 71000 Port Dickson	The Manager
St Helier Estate	72109 Bahau	Paimin b. Selamat
Sua Batong Estate	71900 Port Dickson	Teng Wee Hing
Sua Gresing Estate	71200 Rantau Post	Lee Soon Wee
Sun Chin Chan Estate	69A Lemon Hill, 70200 Seremban	The Manager
Sungai Beranang Estate	P O Box 101, 71750 Lenggong	The Manager
Sungai Dua Estate	Gemencheh, 73000 Tampin	The Manager
Sungai Patai Estate	71750 Lenggong	The Manager
Sungala Estate	71000 Port Dickson	The Manager
Sungei Bhru Estate	78300 Masjid Tanah	The Manager
Sungei Gadut Estate	Seremban	Shari bin Osman
Sungei Gemas Estate	73400 Gemas	The Manager
Sungei Mahang Estate	71809 Nilai	A Viswanathan
		Tuan Syed Abdul Aziz b. Syed J

Telephone	Agency	Oil Palm	Rubber	Cocco	Coconut	Others	Total Ha	Remarks
06-729811	Lim Jiew Siew	2436	0	0	0	0	2436	
06-841016	Taiko Plantations Sdn Bhd	762	1531	0	0	0	2293	
06-467219/01-451219	Plantation Agencies Sdn Bhd	533	2068	0	0	3	2604	O.P. & Rubber
06-811079	H.M.P. Bhd	0	825	0	0	0	825	
		0	0	0	0	0	137	
06-876238	H.M.P. Bhd	59	736	0	0	0	795	
06-280288	Keng Tek Lee Estate Sdn Bhd	266	202	0	0	0	468	
06-921963		0	0	0	0	0	0	Figures n.a
06-771056/771121		0	0	0	0	0	0	Figures n.a
06-712632		0	0	0	0	0	0	Figures n.a
06-73637		0	0	0	0	0	60	
		0	0	0	0	0	0	Figures n.a
06-811782		135	62	0	0	0	197	
06-74646		0	0	0	0	0	0	Figures n.a
06-725301	Sime Darby Plantations	235	1613	0	0	0	1848	
03-567491		0	0	0	0	0	149	
06-876229	Austral Enterprises Bhd	2241	0	0	0	0	2241	
06-641433	Taiko Plantations Sdn Bhd	1285	998	32	0	0	2315	
06-841106	Dunlop Estates Bhd	481	173	0	0	25	679	
06-691215	Kumpulan Guthrie Sdn Bhd	2626	0	0	0	0	2626	
06-861346	Plantation Agencies Sdn Bhd	382	161	0	0	0	543	
06-774316		0	0	0	0	0	81	
03-8110032	Dunlop Estates Bhd	270	592	0	0	33	895	
06-641248	Unitac Sdn Bhd	430	394	0	0	0	824	
06-811313		0	0	0	0	0	59	
		0	0	0	0	0	200	
07-941121	Genas Lim Chin Moh Realty S/B	0	0	0	0	0	0	Figures n.a
03-311396/324126		0	0	0	0	0	0	Figures n.a
06-641466/722216	H.M.P. Bhd	270	824	0	0	0	1094	
06-671355		0	0	0	0	0	577	
06-871682		373	0	0	0	0	373	
06-841242	Taiko Plantations Sdn Bhd	137	446	0	0	0	583	
06-785399	Eastern Planta. Agency (J) S/B	0	0	0	0	0	2437	
06-781219		0	0	0	0	0	166	
06-813300	Kumpulan Guthrie Sdn Bhd	0	1214	0	0	0	1214	
06-979229		0	0	0	0	0	379	
06-691214	Sime Darby Plantations	491	1227	0	0	0	1718	
06-876214		57	516	11	0	0	584	Intercropped
06-681234	Sime Darby Plantations	0	974	0	0	0	974	
06-771056/771121		0	0	0	0	0	53	
06-641466/722216	H.M.P. Bhd	48	434	0	0	0	482	
06-722562		24	176	0	0	0	200	
	The United Malacca Rub. Est. Bhd	0	171	0	0	0	171	
06-725166	P Forest (M) Sdn Bhd	421	425	0	0	0	846	
06-899233	H.M.P. Bhd	179	855	0	0	0	1034	
06-74646		0	0	0	0	0	165	
06-471988	Kumpulan Guthrie Sdn Bhd	1557	703	0	0	0	2260	
		0	0	0	0	0	0	Figures n.a
		0	0	0	0	0	0	Figures n.a
06-456317	Dunlop Estates Bhd	433	1682	115	0	88	2318	
06-411253	Asiatic Development Berhad	101	607	0	0	0	708	
06-641229		0	0	0	0	0	750	
06-981212		130	72	0	0	0	202	
	Nepri Sembilan Oil Palms Bhd	937	0	0	0	0	937	
06-74258	Asiatic Development Bhd	191	577	0	0	3	771	
06-405311/670241/201	Kumpulan Guthrie Sdn Bhd	2043	800	0	0	0	2843	
06-691237	Plantation Agencies Sdn Bhd	216	158	0	0	0	374	
06-725471	Plantation Agencies Sdn Bhd	375	674	0	0	0	1049	
06-842629	Boustead Estates Agency	915	690	0	0	0	1605	
06-841331	H.M.P. Bhd	0	417	0	0	0	417	
06-641477/240/442	Kumpulan Guthrie Sdn Bhd	1923	68	0	0	0	1991	
		0	0	0	0	0	0	Figures n.a
		0	0	0	0	0	0	Figures n.a
06-841331	H.M.P. Bhd	53	655	0	0	0	708	
06-471233	Kumpulan Guthrie Sdn Bhd	2255	662	24	0	0	2941	
06-641507	S.K.Ting Mgt Sdn Bhd	254	362	0	0	0	616	
06-712628		0	0	0	0	0	68	
03-318002	Associated Estates Agencies S/B	0	504	0	0	0	504	
		0	0	0	0	0	0	Figures n.a
06-781237		0	0	0	0	0	110	
06-471623		0	0	0	0	0	518	
06-541301		62	514	0	0	0	576	
06-74170		0	0	0	0	0	0	Figures n.a
07-981101	Kumpulan Guthrie Sdn Bhd	0	0	0	0	0	0	Figures n.a
06-691234/691239	H.M.P. Bhd	1792	1294	0	0	0	3086	

Name of Estate	Address	Manager
■ Nagri Sembilan Cont.		
Sungai Sabaling Estate	72109 Bahau	Tan Kee Ban
Swee Hoe Estate	Gemencheh, 73000 Tampin	The Manager
Tampin Linggi Estate	71209 Rantau	Lim Jit Joo
Tanah Merah (NS)	71009 Port Dickson	Lim Ming Hong
Tanjong South Estate	2120 Jalan Rasak, Seremban	The Manager
Terentang Estate	c/o Linnam Estate, 71200 Rantau	The Manager
Tiang Hoe & Sons Estate	Jalan Dato Bandar Tunjungs, 70000 Seremban	The Manager
Tong Watt Estate	Batang Melaka Post Office, 73300 Batang Melaka	The Manager
Ulu Kanchong Estate	71209 Rantau	Gari Tong Chee
Ulu Pedas Estate	71409 Pedas	Mat Saad b. Ramli
United Malacca Rubber Ests Bhd	6 3/4 Miles, Kg Tengah, Kundur, 71400 Pedas, Rantau	Chong Seong Hoe
United Properties Co-op. S/B	Lot 5994, 1st Mile, Labu Road, Seremban	The Manager
Yee & Siow Estate	P O Box 142, 70710 Seremban	The Manager
■ PAHANG		
ACE Estate	Keraton, Rompin	The Manager
Antabira Kuantan Estate	Kuantan	The Manager
Asia Oil Palm Sdn Bhd	Sri Jaya (New Maran), Kuantan	The Manager
Asijaya Sepakat Estate	Ulu Lepar, Kuantan	The Manager
B S Oil Palm Plantations S/B	Block 6, Mukim Keratong, 26600 Pekan	The Manager
Ban Choon Estate	13 Main Street, 28380 Kemayan	The Manager
Ban Hoo Estate	Triang, 28000 Temerloh	The Manager
Ban Lee Estate	12 Loka Vow Street, 28700 Bentong	The Manager
Ban Zhi Estate	28000 Temerloh	The Manager
Bee Yong Estate	28409 Mantakab	Tay Ching
Benta Estate	27300 Benta P O	Abd Malik b. Ismail
Bentong Estate	8th Mile, Tras Road, 28709 Bentong	P K Yap
Blue Valley Estate	Tanah Rata, 39000 Cameron Highlands	N. Ratnasabapathy
Blue Valley Tea Estate	39009 Tanah Rata	J. Jayachandran
Boh Tea Estate	Ringlet, 39200 Cameron Highlands	The Manager
Buku Estate	P O Box 202, 27300 Benta	The Manager
Bukit Dinding Estate	28600 Karak P O	Chai Min Fah
Bukit Jalil Keratong O/P Plantn.	Block 9, Mukim Keratong, Rompin	The Manager
Bukit Mentrí Estate	Mukim Triang, 28000 Temerloh	The Manager
Bukit Ridan Estate	26600 Pekan	The Manager
Bukit Senorang Palm Oil Mill	Lot 788 & 789 Kemayan, 28000 Temerloh	The Manager
Chan Siang San Estate	288 Kempong Perting, 28700 Bentong	The Manager
Chenor Estate	26400 Bandar Pusat Jenaka	Kunnan Kutty
Cheroh Estate	9 Miles Jalan Cheroh, 27600 Raub	The Manager
Chin Sun Timber Trading Co	33 Jalan Ibrahim, 28000 Temerloh	The Manager
Chini 2 Palm Oil Mill	Bukar Chini Satu, 26600 Pekan	The Manager
Chong Brother Estate	3 Mile Jalan Tras, 28703 Bentong	The Manager
Chorok Puting Estate	Kuantan	The Manager
Chow Teck Noo Estate	95 Sungai Marong, 28700 Bentong	The Manager
Chow Tei Tei Estate	1 Hill Road, 28700 Bentong	The Manager
Damen Oil Palm Plantation S/B	Block 5, Mukim Keratong, 26600 Pekan	The Manager
Ditali Estate	P O Box 77, 25700 Kuantan	Ding Nguk Kong
Dura Oil Palm Sdn Bhd.	11 Main Street, Padang Terjaku, 27200 Kuala Lipis	The Manager
ESPEK Ulu Keratong II	Mukim Keratong, 26600 Pekan	The Manager
ESPEK Ulu Keratong IV	26600 Pekan	The Manager
ESPEK-Bera	d/a Pej. Pos Kemayan, 28380 Kemayan	Abd. Kadir b. Abd. Rauf
ESPEK-Bukit Keramat	d/a Pej. Pos Kemayan, 28380 Kemayan	Jayarawan
ESPEK-Ulu Cheka	Bj Berkunci d/a Pej Pos Jerantut 27000 Jerantut	Hj. Shabil b. Ahmad
Ednasor Estate	c/o Lanchang Estate, P O Box 1, 28500 Lanchang	Hj Mohd Zaini b. Hj Abd Rahman
Eng Hing Loose Rubber Estate	SU-3 Lembeh Bertan, 39200 Ringlet, C. Highlands	Lim Siow Hae
Eng Seong Estate	Lot 646, Semantan Ulu, 27600 Raub	The Manager
Farlie Estate	Ringlet, 39200 Cameron Highlands	The Manager
Felcra Gong	28000 Temerloh	The Manager
Gambang Palm Oil Estate Sdn Bhd	5th Mile Pulau Manis, Gambang, 26300 Kuala Kuantan	The Manager
Getah Estate	Kampung Awah P O Box 4, 28009 Temerloh	Mohd Zakaria b. Mohd Sidek
Greenlast Realty Sdn Bhd	25 Jalan Penjara, 25000 Kuantan	The Manager
Hock Ann Estate	45 Jalan Teluk Sisik, 25000 Kuantan	The Manager
Hock Joo Estate	Batu Talam, 27600 Raub	The Manager
Hoe Sang Estate	Mengkarak, 28200 Kuantan	The Manager
Hwa Li Estate	Block 16 Keratong, Rompin	The Manager
Jabor Valley Estate	25990 Kuantan	J G MacQuistan
Jaya Mini Market	59-61 Jalan Chui Yin, 28700 Bentong	The Manager
Jeram Kuantan Estate	25990 Kuantan	Azhar Abdullah
Jerantut Estate	27000 Jerantut	John Morsis
Juntai Estate	Regional Agriculture Crop S/B, 28380 Pejabat Pos Kemayan	Tie Hoong Lip
Juntai Realty Sdn Bhd	Sungai Chetang, 27600 Tras - Raub	The Manager
KSM Merchong Estate	Rompin	The Manager
Kampung Aur Oil Palm Sdn Bhd	Block 4, Mukim Keratong, 26600 Pekan	The Manager
Kampung Awah Estate	P O Box 4, 28007 Temerloh	The Manager
Karnen Estate	28200 Mengkarak	Snoop Singh a/l Kishan Singh

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
06-841201	H.M.P. Bhd	74	1221	0	0	0	1295	
06-922514/921218		0	0	0	0	0	0	Figures n.a
06-670344	Kumpulan Guthrie Sdn Bhd	440	1593	0	0	0	2033	
06-671211		2632	1487	83	0	0	4202	
06-724023		0	0	0	0	0	351	
06-781466	Harrisons M'sian Plantations Bhd	0	598	0	0	0	598	
06-723685		0	0	0	0	0	41	
06-461232		0	0	0	0	0	296	
06-642333/641357		800	800	0	0	0	1600	
06-651229	Taiko Plantations Sdn Bhd	547	412	0	0	0	959	
06-641248	Unitac Sdn Bhd	0	171	0	0	0	171	
06-715100/726202		42	0	0	0	0	42	
06-712053		0	0	0	0	0	45	
09-913361		0	0	0	0	0	0	Figures n.a
09-21024		0	0	0	0	0	0	Figures n.a
03-281132		0	0	0	0	0	0	Figures n.a
09-521441		0	0	0	0	0	0	Figures n.a
09-522355	Far East Holding Sdn Bhd	0	0	0	0	0	0	Figures n.a
09-458311		0	0	0	0	0	236	
09-721430		0	0	0	0	0	103	
03-371306		0	0	0	0	0	0	Figures n.a
09-271037	Size Darby Plantations	34	893	0	0	0	927	
09-338205	Plantation Agencies Sdn Bhd	360	763	0	0	0	1123	
09-221809	Plantation Agencies Sdn Bhd	174	1391	0	0	0	1565	
05-981302	Nat. Land Finance Co-op Soc. Ltd	0	0	0	0	179	179	
09-991302	Plantation Agencies Sdn Bhd	0	0	0	0	191	191	Tea 179 Others 12
09-948634/799		0	0	0	0	612	612	Tea
09-338208	Socfin Co Bhd	0	1817	0	0	0	1817	
09-231244/231255	Dynamic Management Sdn Bhd	436	1107	0	0	18	1561	Orchard
03-289166		0	0	0	0	0	544	
09-55278		0	0	0	0	0	70	Figures n.a
09-458235		3240	0	0	0	0	3240	
09-721855		0	0	0	0	0	102	
09-462264	Kumpulan Guthrie Sdn Bhd	1967	0	0	0	0	1967	
09-57200		0	0	0	0	0	1491	
09-451292	PELDA	0	0	0	0	0	0	Figures n.a
09-722850		2503	0	0	0	0	2503	
09-522355		0	0	0	0	0	59	
09-522355		0	0	0	0	0	2233	
09-721036		0	0	0	0	0	62	
09-721270		0	0	0	0	0	44	
09-522355	Far East Holding Sdn Bhd	0	0	0	0	0	0	Figures n.a
09-523066		100	0	0	0	4	104	
09-311252		164	63	0	0	0	227	
09-208366	Estet Pekebun Kecil Sdn Bhd	0	0	0	0	0	0	Figures n.a
06-842926	Estet Pekebun Kecil Sdn Bhd	0	0	0	0	0	0	Figures n.a
01-332746	Estet Pekebun Kecil Sdn Bhd	1976	0	0	0	0	1976	
09-271045	Estet Pekebun Kecil Sdn Bhd	43	435	0	0	0	478	
05-996888/105/651385	Estet Pekebun Kecil Sdn Bhd	386	407	0	0	0	793	
	H.M.P. Bhd	281	659	0	0	0	940	
		0	41	0	0	0	41	
09-948634	Hock Choon Hin Realty Co	0	0	0	0	0	64	
09-201230	Bch Plantations Sdn Bhd	0	0	0	0	145	145	Tea, Citrus, Coffee
06-75886	FELCRA	384	0	0	0	0	384	
09-249234		0	0	0	0	0	0	Figures n.a
09-521126		0	771	0	6	1	778	Fruits
09-357227		0	0	0	0	0	0	Figures n.a
		0	0	0	0	0	85	
		178	50	0	0	0	228	Figures n.a
		0	0	0	0	0	0	Figures n.a
09-520560	Kumpulan Guthrie Sdn Bhd	2418	0	0	0	0	2418	
09-721049		0	0	0	0	0	46	
00-520568	Kluang Estates (1977) Sdn Bhd	301	435	0	0	0	736	
09-262217	Austral Enterprises Bhd	718	0	141	0	0	859	
09-208392/01-331160		1749	0	0	0	0	1749	
09-385240		203	174	0	0	0	377	
09-913361		0	0	0	0	0	0	Figures n.a
09-522355	Far East Holding Sdn Bhd	0	0	0	0	0	0	Figures n.a
09-247244	Syarikat Choh Swee Ean Penang	256	836	0	0	0	1092	

Name of Estate	Address	Manager
■ Pahang Cont.		
Kecil Bukit Kijal Estate	28000 Temerloh	The Manager
Kemajuan Estate	11th Mile Jalan Gambang, 25150 Kuantan	The Manager
Kemasul Estate	28200 Mentakab	Teo Thian Kong
Kemayan Estate	Kemayan, 28000 Temerloh	The Manager
Keratsong Estate	Bukit Isan, Rompin	The Manager
Kerdau Estate	Wakil Pos Kerdau, 28010 Temerloh	Rahli Majid
Kim Siew Loong Estate	Mentakab, 28000 Temerloh	The Manager
Kingsmead Estate	Batang Balai, 27000 Jerantut	The Manager
Klang Oil Palm Estate	Triang, 28000 Temerloh	The Manager
Kolek Rubber Estate	P O Box 7, 25700 Kuantan	Chuah Hong Hap
Kong Siew Chong Estate	48 Loke Yew Street, 28700 Bentong	The Manager
Kosatu Estate	Triang, 28000 Temerloh	The Manager
Kota Bahagia Estate	Keratsong	The Manager
Kuala Besan Estate	P O Box 115, 25710 Kuantan	Onj Back
Kumaran Estate	3 Main Road, Tanah Rata, 39000 Cameron Highlands	The Manager
LKPP-Bukit Goh	Km 19, Bukit Goh, 26050 Kuantan	Abdullah b. Abd. Rahim
LKPP-Temin III Estate	27000 Jerantut	The Manager
Ladang (P2H) Nuklias 2	c/o Pej. Pos Bandar Tun Razak, 26900 Bandar Tun Razak	Mat Rani b Awang
Ladang (SKS) Kg. Bongsu	c/o Pej. Pos Lanchang, 28500 Mentakab	Karaluddin b Bilal Bakar
Ladang (SKS) Paloh Hinal	c/o Pej. Pos Pekan, 26650 Pekan	Zulkifli b Dambis
Ladang Besar (OP4)	c/o P O Box 16, 26700 Masjid Shah	Abd. Gafa b Keme
Ladang Sg. Jernih	c/o Ladang Falah Hinal, 26650 Pekan	Azmad b Hj Mohd Noor
Lanchang Estate	P O Box 1, 28500 Lanchang	Hj Mohd Zaini b. Hj Abd Rahman
Lee Sui Weng & Sons Sdn Bhd	96 Loke Yew Street, 28700 Bentong	The Manager
Lemb. Perur. Pertanian Pahang	Jalan Gambut, 25000 Kuantan	The Manager
Lembaga Kemajuan Perusahaan	Pertanian Negeri Pahang, Kuantan	The Manager
Lepar Utara A Palm Oil Mill	Sri Jaya Post Office, Kuantan	The Manager
Lian Hap Estate	P O Box 55, 25700 Kuantan	The Manager
Lian Hap Palm Oil Estate	Jenderak, 28000 Temerloh	The Manager
Liew Weng Chee Estate	28709 Bentong	Sin Chuan Hng
Malaysian Agric. Product S/B	Triang Post Office, 28300 Triang	The Manager
Matong Development Sdn Bhd	Kuala Kuantan, Kuantan	The Manager
Mempaga Palm Oil Mill	P O Box 7, 28787 Bentong	The Manager
Mengkayang Estate	Triang Post Office, 28300 Triang	The Manager
Mentakab Estate	28409 Mentakab	Gool Thean Soo
Merchong Estate	P O Box 6, 26700 Masjid Shah	Chow Yoke Chong
Nj Oil Palm Estate	Mengkarak, 28000 Temerloh	The Manager
Nuclear Oil Palm Estate	Lot 17 Keratong, Rompin	The Manager
Nuklias V. Estate	P O Box 390, 25740 Kuantan	Hj Baharuddin b. Hj Nizam
P. K. Estate	47 Jln JKR Sotor, Tun Dali Singh, 27200 Kuala Lipis	The Manager
Padang Piai Estate	P O Box 7, 27000 Jerantut	The Manager
Pahang Enterprise Palm Oil Mill	Sri Jaya, Kuantan	The Manager
Pahang Investment Co Sdn Bhd	Rubber Estate, 64 Jln Loke Yew, 28700 Bentong	The Manager
Pahang Oil Palm	Sri Jaya New Village, 26500 Maran	Wong Kin Onn
Phua Ah Hong Estate	c/o P O Box 43, 25700 Kuantan	The Manager
Phua Seng Hong Estate	P O Box 43, 25700 Kuantan	The Manager
Pukin Oil Palm Estate	Keratsong, Rompin	The Manager
Pun Chun Estate	Batang Padang	The Manager
Raub Mining & Development Co S/B	Sg Chetang, Tras, 27670 Raub	Ti Teow Eng
Raub Mining & Development Co S/B	27607 Bukit Koman, Raub	Ti Teow Eng
Regional Agriculture Corp. S/B	Juntai Palm Oil Mill, 28380 Kemayan	Lee Chee Kwan
Renjak Estate	28709 Bentong	Lee Siew Joo
Sabai Estate	28600 Karak	Liew Ah Chai
Sawira Estate	26800 Kuala Rompin	The Manager
Sekilau (M) Sdn Bhd	Lot 1148 Ulu Lepar, Kuantan	The Manager
Selborne Estate	Padang Tempu, 27100 Kuala Lipis	Wong Chin Chuan
Semambu Estate	Kuantan	The Manager
Semantan Estate	3 Miles Jalan Karak, 28400 Mentakab	The Manager
Sg Kawang Estate	B/K No 2, 28500 Lanchang	Yap Nyoke Yong
Sg Merba Estate	K B 4, 26700 Masjid Shah,	Lee Kong Kian/Kelann b. Sukardi
Sg Ular Estate	Locked Bag Service No 7, 27609 Raub	Sarinon Janagi
Soon Seng Estate	Kuantan/Kaman	The Manager
South East Pahang Palm Oil Bhd	Kemayan, 28000 Temerloh	The Manager
Sri Jaya Oil Palm Estate	Sri Jaya Maran 26500 Maran	The Manager
Suburban Properties Sdn Bhd	Block 14 Keratong, 26607 Pekan	The Manager
Sungei Bertang Estate	28400 Mentakab	J. P. Reid
Sungei Mai Estate	27000 Jerantut	Nasim b. Noor
Sungei Merchong Estate	Bukit Isan, Rompin	The Manager
Sungei Palas Estate	P O Box 40 Tanah Rata, 39000 Cameron Highlands	The Manager
Sungei Petang Estate	P O Box 1, 28600 Karak	T M Thomas
Sungei Tekal Estate	28409 Mentakab	Chua Kian Hong
Taat Seng Plantations Sdn Bhd	P O Box 8, 27600 Raub	The Manager
Takau Estate	27000 Jerantut	Lin Kim Long
Tan Ching Tin Estate	4 Leboh Wayong, 27600 Raub	The Manager
Tan Tiong Seng Oil Palm Estate	Triang, 28000 Temerloh	The Manager

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
09-522355		0	0	0	0	0	0	Figures n.a
09-581362		0	0	0	0	0	0	Figures n.a
09-247245	Taiko Plantations Sdn Bhd	0	443	0	0	0	443	Figures n.a
09-58286		0	0	0	0	0	0	Figures n.a
01-335416	Chin Teck Plantations Bhd	0	0	0	0	0	0	Figures n.a
09-41134	Austral Enterprises Bhd	2446	0	0	0	0	2446	
		0	0	0	0	0	355	
		0	0	0	0	0	82	
09-411337	Plantation Agencies Sdn Bhd	585	272	0	0	0	857	Figures n.a
09-221067		0	82	0	0	0	82	
		0	0	0	0	0	0	Figures n.a
09-55284		0	0	0	0	0	0	Figures n.a
09-411107	Plantation Agencies Sdn Bhd	1282	191	0	0	0	1473	
09-941301		0	25	0	0	0	25	
09-538663		589	0	0	0	0	589	
09-262302		546	287	0	0	0	833	
01-950049	Sykt. Ladang LKPP Sdn Bhd	823	0	0	0	0	823	
09-203234	Sykt. Ladang LKPP Sdn Bhd	182	774	0	0	20	976	
09-524200	Sykt. Ladang LKPP Sdn Bhd	132	1776	0	0	18	1926	
09-452636	Sykt. Ladang LKPP Sdn Bhd	2283	0	0	0	19	2302	
01-950046	Sykt. Ladang LKPP Sdn Bhd	2464	0	0	0	30	2494	
09-203235/203245	H.M.P. Bhd	316	1242	0	0	0	1558	
09-721524		0	0	0	0	0	258	
09-511522		6560	0	0	0	0	6560	
09-522355		10479	6110	0	0	0	16589	
		4907	0	0	0	0	4907	
		0	0	0	0	0	884	
06-787232		0	0	0	0	0	0	Figures n.a
09-239242	Taiko Plantations Sdn Bhd	0	665	0	0	0	665	
09-58231		0	0	0	0	0	0	Figures n.a
03-416611/410856		0	0	0	0	0	0	Figures n.a
	PELDA	6060	0	0	0	0	6060	
09-54246		387	387	0	0	0	774	
09-271028	H.M.P. Bhd	157	481	0	0	0	638	
01-610598	Dunlop Estates Bhd	1835	0	0	0	99	1934	
01-387050		0	0	0	0	0	0	Figures n.a
		0	0	0	0	0	0	Figures n.a
01-950047	Syarikat Ladang LKPP Sdn Bhd	2047	0	0	0	0	2047	
09-311505		0	61	0	0	0	61	
		0	0	0	0	0	0	Figures n.a
	Barlow Boustead Estates Agency	6060	0	0	0	0	6060	
09-239239/221808		0	660	0	0	0	660	
09-63159		0	0	0	0	0	0	Figures n.a
09-22011		0	272	0	0	0	272	
09-22011		0	224	0	0	0	224	
		0	0	0	0	0	0	Figures n.a
05-944562		0	0	0	0	0	0	Figures n.a
09-385240	Management Advisory Services S/B	204	175	0	0	0	379	
09-351200		1457	222	20	0	0	1699	
09-208392	Chemura of Guthrie	1600	0	0	0	0	1600	
09-239249	Taiko Plantations Sdn Bhd	41	612	41	0	0	694	
09-231211	Dynamic Management Sdn Bhd	279	1258	0	0	0	1537	
		0	0	0	0	0	0	Figures n.a
		0	0	0	0	0	0	Figures n.a
09-311237	Taiko Plantations Sdn Bhd	0	981	304	0	0	1285	
09-520583		0	0	0	0	0	455	
09-41025		0	0	0	0	0	1330	
01-910693	Taiko Plantations Sdn Bhd	0	1826	0	0	0	1826	
09-7574366/7568992	Lam Soon Management Services S/B	4107	0	70	0	0	4177	
01-335477	Austral Enterprises Bhd	1391	0	0	0	0	1391	
09-21412		0	0	0	0	0	0	Figures n.a
09-58235		0	0	0	0	0	0	Figures n.a
09-61363		0	0	0	0	0	0	Figures n.a
		0	0	0	0	0	0	Figures n.a
09-31215/31216	Associated Estates Agencies S/B	0	1294	0	0	0	1294	
09-201250		1939	0	0	0	0	1939	
		0	0	0	0	0	0	Figures n.a
09-941288	Boh Plantations Sdn Bhd	0	234	0	0	0	234	
09-231215/231216	Associated Estates Agencies S/B	0	1294	0	0	0	1294	
09-201344	Kumpulan Guthrie Sdn Bhd	0	825	0	0	0	825	
		0	0	0	0	0	311	
01-330060		373	72	0	0	0	445	
09-351225		0	0	0	0	0	75	
		0	0	0	0	0	0	Figures n.a

Name of Estate	Address	Manager
■ Pahang Cont.		
Tee Teh Oil Palm Estate	Keraton, Rompin	The Manager
Tembeling Estate Sdn Bhd	Lipis	The Manager
Tementi Palm Oil Mill	Triang Post Office, 28300 Triang	The Manager
Ter Liang Plantation	Triang, 28000 Temerloh	The Manager
Thong Hong Estate	Telanong, 28620 Karak	Liew Mun Onn
Timor Oil Palm Plantation Bhd	Jalan Sokolah, 26500 Meran	The Manager
Tong Guan Lee Trading Co	13 Miles, Bentong/Raub	The Manager
Triang Estate	28300 Triang	Poh Kong Ngoh
Tham Estate	28709 Bentong	Chuan Chong Meng
United Malayan Agric. Corpn. Bhd	Block 8 Keraton, Rompin, 26600 Pekan	The Manager
Wilson Estate (Penyor Div)	2 Jalan Mat Kilau, 25000 Kuantan	D C L Wilson
Wilson Estate (Yee Kong Div.)	2 Jalan Mat Kilau, 25000 Kuantan	D C L Wilson
Yuen Koh Oil Palm Plantation S/B	28700 Bentong	The Manager
■ PENANG		
A.M. Estate	131 Penang Street, 10200 George Town	The Manager
Alma Rubber Estate Ltd	17 Jalan Pangkor	The Manager
Alma Rubber Estates Sdn Bhd	P O Box 201, 14007 Bukit Mertajam	Roger Teoh
Arunqam Pillai Estates	132 Penang Street, 10200 George Town	The Manager
Baling (Kook Kee Division)	200 Beach Street,	The Manager
Ban Eng Cheang	11a Kim Bian Aik Road, 10400 George Town	The Manager
Ban Song Huat Sdn Bhd	66 Jalan Bunga Raya, 14000 Bukit Mertajam	The Manager
Batu Kawan Estate	14109 Simpang Ampat, P.Wellesley	Cho Fong Yen
Bodong Hong Kheng Rubber Estate	64 Rangoon Road, 10400 George Town	The Manager
Bertan Estate	13200 Kepala Batas	Lim Teik Mui
Bukit Toh Alang Estate	P O Tasok Glujor, 13300 Seberang Perai	Chew Siew Teong
Bukit Tokanga Estate Sdn Bhd	14300 Nibong Tebal	The Manager
Chang Pak Sin Sdn Bhd	Sungai Bakap, 14200 Sungai Jawi	The Manager
Chang Wen Estate	66B Penang Street, 10200 George Town	The Manager
Cheong Huat Estate	161 Kimberley Street,	The Manager
Chin Hong Estate	20 Main Road, 14100 Simpang 4	The Manager
Chin Hong Estate	67 Lebuh Pantai, 10300 George Town	The Manager
Chin Lee Estate Sdn Bhd	691 Main Road, Sungai Bakap, 14200 Sungai Jawi	The Manager
Chong Yoo Estate Sdn Bhd	c/o 313 Chulia Street,	The Manager
Choot Ching Koon Estate	20 Hongkong Street,	The Manager
Chuan Huat Rubber Estate	3771 Siran Road, 12100 Butterworth	The Manager
Eng Soon Estate	Ara Rendang	The Manager
Foothills Estate	51 Madras Lane, 10400 George Town	The Manager
Giap Hoe Estate	2345 Caledonia Street, 14300 Nibong Tebal	The Manager
Golden Orchard Sdn Bhd	21 Perak Road, 10150 Penang	Goh Loo Sai
Guan Hong Estate-O/Palm Nuragry	996 Cherok Tokan, 14000 Bukit Mertajam	The Manager
Heng Lee Estate	727 Jalan Besar, Sungai Bakap, 14200 Sungai Jawi	The Manager
Heng Seng Estate	Bukit Junan Gurun,	The Manager
Hilir Oil Palm Sdn Bhd	242 Beach Street,	The Manager
Hin Huat Estate	79 Jalan Asmara, 14000 Bukit Mertajam	The Manager
Hock Chuan Song Estate	28 Perangin Road,	The Manager
Hock Eng/Hock Kim Estates	13300 Tasok Glujor, P. Wellesley	Wong Khui Sun
Hock Plantations	c/o Eu Hock Sdn Bhd, 433 Chulia Street, 12000 Penang	Dr. Yeh Bi Hock
Jonan Bah B2 Estate	Kennedy, Birkill & Co, Chartered Bank Chambers	The Manager
Jonan Div A&B1	Kennedy, Birkill & Co, Chartered Bank Chambers	The Manager
Joo Estate	312E Perak Road, 11600 Penang	Goh Joo Or
Koong Huat Estates	20 Carnarvon Street,	The Manager
Kooli Aik Estate	107 Teik Soon Street,	The Manager
Krian Kodah Estate	2 1/2 Miles Jalan Krian Kodah, Jawi	The Manager
Krian Kodah Estate	2nd Floor Hongkong Bank Bldg, Drowning Street,	The Manager
Kriang Kodah Estate	15 Lintang Merbuk, 14300 Nibong Tebal	Ong Thian Sun
Lading Hyran	14300 Nibong Tebal	K N Ramakrishnan
Lan Chuan Plantations Sdn Bhd	62 Malay Street, Penang	The Manager
Lee Giat Cheso & Co Sdn Bhd	132 Chulia Street, Penang	The Manager
Lee Weng Song Estate	c/o 1212 Jalan Besar, 13200 Kepala Batas	The Manager
Leong Hong Estate	15 Kennedy Road, 11600 George Town	The Manager
Lin Siak Yu Sdn Bhd	4 Biggs Road, 10350 George Town	The Manager
M.R.M.SP. Small Estate	560 Main Road, 11900 Bayan Lepas	CT. Mathian
Malakoff Estate	13300 Tasek Gelujor	Lee Heng Huat
Patani Estate	P O Box 570, 10770 George Town	The Manager
Pinang Tunggal Estate	P O Box 110, 10710 George Town	The Manager
Saw Poh's Sons' Enterprises S/B	39-C Wisma Saw Chong Thuan, 10300 Pengkalan Weld	The Manager
Sempah Estate	Sungai Bakap, 14200 Sungai Jawi	The Manager
Seow Liu Chuan Estate	99 York Road, 10450 George Town	The Manager
Simpang Plantations Sdn Bhd	Jalan Tasek, 14100 Simpang Ampat	Ch'ng Han Boon
Sin Teik Estate	39-C Pengkalan Weld, 10300 Pulau Pinang	Ong Bong Hock
Sinaran Estate	389 Lebuh Chulia, 10200 George Town	The Manager
Sing Giap Estate	14300 Nibong Tebal	The Manager
South Island Mining Co	Pej. Dermaga, 13600 Prai	The Manager
Srukam Estate	423 Ptg. Manggis, 06200 Kepala Batas	Gooli Boon Pin

Telephone	Agency	Oil Palm	Rubber	Cocoe	Coconut	Others	Total Ha	Remarks
		0	0	0	0	0	0	Figures n.a
	FELDA	0	0	0	0	0	142	
		10807	0	0	0	0	10807	
09-239248	Corp. Accountants & Secretaries	0	0	0	0	0	0	Figures n.a
		84	364	7	0	0	455	
09-471245		1953	0	0	0	0	1953	
		0	0	0	0	0	0	Figures n.a
09-254218	Dynamic Management Sdn Bhd	319	1485	0	0	0	1804	
09-239246	Taiko Plantations Sdn Bhd	63	915	296	0	0	1274	
		0	0	0	0	0	0	Figures n.a
09-523895/469223	M/s N Chandrakasan	0	61	0	0	0	61	
09-523895	M/s N Chandrakasan	0	43	0	0	0	43	
09-31202		0	0	0	0	0	0	Figures n.a
04-371696		97	117	0	0	0	214	
04-511011		0	0	0	0	0	455	
04-511011		16	457	0	0	0	473	
04-551206		0	105	0	0	0	105	
04-617484		39	101	0	0	0	140	
04-364421		43	0	0	0	0	43	
04-511077		150	0	0	0	0	150	
04-526206	Taiko Plantations Sdn Bhd	1784	91	0	0	0	1875	
04-363522	M.P. Evans (M) Sdn Bhd	0	129	0	0	0	129	
		1001	855	0	0	2	1858	
04-521331	Gergaji Management Sdn Bhd	182	240	0	0	0	422	
04-511717		0	0	0	0	0	236	
04-64242		0	0	0	0	0	0	Figures n.a
04-617969		0	67	0	0	0	67	
04-884412		0	0	0	0	0	100	
		0	0	0	0	0	90	
04-65290/363374		0	206	0	0	0	206	
04-524806		88	0	0	0	0	88	
		0	162	0	0	0	162	
04-63070		0	80	0	0	0	80	
04-331342		0	0	0	0	0	128	
		0	0	0	0	0	65	
04-571043		0	0	0	0	0	510	
		0	0	0	0	0	119	
		28	8	0	0	3	31	
04-512912/511244		60	0	0	0	0	60	
		0	0	0	0	0	0	Figures n.a
04-462241		0	0	0	0	0	402	
04-22564		245	0	0	0	0	245	
		0	0	0	0	0	66	
04-63855		0	0	0	0	0	44	
04-521211	Plantation Agencies Sdn Bhd	234	251	0	25	1	511	
		260	0	0	0	0	200	
04-743220		0	0	0	0	0	113	
04-743220		0	0	0	0	0	172	
04-368899		0	0	0	9	0	9	
04-620042		0	41	0	0	0	41	
04-369665		226	118	0	0	2	346	
		0	0	0	0	0	347	
04-531261	Kumpulan Guthrie Sdn Bhd	226	118	0	0	2	346	
04-373111		0	0	0	0	0	0	Figures n.a
04-62194/22037		200	0	0	0	0	200	
04-893269		81	84	0	0	0	165	
04-60117/61488		0	45	0	0	0	45	
04-363054		0	0	0	0	0	0	Figures n.a
04-830287		0	0	0	0	0	61	
		0	46	0	0	12	58	Durian
06-612029	Boustead Estates Agency Sdn Bhd	1194	757	0	0	0	1951	
		0	80	0	0	0	80	
04-36944		0	0	0	0	0	1481	
04-524237		84	32	0	0	0	116	
04-370663		0	0	0	0	0	163	
		0	21	0	0	0	21	
		433	0	0	0	0	433	
04-619807		92	24	0	0	0	116	
04-377404		0	0	0	0	0	81	
04-572454		0	0	0	0	0	0	Figures n.a
04-341262		0	0	0	0	0	579	
04-351188	Srukan Estate Sdn Bhd	29	192	0	0	0	221	

Name of Estate	Address	Manager
■ Penang Cont.		
Sungai Kok Plantation Sdn Bhd	Lot. 1908, MK 11 Jalan Changkat, 14300 Nibong Tebal	The Manager
Sungai Nibong Estate	426-C Block G Kampong Perlis, 11900 Bayan Lepas	The Manager
Sungai Ara Estate	11900 Bayan Lepas	The Manager
T.V.S. Estates 1	250 Jalan Arumugam Pillay, 14000 Bukit Mertajam	Sinnam Chetty MFL Y
T.V.S. Estates 2	250 Jalan Arumugam Pillay, 14000 Bukit Mertajam	Vengadasalan MFL Y
Tai Hin Estate	14 Katz Street, Sempah Sungai Bakap	The Manager
Tai Sin Estate	444 Chulia Street,	The Manager
Tee Hoon An Estate	c/o 420 Cherok Tokun, 14000 Bukit Mertajam	The Manager
Toeh Chin Leong & Sons Sdn Bhd	691 Main Road, Sungai Bakap, 14200 Sungai Jawi	The Manager
Theng Hoe Estate	Ayer Puteh, 11000 Balik Pulau	The Manager
Yeak Lik Loong & Sons Sdn Bhd	14300 Nibong Tebal	The Manager
Yeoh Ely Hook Enterprise Sdn Bhd	470 (Level-2) Beach Street, 10300 Penang	Y G Toeh
■ PERAK		
Air Kuning Estate	36800 Kampung Gajah	The Manager
Alaga Estate	61 Jalan Bender, 36000 Teluk Intan	The Manager
Allagar Estate	34800 Trong	Lee Koon Hain
Allington Hill Estate	Tengah Road, 35000 Tapah	The Manager
Ang Pang Sin Estate	6th Mile, Jalan Changkat Joreh, 36000 Teluk Intan	The Manager
Anson Plantations Sdn Bhd	7th Mile, Jalan Changkat Joreh, 36000 Teluk Intan	The Manager
Appu Plantation Sdn Bhd.	77 Jalan Bender, 36000 Teluk Intan	The Manager
Arcadia Estate	32000 Sitiawan	S Namasivayam
Arunachalam Chettiar	1 Jalan Bender, 36000 Teluk Intan	The Manager
Ayer Kuning Estate	3rd Mile, Ayer Kuning Road, 34000 Taiping	The Manager
Baba Bakala Estate	35800 Slim River	The Manager
Bagan Datoh Estate	36100 Bagan Datoh	Ashli Rahman b. Abu Samah
Bagan Pasir Estate	P O Box 2, 36109 Sungai Sumen	K Sadasivam
Bagan Pasir I/II Estate	36000 Teluk Intan	K. Sadasivan
Ban Chin Hin Estate	25-27 High Low Street, 30000 Ipoh	The Manager
Ban Hong (Banir) Estate	Banir, 35000 Tapah	The Manager
Ban Joe Hin Estate	9th Mile, Lintang Road, 31100 Sungai Siput	The Manager
Ban Seng Leong Estate	134 Jalan Gopeng, 31900 Kampar	The Manager
Banqadane Estate	Batang Padang	The Manager
Batang Padang Estate	8 Jalan Raja, 36000 Teluk Intan	Toeh Ah Ton
Batu Matang Palm Oil Estate	34750 Larut Matang	The Manager
Bedford Estate	c/o Cluny Estate, 35800 Slim River	P K Varughese Babji
Beng Lee Estate	31100 Sungai Siput	John Jamieson Black
Bidor Tahan Estate	35500 Bidor	Ong Moo
Bikan Estate	35600 Sungai	S Kararajah
Blenheim Estate	36309 Sungai Sumen	M Tissa Perera
Bon Ton Estate	39200 Ringlet, C. Highlands	R Vettiveloo
Bukit Baccat Estate	35800 Slim River	P Nithianandh
Bukit Berapit Estate (1951) S/B	33700 Padang Rengas	The Manager
Bukit Berapit Oil Palm Inds. S/B	Batu 5, Jln Kamunting, 34600 Kamunting, Taiping	Ong Chin Lee
Bukit Katho Estate	35500 Bidor	Chen Yong Sang
Bukit Kilan Estate	34100 Selama	Robert S H Chua
Bukit Nias Estate	35800 Slim River	Kasa Raja s/o Gobal
Buluh Awar Estate	32810 Parit	M Jone
Cashwood Estate	32400 Ayer Tawar	N Selvanathan
Chan Peng Yong Estate	179 Main Road, 31100 Sg Siput (U)	Chan Peng Yong
Chan Wei Wah Estate	14 Jalan Gopeng, 30250 Ipoh	Devidas Menon
Changkat Aca Estate	K B No 4, 35909 Tanjong Malim	Sin Beck Sin
Changkat Bruas Estate	32700 Bruas	The Manager
Changkat Cermin I Estate	Bt. 16 Ayer Tawar, 32400 Minjung	Shahruzzaman b. Abd Halim
Changkat Cermin II Estate	16th Miles, 32400 Ayer Tawar	The Manager
Changkat Mentri Estate	36500 Ulu Berauh	Norman Santa Maria
Changkat Salak Estate	31050 Salak (U)	Mond Razlan b. Hj Ibrahim
Charlesland Estate	74 Barrack Road, 34000 Taiping	The Manager
Chau Yang Farming Sdn Bhd	Mukim Blanja, 31000 Batu Gajah	The Manager
Chendiro/Ampang Estate	c/o 14A Taiping Road, 33000 Kuala Kangsar	The Manager
Choo Mook Heng Holding Sdn Bhd	14-16 Jalan Besar, 34000 Taiping	The Manager
Chooing Cheo Estate	55 Hale Street, Ipoh	The Manager
Chersonese Estate	34350 Kuala Kurau	M Balasingaran
Chuang Kong Plantations Sdn Bhd	Krian	The Manager
Choo Mook Heng Holdings S/B	14-16 Jalan Taming Sari, 34000 Taiping	Choo Mook Heng
Cicely Estate	35 Jalan Bender, 36000 Teluk Intan	The Manager
Cima Plantations Sdn Bhd	Hilir Perak	The Manager
City Plantations	2700-1 Jln Sultan Iskandar, 30000 Ipoh	Pu Kau Chi
Cluny Estate	35800 Slim River	P K Varughese
Coalfields Estate	Peti Surat No 12, 35909 Tanjong Malim	Thong Kin Sin
Dato KR Sithambaram Pillay Est.	Hilir Perak	The Manager
Dindings Oil Palm Estate	34903 Pantai Remis	Leong Ming San
Dovenby Estate	31100 Sg Siput (N)	K Ramakrishnan
ESPDR-Bukit Kota I	32700 Bruas	Chun Kai Sang

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
04-524280		78	0	0	0	0	78	
04-831462		0	0	0	0	0	157	
04-831495		0	113	0	24	120	257	Fruits
04-511134		41	28	0	12	0	81	
04-511134		12	65	8	0	4	89	
04-610798/524220		61	21	0	0	0	82	
04-85893		0	0	0	0	0	47	
04-301263		0	0	0	0	0	80	
04-524236		56	0	0	0	0	56	
04-898253		0	0	0	0	0	156	
04-611443		0	0	0	0	0	0	Figures n.a
		0	0	0	0	0	0	Figures n.a
05-511009/511012		0	0	0	0	0	0	Figures n.a
05-626153		45	36	0	0	0	81	
05-887104	Taiko Plantations Sdn Bhd	553	236	0	0	0	789	
05-481249		0	0	0	0	0	66	
05-939061		0	0	0	0	0	0	Figures n.a
05-624211		0	0	0	0	0	0	Figures n.a
05-621374		135	0	0	0	0	135	
05-911306	Plantation Agencies Sdn Bhd	0	0	0	1165	0	1165	
05-626153		78	125	0	0	0	203	
05-557578		0	0	0	0	0	48	
05-348201		26	53	0	0	0	79	
05-696244/240/249	H.M.P. Bhd	160	0	2	1483	0	1645	
05-669214	Plantation Agencies Sdn Bhd	220	0	22	641	0	883	
05-669214	Nat. Land Finance Co-op Soc. Ltd	279	0	529	856	0	1664	
05-553609		0	670	0	0	0	670	
05-647217		0	109	0	0	0	109	
05-987316		0	0	0	0	0	225	
05-651505		0	8	24	0	0	32	
05-644031		0	0	0	0	0	182	
05-621722		293	0	0	0	0	293	
05-823127		0	0	0	0	0	0	Figures n.a
05-428422		142	236	0	0	0	378	
05-399291		0	0	189	7	0	196	
05-441966		323	215	0	0	0	538	
05-486261	Harrisons' Malaysian Plantations Bhd	401	705	0	0	0	1106	
05-669225/221/277		0	0	0	776	0	776	
05-996032/33		0	0	0	0	466	466	Tea
05-428464	Amusa Agency	175	199	0	0	0	374	
05-874096		15	270	0	0	0	291	
05-821504/823809		81	0	0	0	0	81	
05-441175	Taiko Plantations Sdn Bhd	122	337	0	0	0	459	
05-804039		180	200	0	0	0	380	
		999	0	0	0	0	999	
05-371320	Riverview Rubber Estates, Berhad	91	671	202	0	0	964	
05-944193	IPP Berhad	0	245	525	10	0	788	
05-782825/782033		102	76	0	0	0	178	
05-540155		55	347	0	0	0	402	
05-496080	Taiko Plantations Sdn Bhd	670	223	0	0	0	893	
05-972270		0	0	0	0	0	430	
05-942805	Ladang Perbadanan Fima Sdn Bhd	1265	0	0	0	0	1265	
	Ladang Perbadanan Fima Sdn Bhd	938	0	0	0	0	938	
05-636261-04	United Plantations Bhd	2296	0	0	0	0	2296	
05-876505	Kumpulan Guthrie Sdn Bhd	202	1323	0	0	0	1525	
05-823008		85	0	0	0	0	85	
05-989319/548325		0	0	0	0	0	0	Figures n.a
05-851515		0	42	0	0	0	42	
05-824166/269		40	0	0	0	0	40	
05-545112		0	0	0	0	0	294	
05-557024	H.M.P. Bhd	1508	0	0	732	0	2240	
04-26268/9		0	0	0	0	0	0	Figures n.a
05-824066/824266		47	0	0	0	0	47	
05-625202		170	16	0	0	0	186	
06-632490		0	0	0	0	0	0	Figures n.a
05-513222		728	0	0	0	0	728	
05-428422	H.M.P. Bhd	198	537	0	0	0	735	
05-496060	Taiko Plantations Sdn Bhd	535	565	0	0	0	1100	
05-621314		0	0	0	0	0	321	
05-341332		683	0	0	0	0	683	
05-781213	Plantation Agencies Sdn Bhd	244	483	0	0	0	727	
05-349298	Estet Pekibun Kecil Sdn Bhd	365	1358	0	0	0	1723	

Name of Estate	Address	Manager
Perak Cont.		
ESPEK-Bukit Kota II	d/a Pej. Pos Air Tawar, 32400 Air Tawar	Mohd Damhuri b Mohd Jamli
ESPEK-Bukit Kota III	32400 Ayer Tawar	Din b. Zakaria
ESPEK-Serigala Estate	35800 Slim River	Mohd. Idris b. Abdallah
ESPEK-Ulu Slim	d/a Wakil Pos, Kg Ulu Slim, 35800 Slim River	Purusothasan a/l Elumalai
Englohurst Estate	10 1/2 Miles Pondok Tanjung, 34000 Taiping	The Manager
Elphil Estate	31100 Sg Siput (U)	Jamil Hj Mohd Nor
Eng Thye Plantations Bhd	Kuala Krai	The Manager
Eng Wah Estate	179 Malin Road, 31100 Sg Siput (U)	Chan Peng Yong
Eacot Estate	Tanjong Malin Post Office, 35900 Tanjong Malin	The Manager
Fairlie Estate	39200 Ringlet, C. Highlands	R Marthi
Federal Oil Palm Sdn Bhd	Hilir Perak	The Manager
Felcra Changkat Sulaiman Estate	Pej. Pos Sungai, 35600 Sungai	The Manager
Felcra Nasaruddin (Bellia) I - VI	Km 37, Jalan Tronoh, 32600 Bota	The Manager
Felcra Nasaruddin (Pemulihan)	I & II, Km 37, Jalan Tronoh, 32600 Bota	The Manager
Felcra Rejang Punggor Estate	Km 33, Jalan Kampar, 36700 Langkap	The Manager
Flemington Estate	36309 Sg Sumun, Teluk Intan	M Nasarudin
Foo Nyit Tee Estate	P O Box 83, 30710 Ipoh	The Manager
Foong Lee Plantation Sdn Bhd	Pondok Tanjung, 34000 Taiping	P Aravasee
Ganda Plantations Bhd	Bt 7 Jln Changkat Jong, P O 97, 36008 Teluk Intan	Imail b. Mohd Rezi
Gedong Estate	Peti Surat 4, 34300 Bagan Serai	Looi Hong Chooi
Gelong Gajah Estate	32700 Bruas	The Manager
Getah Estate	Kampong Changkat Sulaiman, 35600 Sungai	The Manager
Glenvale Estate	32800 Parit	Lim Cho Yan
Gough Gardens Estate	c/o Flemington Estate, 36309 Sg Sumun, Teluk Intan	M Nagarathnam
Guan Chow & Sons Estate	62 Theatre Street, 30300 Ipoh	The Manager
Gula Estate	34350 Kuala Kurau	Gol Aik Theam
Gunong Inas Estate	167-169 Kota Road, 34000 Taiping	The Manager
Harcroft Estate	32400 Ayer Tawar	K M Muthu
Hatina Rubber Estate	11 Miles Jalan Kasla Trong, 34800 Trong	The Manager
Heap Seng Estate Sdn Bhd	34750 Larut Matang	The Manager
Heaswood Estate	31100 Sungai Siput (U)	The Manager
Hendon Estate	34100 Selama	M Marupan (Asset-in-charge)
Hibernia Estate	34100 Selama	R Sinapan
Hidden Stream Estate	32700 Bruas	The Manager
Hilir Oil Palm Sdn Bhd	Durian Sebatang, Hilir Perak	The Manager
Hock Leong Estate	31 Jalan Swettenham, 34000 Taiping	The Manager
Hock Plantation	Amp Pongau, 34300 Bagan Serai	The Manager
Hock Seng Estate Sdn Bhd	Simpang Lina, 34200 Parit Buntar	The Manager
Hollywood Estate	34100 Selama	The Manager
Hong Seng Estate	5 Jalan Bendahara, 31650 Ipoh	H Radhakrishnan
Hong Thin Coconut Estates S/B	1 Medan Kidd, Kintan Mansion, 30200 Ipoh	The Manager
Hong Tion Di Estate	7th Mile Jalan Changkat Jong, 36000 Teluk Intan	The Manager
Hua Lian Sdn Bhd	3 Jalan Tokong, 34000 Taiping	Tech Kok Liang
Huntly Estate	34900 Pantai Remis	A R Menon
Hap Aik Oil Palm Estate	Kampong Dow, 34750 Larut/Matang	The Manager
Hap Hock Estate	106 Jalan Tasek, 31400 Ipoh	The Manager
Hurst Estate	Ulu Sepatang, 34000 Taiping	The Manager
Jabatan Pertanian Perak	Rancangan Tanah Beka, 33000 Kuala Kangsar	The Manager
Jalong Bahru Estate	c/o Jalong Tinggi Estate, 31100 Sungai Siput (U)	The Manager
Jalong Estate Sdn Bhd	31100 Sungai Siput (U)	The Manager
Jalong Tinggi Estate	31100 Sungai Siput (U)	The Manager
Jaya Estate	Hilir Perak	The Manager
Jaya Plantations Sdn Bhd	5 Miles Jalan Hutan Melintang, 36000 Teluk Intan	The Manager
Jayamondar Estate	61 Anson Road, 36000 Teluk Intan	The Manager
Jendarata Estate	36009 Teluk Intan	Loh Hong Pui
Jin Aik Rubber Estate	Peti Surat 83, Bt 9, Jln Krian, 34008 Taiping	Chew Liew Koh
Jin Seng Estate	34300 Bagan Serai	S Nadarajah
Joo Cheang Oil Palm Sdn Bhd	16 Miles Batu Kurau, 34000 Taiping	The Manager
Joo Kee Singh Estate	4 Miles Jln Gula, Simpang Empat, 34300 Bagan Serai	The Manager
Joo Seng Estate	14 Jalan Taiping, 33000 Kuala Kampar	The Manager
K'lapa Bali Estate	35800 Slim River	The Manager
Kalumpang Estate	34300 Bagan Serai	P Jayaraman
Kan Tai Coldstream Estate	Changkat Jong, Hilir Perak	The Manager
Kanlayathy Estate	5 Market Street, 36000 Teluk Intan	The Manager
Kanochy Estate	c/o 7 Tan Rethna, Jln Manggis, 36000 Teluk Intan	K M Kurian (Conductor-in-charge)
Kampar Estate	P O Box No 20, 31907 Kampar	Ang Chai Poo
Kampong Banjar Estate	36000 Teluk Intan	The Manager
Kampong Changkat Sulaiman Estate	35600 Sungai	The Manager
Kamuning Estate	31100 Sg Siput (U)	Toy Chin Yu
Kanthan Estate	P O Box 83, 30710 Ipoh	Foo Poon Kwian (Supervisor)
Kastan Zarian Estate	Manong, 33800 Kuala Kangsar	The Manager
Kati Estate	Sauk, 33500 Kuala Kangsar	The Manager
Kean Chuan Rubber Estate S/B	Tapah, 35000 Botang Padang	The Manager
Kg. Ulu Klang Estate	Jaya Setia, 31100 Sungai Siput (N)	The Manager
Kheng Hoo Hin Estate	12 Miles Jalan Bagan Datok, 36400 Hutan Melintang	The Manager

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
05-361242/01-330578	Estet Pekanbun Kecil Sdn Bhd	487	996	0	0	0	1483	
01-336285	Estet Pekanbun Kecil Sdn Bhd	744	660	0	0	0	1404	
05-428250/01-336284	Estet Pekanbun Kecil Sdn Bhd	395	1454	0	0	0	1849	
05-428314	Estet Pekanbun Kecil Sdn Bhd	0	717	0	0	0	717	
05-823013		0	0	0	0	0	582	
05-781829	H.M.P. Berhad	171	747	0	0	0	918	
04-557129/462		2495	0	0	0	0	2495	
05-782033/782825		25	188	0	0	0	213	
03-346060	Taiko Plantations Sdn Bhd	461	640	0	0	0	1101	
05-996258	J.A. Russell & Co Sdn Bhd	0	0	0	0	335	335	Tea, Citrus, Coffee
05-621538/622077		0	0	0	0	0	0	Figures n.a
05-486057	FELCRA	0	0	0	0	0	0	Figures n.a
05-361241	FELCRA	0	0	0	0	0	0	Figures n.a
05-361215	FELCRA	0	0	0	0	0	0	Figures n.a
05-691273	FELCRA	0	0	0	0	0	0	Figures n.a
05-661207	H.M.P. Bhd	337	0	0	1545	0	1882	
05-510366		0	0	0	0	0	259	
05-822752		647	0	0	0	0	647	
05-622399/Bxt 196		2014	0	0	0	0	2014	
04-555619	Sime Darby Plantations	1337	0	0	0	0	1337	
05-511009/511012		0	0	0	0	0	0	Figures n.a
05-486101	RISDA	0	613	0	0	0	613	
05-371245	Taiko Plantations Sdn Bhd	120	694	0	0	0	814	
05-661266	H.M.P. Bhd	178	52	0	0	0	230	
05-541907/531578		69	42	0	0	0	111	
05-557129/557462	Sin Thy Management Sdn Bhd K.L.	2525	0	0	0	0	2525	
05-804034		14	261	0	0	0	275	
05-944197	Plantation Agencies Sdn Bhd	284	482	0	50	0	816	
05-887302		71	15	0	0	0	86	
05-823793		0	0	0	0	0	51	
05-781245	Highlands & Lowlands Bhd	0	1002	0	0	0	1002	
05-804140	Plantation Agencies Sdn Bhd	165	93	0	0	0	258	
05-804019	Riverview Rubber Estates, Berhad	194	165	0	0	0	359	
05-887380		201	231	0	0	0	432	
04-65784		0	0	0	0	0	0	Figures n.a
05-825071		47	0	0	0	0	47	
04-370581		0	0	0	0	0	0	Figures n.a
05-804031	H.M.P. Bhd	711	512	0	0	0	1223	
05-514482		0	0	0	0	0	48	
05-545758		0	0	0	84	0	84	
05-823771		0	0	0	0	0	0	Figures n.a
05-341735	Plantation Agencies Sdn Bhd	82	0	0	0	0	82	
05-823771		499	335	32	0	0	866	
05-408235		0	0	0	0	0	0	Figures n.a
05-823049		0	0	0	0	0	202	
05-823049		206	191	0	0	0	397	
05-987539/884218		0	0	0	0	0	0	Figures n.a
05-537924/928		0	0	0	0	0	55	
05-987420		519	64	0	0	0	583	
05-632334		0	0	0	0	0	410	
05-627047		0	0	0	0	0	0	Figures n.a
05-626153		0	80	0	0	0	80	
05-661411	United Plantations Bhd	5994	0	1438	104	0	7536	
05-823127		412	0	0	0	0	412	
05-555663	H.M.P. Bhd	1051	0	0	0	0	1051	
05-888149		0	0	0	0	0	0	Figures n.a
05-888149		0	0	0	0	0	0	Figures n.a
05-851500		0	0	0	0	0	112	
05-428141/326	Socfin Co Bhd	2297	0	0	0	0	2297	
05-555841	Kumpulan Guthrie Sdn Bhd	1358	0	0	0	0	1358	
05-651263		0	0	0	0	0	66	
05-621077		0	0	0	0	0	41	
05-611935	Plantation Agencies Sdn Bhd	101	0	0	17	0	118	
05-651448	Taiko Plantations Sdn Bhd	222	459	0	0	0	681	
05-628333		809	0	0	0	0	809	
05-781109	Kumpulan Guthrie Sdn Bhd	0	0	0	0	0	1065	
05-510366		167	1982	0	0	0	2149	
05-851527		101	141	0	0	0	242	
05-871232		0	0	0	0	0	183	
05-72561		0	748	0	0	0	748	
05-987465/987083		0	0	0	0	0	142	
05-625871		0	0	0	0	0	0	Figures n.a
		0	0	0	0	0	0	Figures n.a

Name of Estate	Address	Manager
■ Perak Cont.		
Kheng Hooi Plantations Bhd	36400 Hutan Melintang	The Manager
Kim Hua Estate	72-74 Jalan Berrack, 34000 Taiping	The Manager
Kinta Kallias estate	P O Box 7, 31100 Batu Gajah	Abdul Mukti b. Abdul Rahman
Klabang Estate	31200 Chemor	Pen Yong Kwang
Koh Chin Leen Estate	Lot 230 Himpia Panjang N/V, 31100 Sungai Siput (U)	The Manager
Kocp Pehama Estate	Sri Majong	The Manager
Kop. Pengawas Ht. Mel. N. Perak	P O Box 11, 32800 Parit	The Manager
Kota Bahroe Group Estate	31600 Gopeng	Cheam Suan King
Kota Lima Estate	33400 Lempong	The Manager
Kruada Bharu Estate	2 Chateau Lane, Chateau Gardens, 30250 Ipoh	The Manager
Kuala Bernam Estate	36009 Teluk Intan	The Manager
Kuala Bidor Estate	P O Box 43, 36007 Teluk Intan	C V Rajah Padman
Kuala Bikas Estate	c/o No. 8 Jalan Raja, 36000 Teluk Intan	The Manager
Kuala Kangsar Estate	Padang Rengas, 33700 Kuala Kangsar	Teoh Ah Ton
Kuala Perak Coconut Industries	36000 Teluk Intan	Salleh b. Aki N. Jayaraman
Kuala Perak Estate	P O Box 1, 36200 Selekoh	N. Jayaraman
Kuala Perak Estate (Coconut Div)	21st Mile, 36209 Selekoh	N Jayaraman
Kuantan Trading Co Sdn Bhd	HK & Shanghai Bk, Station Rd, 30000 Ipoh	Yam Sin Fah
Kumpulan Estet Mah Hock Cheong	Makin Durian Sobatang, 36000 Teluk Intan	The Manager
Kumpulan Estet Mah Hock Cheong	Makin Ulu Bernam, Batang Padang	The Manager
Kwang Lim Yoon Estate	1st Mile Jalan Chenderising, 35000 Tapah	Leslie Philip Mtapang
Ladang Kemiri Estate	31100 Sg Siput (U)	Kamruddin b. Ahmad
Ladang Mara (M) Bhd	Ladang Sitiawan Singsang Tiga, 32010 Sitiawan	The Manager
Lan Guan Plantations Sdn Bhd	3 Miles Jalan Selama, 34300 Bagan Serai	The Manager
Lan Wah Fun Estate	87 Jalan Gopeng, 31900 Kampar	The Manager
Lauderdale Estate	34750 Larut Matang	The Manager
Lekir I Estate	14th Miles Lekir, 32000 Sitiawan	The Manager
Lekir II Estate	14th Miles Lekir, 32000 Sitiawan	The Manager
Loong Cheng Estate	11 Miles Jalan Tromg, 34000 Taiping	The Manager
Liberal Sdn Bhd.	270-D Jalan Sultan Iskandar, 30000 Ipoh	The Manager
Lim Kooi Hui Estate	c/o Bagan Pasir Est P O. Box 2, 36309 Sungai Sumit	R Sadasivam (Visiting Manager)
Lim Swee Ann Estate	74 Jalan Kota, 34000 Taiping	The Manager
Lina Bhas Estate	35800 Slim River	The Manager
Linda Estate	47 Jalan Bandar, 36000 Teluk Intan	D. W. E. Hay
Ling Sing Song & Lim Seny Seong	62 Theatre Street, 30300 Ipoh	The Manager
Loke Estate (Segari Div.)	4 Miles Segari, 32200 Lumut	Loke Kok Leong
Loke Kok Cheong Plantations S/B	161 Jln Menapis, KJ. Jambu, 34000 Taiping	The Manager
Loong Estate	11 Jalan Lumut, 32000 Sitiawan	The Manager
Mah Kling Yow & Rakan-Rakan	Hilir Perak	The Manager
Mah King Moon Sdn Bhd.	2133 Jalan Maharaja Iela, 36000 Teluk Intan	The Manager
Mah Poh Cheong Co Sdn Bhd	Larut/Matang, Hilir Perak	The Manager
Malay Rubber Plantation (M) S/B	31500 Lahat	The Manager
Malaya Estate	34100 Selama	K Raja
Melontang Estate	36100 Bagan Datoh	Tsui Chi Pui
Menglembu Estate	c/o 14A Tingkat Kledang 21, 31450 Menglembu	T Krishnan
Moozis Estate Sdn Bhd	Changkat Jong, Hilir Perak	The Manager
Munasamy Estate	178 Market Road, 34000 Taiping	The Manager
Maragahan Estate	122 Belfield Street, Ipoh	The Manager
N.K.B. Arunasalam Chettiar Est.	43 Jalan Kangsar, 33000 Kuala Kangsar	The Manager
Nalla Estate	31750 Tronoh	lan Kar Khong
Nan Bee Sdn Bhd	2305, 2 1/2 Mls Jln Batak Rabbit, 36000 Teluk Intan	The Manager
Nanyang Estate	Jelai, Batu Kurau, 34000 Taiping	The Manager
Narborough Rubber Estate	35600 Sungai	J.L. Black
New Behrang Estate	8 Jalan Raya, 36000 Teluk Intan	Teoh Ah Ton
Ngan Holdings Sdn Bhd	Hutan Melintang, 36400 Hilir Perak	The Manager
North Malaya Estate	5 Main Road, 31100 Sungai Siput (N)	The Manager
Nova Scotia Estate	36009 Teluk Intan	Piong Sim
Ong Ah Thor & Wong An Thor	217 Upper Stephen Road, 34000 Taiping	The Manager
Ong Tam Swee & Sons Sdn Bhd	Brian, Krian	The Manager
Padang Rengas Estate	33700 Padang Rengas	The Manager
Parit Buntar Estate	Krian	The Manager
Pembroke Estate	29 Jalan Bandar, 36000 Teluk Intan	The Manager
Pemarth Plantations Sdn Bhd	179 Main Road, 31100 Sg Siput (U)	Chin Peng Yong
Pendolang Estate	Pondok Tanjung, 34000 Taiping	The Manager
Perak Motor Sdn Bhd	12th Mile, Jln Bidar P O Box 53, 36007 Teluk Intan	Yow Thin Hock
Perak River Estate	33700 Padang Rengas	S Balakrishnan
Perak River Estate	36309 Sungai Sumit	N Tissa Perera
Perlop Estate	31100 Sungai Siput (U)	The Manager
Pertubuhan Peladang Kawasan	Kempong Gajah, 36000 Telok Intan	The Manager
Petaling Dlm. Corp. Sdn Bhd	11 Jalan Bandar, 36000 Teluk Intan	The Manager
Pinjil Estate	31500 Lahat	Pong Ting Wong
Pondok Tanjung Plantations	Pondok Tanjung, 34750 Matang	The Manager
Pondoland Estate	Pondok Tanjung, 34000 Taiping	The Manager
Ponsivaya Plantations	Hilir Perak	The Manager
Pundut/Ulu Ayer Tawar Estates	32000 Sitiawan	S R Kannan

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
05-912122		0	0	0	0	0	0	Figures n.a
05-823008		0	0	0	0	0	82	
05-763234	H.M.P. Bhd	227	720	0	0	0	947	
05-701416		126	256	0	0	26	408	Mango
05-987237		0	0	0	0	0	79	
05-371488		0	0	0	0	0	0	Figures n.a
05-391245	Osborne & Chappol Inter. Sdn Bhd	974	0	0	0	0	974	
04-62194		382	840	133	0	0	1355	
05-542425		0	0	0	0	0	165	
05-669211	United Plantations Bhd	0	41	0	0	0	41	
05-621144/622917		0	0	785	799	0	1584	
05-621722/621955		20	95	0	0	0	115	
05-874215	Taiko Plantations Sdn Bhd	399	0	0	0	0	399	
05-669216	Nat. Land Finance Co-op Soc. Ltd	0	796	0	0	0	796	Figure n.a.
05-696255	Nat. Land Finance Co-op Soc. Ltd	0	0	1134	1187	0	2321	
05-669216	Plantation Agencies Sdn Bhd	0	0	0	1187	0	1187	
05-510366	Tay Tiam Hin Sdn Bhd	2141	0	0	0	0	2141	
05-621722/621955		0	0	0	0	0	0	Figures n.a
05-621722/621955		0	0	0	0	0	0	Figures n.a
05-412550		0	0	0	0	0	59	
05-781245	Kumpulan Guthrie Sdn Bhd	150	781	0	0	0	931	
05-911117	MARA Holdings Sdn Bhd	1192	0	22	0	0	1214	
05-555512		0	0	0	0	0	0	Figures n.a
05-651248		0	0	0	0	0	251	
05-823546		0	0	0	0	0	366	
05-915059	Ladang Perbadanan Fim Sdn Bhd	1521	0	0	0	0	1521	
05-939237	Ladang Perbadanan Fim Sdn Bhd	856	0	0	0	0	856	
05-51250/51255		0	0	0	0	0	0	Figures n.a
05-669214	Plantation Agencies Sdn Bhd	70	0	0	0	0	70	
05-823263		0	0	0	195	0	195	
05-428326	Socfin Co Bhd	0	45	0	0	0	45	
05-622561/626933		2747	0	0	0	0	2747	
05-541907/531578		67	37	0	0	0	104	
05-942306		78	42	0	0	0	112	
05-821653		179	130	0	0	4	313	
05-911592		45	45	0	0	0	90	
05-822297		60	0	0	0	0	60	
05-628333		0	0	0	0	0	0	Figures n.a
05-822297		820	0	0	0	0	820	
05-542413		0	0	0	0	0	0	Figures n.a
03-2419044	Boustead Estate Agency Sdn Bhd	88	859	114	0	0	1061	
05-696218	H.M.P. Bhd	614	238	0	0	0	852	
05-542625	Taiko Plantations Sdn Bhd	1259	0	19	881	0	2159	
05-625122/625128		0	439	0	0	0	439	
05-823853		0	0	0	0	0	0	Figures n.a
05-851688		23	34	0	0	0	57	
05-376232	Dason & Co	0	0	0	0	0	84	
05-621412		142	242	0	0	3	387	Durian
05-888045		0	0	0	0	0	406	
05-486185		0	0	0	0	0	241	
05-621722		119	442	0	0	0	561	
05-622399		254	107	0	0	0	361	
05-987330		0	0	0	0	0	0	Figures n.a
05-621477	Sine Darby Plantations	0	0	0	0	0	46	
05-822989		3008	50	0	0	0	3058	
05-822714		11	0	0	0	0	11	
05-855206		0	0	0	0	0	0	Figures n.a
05-621161	Ban Song Huat Sdn Bhd	0	0	0	0	0	0	Figures n.a
05-782825/782033		149	0	0	0	0	149	
05-823367		160	0	0	0	0	160	
05-691455/691784		67	148	0	0	0	215	
05-861619/874219		93	291	0	0	0	384	
05-696250		500	0	0	0	10	510	Bananas
05-781539		121	231	0	0	0	352	
05-650224		0	0	0	805	0	805	
05-622385		2000	0	0	0	0	2000	
05-218413	Taiko Plantations Sdn Bhd	121	0	0	0	0	121	
05-822508		0	0	0	0	0	109	
05-823367		301	754	158	0	0	1213	
05-628424		0	0	0	0	0	758	
05-935606	Plantation Agencies Sdn Bhd	104	293	0	0	0	397	
		0	0	0	0	0	0	Figures n.a
		0	316	48	242	0	606	

Name of Estate	Address	Manager
Perak Cont.		
R.P. Kolapa Sawit Sdn Bhd	Slim River Post Office, 35800 Slim River	The Manager
RISDA Rubber Estate	Kg Changkat Suleiman, 35600 Sungkai	Mohi Senan b. Abu
Raja Hitam Estate	Air Tawar, 32400 Dingding	The Manager
Ratanang Estate	2 Mile Jalan Changkat Jong, 36000 Teluk Intan	The Manager
Redang Pungor Estate	(Mukim Labu Kubong), Hillir Perak	The Manager
Rengas Estate	2 Jalan Patani, 33000 Kuala Kangsar	The Manager
Rivakhar Plantations	P O Box 198, 30720 Ipoh	The Manager
Riverview Estate	31800 Tanjung Tualang	Shuib b. Abdullah
Rubana Estate	36009 Teluk Intan	Young Ching Pin
Rubest Plantations Sdn Bhd	Lot 42 & 43 Durian Sebatang, 36000 Teluk Intan	The Manager
Rumpun Estate	Lot No 1943 Mukim Chegar Galah, 33000 Kuala Kangsar	The Manager
RSK Bagan Datok Perak Bhd	7th Mile Jalan Changkat Jong, 36000 Teluk Intan	The Manager
Sabrang Estate	36009 Teluk Intan	Toh Chan Hin
Safira Estate	32700 Bruas	Syed Hilmi Shabudin
Salamat Estate	34800 Trong	Young Teik Boon
San San Estate	Gunong Semanggol	The Manager
Sebur Estate	34500 Batu Kurau	The Manager
Selaba Estate	P O Box 51, 36007 Teluk Intan	K C Chee
Selamat Oil Palm Sdn Bhd	Hutan Melintang, 36400 Hillir Perak	The Manager
Selidings Estate	34100 Selama	Yoo Kok Kieng
Selinsing Estate	P O Box 16, 34007 Taiping	K K John
Semaiah Properties Sdn Bhd	549 & 551 Jln Silibin, 39100 Ipoh	Yap Beng Choon
Senggang Estate	33800 Marang, Kuala Kangsar	M Harlappan
Serapoh Estate	32800 Parit	Cheng Rip Siang
Seri Belang Estate	Bt. 11 3/4, Jln Bidor P O Box 89, 36008 Teluk Intan	Bajuri b. Subada
Seri Sawit Sdn Bhd	P O Box 97, 36000 Teluk Intan	The Manager
Setia Estate	13th Miles Jalan Bagan Datok, 36400 Hutan Melintang	The Manager
Sg Reyla Estate	31100 Sg Siput (N)	Lau Song Lee
Sg Siput Estate	31100 Sg Siput (U)	E Keerthy
Sivah & Shah Oil Palm Estate	4th Mile Jalan Sungai Manik, 36000 Teluk Intan	The Manager
Simpang Estate	2 1/2 Miles Kampong Dew Road, 34700 Simpang	The Manager
Sin Heng Estate	29 Main Road, 31100 Sungai Siput (U)	The Manager
Sin Hin Oil Palm Estate	31100 Sungai Siput (N)	The Manager
Sin Hoi Estate	5th Mile Krian Road, 34300 Taiping	The Manager
Sin Lian Thye Plantation Sdn Bhd	Jalong Tinggi, 31100 Sg Siput (U)	The Manager
Sin Wan Thye Plantation Sdn Bhd	31250 Tanjung Rambutan	Khooi Beng Ann
Sitiawan/Bernam Perak Estate	Hilir Perak	Khooi Beng Ann
Slim River Estate	Ulu Bernam, Batang Padang	The Manager
Societe Des Estains De Kinta	Jalan Iskandar, 31900 Kampar	The Manager
Sogonana Estate	32500 Changkat Kruing, Manjung	S Manokaran
Sogonana Estate	Pantai Bemis, 34900 Dinding	The Manager
Soon Lee Estate	34300 Bagan Serai	M Sivagandass
Southern Perak Plantations S/B	Ladang Barat, 36400 Hutan Melintang	Soe Pook Wain
Southern Perak Plantations S/B	Ladang Timur, 36400 Hutan Melintang	Julian L Than
Spyrie Estate	Lekir, Sri Manjong	The Manager
Sri Maragan Estate	57 Jalan Bendera, 36000 Teluk Intan	The Manager
Stoughton Estate	34510 Batu Kurau	Ng Chang Huat
Strathisla Estate	Jalan Jelapang, 30020 Ipoh	Kwilian B. Mammad
Subur Estate	34520 Batu Kurau	Lee Kuan Hean
Sum Hup Huat Estate	Simpang J, 34200 Parit Buntar	The Manager
Sungai Bruas Estate	32700 Bruas	S Manokaran
Sungai Krudda I/II Estate	31100 Sungai Siput (N)	E. Keerthy
Sungai Wang Estate	34750 Larut Matang	The Manager
Sungai Bernam Estate	36009 Teluk Intan	A Arickiah
Sungai Chawang Estate	36500 Ulu Bernam	Onar b. Dato' Hj Abu Bakar
Sungai Chinch Estate	35700 Trolak	Goh Cheng Beng
Sungai Chong Estate	36500 Ulu Bernam	Lee Foo Wah
Sungai Klah Estate	c/o Bikan Estate, 35600 Sungkai	S Rajarajah
Sungai Koru Estate	c/o R10/318, Kg Mhibah, 31100 Sungai Siput (U)	Teoh Ah Lik
Sungai Krian Estate	34300 Bagan Serai	A Rajammikan
Sungai Kruit Estate	35600 Sungkai	Teoh Kow Tee
Sungai Limu Estate	34800 Trong	Low Eng Cheang
Sungai Palas Estate	P O Box 40, 39007 Tanah Rata, C. Highlands	Capt Zainal Hj Tamby
Sungai Patani Estate	c/o Bruas Estate, 32700 Bruas	The Manager
Sungai Reyla Estate	7th Mile, Lintang Road, 31100 Sungai Siput (U)	Lau Song Lee
Sungai Samak Estate	36500 Ulu Bernam	M Pathmanathan
Sungai Siput Estate	31100 Sungai Siput (N)	J.C. Balachandran
Sungai Sungai Rubber Estate	35600 Sungkai	C N Govindan Nair
Sungai Timah Estate	8 Jln Raja, 36000 Teluk Intan	Teoh Ah Ton
Sungai Wang Estate	32000 Sitiawan	Lee Kim Thian
Suppiah Pillay Estate	3 Main Road, 31100 Sungai Siput	The Manager
Sussex Estate	Pt1 Surat 95, 36008 Teluk Intan	Dr A Puraviappan
Swee Seng Oil Palm Estate	33000 Kuala Kangsar	The Manager
Sykt. Cahaya Mada Perak Sdn Bhd	Hutan Melintang, 36400 Hillir Perak	The Manager
Sykt. Gabungan Seri Sawit Bhd	36400 Hutan Melintang	The Manager

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
05-486101		1173	0	0	3	0	1176	
05-930457	Ladang Perbadanan Fima Sdn Bhd	0	1040	0	0	0	1040	
05-625106		1551	0	0	0	0	1551	
		0	0	0	0	0	476	
05-851377		0	0	0	0	0	0	Figures n.a
05-399201		0	61	0	0	0	61	
05-399201	Riverview Rubber Estates, Berhad	0	0	146	0	0	146	
05-621188	Sime Darby Plantations	55	532	0	0	0	587	
05-621432		1880	0	0	0	0	1880	
		0	0	0	0	0	0	Figures n.a
05-822884		0	0	0	0	0	0	
05-627673		820	0	0	0	0	820	Figures n.a
05-621422	Sime Darby Plantations	2019	0	0	0	0	2019	
05-349270		0	366	0	0	0	366	
05-887252		315	128	0	0	19	462	Orchard
05-825931		0	0	0	0	0	0	Figures n.a
05-888054	Taiko Plantations Sdn Bhd	0	0	0	0	0	0	Figures n.a
05-621699/621698	H.M.P. Bhd	1232	0	0	0	0	1232	Figures n.a
		0	0	0	0	0	0	
05-804046		110	488	0	0	0	598	Figures n.a
05-801236	Shalimar Developments Sdn Bhd	494	0	0	0	0	494	
05-549231/549323		0	0	0	77	0	77	
	Taiko Plantations Sdn Bhd	133	73	0	0	0	206	
05-371361	Taiko Plantations Sdn Bhd	0	872	38	0	0	910	
05-601298	United Plantations Bhd	946	0	0	0	0	946	
05-622399		2023	0	0	0	0	2023	
05-623225		0	0	0	0	0	0	
05-781256	Taiko Plantations Sdn Bhd	236	413	0	0	0	649	Figures n.a
05-781357	Plantation Agencies Sdn Bhd	539	250	0	0	13	802	
05-623225/785422		214	0	0	0	0	214	
05-834470		0	0	0	0	0	250	
05-987340		0	0	0	0	0	41	
05-987573		0	0	0	0	0	0	
05-822694		515	341	0	0	0	856	Figures n.a
05-781420		95	304	0	0	0	399	
05-331033	Chen & co 37A Traucher St, Ipoh	80	353	0	0	0	433	
		0	0	0	0	0	0	Figures n.a
05-651144		0	0	0	0	0	0	Figures n.a
03-2619022	H.M.P. Bhd	47	585	479	0	0	1111	
05-973160		0	0	0	0	0	1152	
05-555669	Plantation Agencies Sdn Bhd	419	229	0	0	0	648	
05-671842	Plantations Agencies Sdn Bhd	1708	0	0	0	0	1708	
		2006	0	0	0	0	2006	
05-637380		0	0	0	0	0	0	Figures n.a
05-627160		62	11	0	0	0	73	
05-880379	Taiko Plantations Sdn Bhd	295	146	0	0	0	441	
05-260623		243	880	0	0	0	1123	
05-880254	Taiko Plantations Sdn Bhd	715	561	0	0	0	1276	
04-561070		0	0	0	0	0	103	
03-2619022	H.M.P. Bhd	210	71	0	0	0	281	
05-781246	Nat. Land Finance Co-op Soc. Ltd	246	595	0	0	0	841	
05-823767		0	0	0	0	0	143	
05-633263	United Plantations Bhd	589	0	1627	1666	0	3882	
01-590250	United Plantations Bhd	1739	0	0	0	0	1739	
05-428116	Taiko Plantations Sdn Bhd	33	1186	0	0	0	1219	
01-590250	United Plantations Bhd	3698	0	0	0	0	3698	
05-486944	H.M.P. Bhd	120	476	0	0	0	596	
		291	34	0	0	0	325	
05-555616		1182	0	0	0	0	1182	
05-486106	M.P. Evans (M) Sdn Bhd	451	361	0	0	0	812	
05-887253	Lim Ali & Co	174	234	0	0	0	408	
05-941288	J.A. Russell	149	139	0	0	0	288	
05-972273		12	45	0	0	0	57	
05-781258	M.P. Evans (M) Sdn Bhd Penang	196	453	0	0	0	649	
05-636223		2478	0	0	0	0	2478	
05-781357	Nat. Land Finance Co-op Soc. Ltd	525	250	0	0	0	775	
05-486175		149	139	0	0	0	288	
05-621722/621955		280	0	0	0	0	280	
05-911206	H.M.P. Bhd	109	1590	961	116	0	2776	
05-987480		0	0	0	0	0	47	
05-621384/612144		272	0	0	0	0	272	
		0	0	0	0	0	82	
05-622399		0	0	0	0	0	0	Figures n.a
05-622399		0	0	0	0	0	0	Figures n.a

Name of Estate	Address	Manager
■ Perak Cont.		
Sykt. Hisham Bersaudara Sdn Bhd	Durian Sebatang, Hillir Perak	The Manager
Sykt. Perusahaan Jasa Budiman	Lot 7282 Changkat Jong, Hillir Perak	The Manager
Tant Yik Plantations Sdn Bhd	Durian Sebatang, Hillir Perak	The Manager
Tai Hai Holding Corporation	8th Mile Matang Pasir, 34300 Bagan Serai	The Manager
Tai Joo Estate	6th Mile, Jalan Damar Laut, Sri Manjong	The Manager
Tai Seng Estate	Batu 11, Jln Kampar Ka Langkap, 36700 Langkap	The Manager
Taiping Oil Palm Plantation S/B	Hutan Melintang, 36400 Hillir Perak	The Manager
Taiping Rubber Plantation	34800 Trong	Chow Kok Choy
Tali Ayer Estate	34300 Bagan Serai	Thong Chow Sin
Tan Teng Yew Rice Mill Sdn Bhd	Kampung Nilong - Sungai Tinggi, 34000 Taiping	The Manager
Tan Teong Hoo Plantation S/B	11 Miles Jalan Trong, 34000 Taiping	The Manager
Tanjong Malin Estate	35907 Tanjong Malin	Abdul Rahman b. Othman
Tanjung Rambutan Estate	31250 Tanjung Rambutan	Liew Sip Koo
TanLian Plantation Sdn Bhd	7 Miles Changkat Jong, 36000 Teluk Intan	The Manager
Tengah Estate	35000 Tapha	The Manager
Teluk Anson Oil Palm Estate	7th Mile Jalan Changkat Jong, 36000 Teluk Intan	The Manager
Temerloh Estate	34800 Trong	K. Weisivanathan
Toeh Kok Liang Estate	3 Jalan Tokong, 34000 Taiping	The Manager
Thai Thong Estate	169 Main Road, 31100 Sg Siput (U)	Chan Boe
Tambah Estate	Lubuk Chopin, Karai, 33000 Kuala Kangsar	The Manager
Toh Eng Hoe Estate	82 Main Road, 34000 Taiping	The Manager
Tong Wah Estate	Batang Padang	The Manager
Trojak Estate	c/o Cluny Estate, 35800 Slim River	P. K. Varughese Baby
Trong (Ruan Weh) Estate	34800 Trong	The Manager
Tromoh Malay Estate	c/o Glenoaly Estate, 32800 Parit	N. Periasamy
Tronoh Malay Oil Palm Sdn Bhd	4 Medan Gopeng Daa, Jln Gopeng, 31350 Ipoh	Ibrahim Hassan b. Pointkowsky PJK
Ulu Basir Estate	36500 Ulu Bernam	Mustafa b. Mohd
Ulu Bernam Estate	36500 Ulu Bernam	Ho Dua Tian
Ulu Kampar Estate	Kinta	The Manager
Ulu Rotan Plantations Sdn Bhd	34750 Larut Matang	The Manager
Union Estate	51 Jalan Bendera, 36000 Teluk Intan	The Manager
Wan Lee Estate	32800 Parit	The Manager
Wan Lim Estate	31600 Bypor	Lim Cho Yam
Wong Heng Estate	61 Jalan Kangsar, 31000 Kuala Kangsar	P. Kallappan
West Malaysia (M) Sdn Bhd	36400 Hutan Melintang	The Manager
Windsor Estate	Ulu Sepetang, 34010 Taiping	K. Rameshchandra
Woh Hap Kee Sdn Bhd	32 Jln Kulop Limbang, Happy Gdn, 31650 Ipoh	The Manager
Yap Lee Estate	7 Lorong Tamkan, 30350 Ipoh	The Manager
Yew Lee Estate	8 Jalan Raja, 36000 Teluk Intan	Toeh An Ton
Yew Lian Estate	Hutan Melintang, 36400 Hillir Perak	The Manager
Yoon Foong Seng Plantation S/B	33000 Kuala Kangsar	The Manager
■ PERLIS		
Eng Lee Estate	3 Jalan Station, 02100 Padang Besar	The Manager
Ping Pah Co	9 Padang Besar, 02100 Padang Besar	The Manager
■ SABAH		
Abd Manaf Ahmad/Abd Talib Ahmad	P O Box 764, 91008 Tawau	The Manager
Agri-Horticultural Trading S/B	1027, Jln Dunlop P O Box 253, 91007 Tawau	Geoffrey Yee
Ah-Liks (Sabah) Sdn Bhd	2320, Jln Apas, P O Box 562, 91008 Tawau	Alex Pang
Avalania Koko Bhd	W D T 63, 91109 Lahad Datu	Phang Chew Pheng
Aqthal Jaseeng Cashcrop Ent. S/B	Locked Bag 48, 90009 Sandakan	The Manager
Aun Why Zhd	P O Box 850, 90008 Sandakan	E. Fernandez
Bal Plantations Sdn Bhd	P O Box 115, 91007 Tawau	W Dally
Balung River Cocoa Estate S/B	Rt. 30, Apas Balung, P O Box 333, 91007 Tawau	John Anselmi
Bandar Merchants	P O Box 850, 90008 Sandakan	E. Fernandez
Bonafort Palm Oil Mill	P O Box 152, 89807 Bonafort	The Manager
Bena Plantation Sdn Bhd	P O Box 735, 91008 Tawau	The Manager
Bena Plantation Sdn Bhd	W D T 46, 91209 Kunak	C. K. Chandran
Binauang Estate	91200 Kunak	The Manager
Bode/Masang Estate	P O Box 81, 90007 Sandakan	Leong Yim Ming/Alwi b. Cholleng
Bornlon Estate Sdn Bhd	W D T 94, 90009 Sandakan	Chai Bui Liong
Budi Bumi	P O Box 850, 90008 Sandakan	E. Fernandez
Bukit Emas Koko Plantations S/B	1762 Seaview Park, Jln Apas, 91007 Tawau	Dudley Chan
Bukit Nuri Coconut Estate	P O Box 10, Mambok, 89767 Kuala Penyu	A. T. Thomas
Bumi Daya Estate	W D T 420, 90009 Sandakan	Looi Eng Kool
Bumiputra Tiger Estate	91000 Tawau	The Manager
Chui Lip Kong	P O Box 256, 90007 Sandakan	The Manager
Demasa (Sabah) Sdn Bhd	P O Box 715, 91008 Tawau	The Manager
Desa Kopeksa Sdn Bhd	W D T 308, 90009 Sandakan	Mr Moorty
Dragon Valley (H) Sdn Bhd	P O Box 931, 91007 Tawau	Joseph Angkiss
Dusun Estate	W D T 127, 90009 Sandakan	Wong Ah Bah

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
05-625644		0	0	0	0	0	0	Figures n.a
05-637345		0	0	0	0	0	0	Figures n.a
05-621573		0	0	0	0	0	0	Figures n.a
04-344290		246	0	0	0	0	246	
		0	0	0	0	0	0	Figures n.a
05-691332		351	0	0	0	0	351	
		0	0	0	0	0	0	
05-887246	Boustead Estate Agency Sdn Bhd	903	474	0	0	0	1377	
04-555334	Sime Darby Plantations	2251	0	0	0	0	2251	
05-887207		459	0	0	0	0	459	
05-823844		0	0	0	0	0	0	Figures n.a
05-496285	Taiko Plantations Sdn Bhd	896	922	0	0	0	1818	
05-311244	Dunlop Estates Bhd	160	271	0	0	19	450	
05-624211		0	0	0	0	0	0	Figures n.a
05-641037		0	0	0	0	0	66	
		0	0	0	0	0	0	Figures n.a
05-887248	Plantation Agencies Sdn Bhd	556	163	68	0	0	787	
05-823771/821986		101	0	0	0	0	101	
05-781463		28	176	0	0	0	204	
05-521072		0	0	0	0	0	0	Figures n.a
05-832540		0	0	0	0	0	46	
05-641052		0	0	0	0	0	407	
05-428422	H.M.P. Bhd	18	408	0	0	0	426	
05-887165		0	0	0	0	0	57	
	Taiko Plantations Sdn Bhd	121	0	0	0	0	121	
05-517773		121	0	0	0	0	121	
01-590251	United Plantations Bhd	3032	0	0	0	0	3032	
05-636261-4	United Plantations Bhd	3261	0	206	0	0	3467	
05-651331		0	0	0	0	0	171	
05-621815		0	0	0	0	0	162	
05-621815		72	0	0	0	0	72	
05-876214	Taiko Plantations Sdn Bhd	20	34	0	0	0	54	
05-851660	Taiko Plantations Sdn Bhd	32	185	0	0	0	217	
05-930195		0	0	0	0	0	63	
		0	0	0	0	0	0	Figures n.a
05-822312	Boustead Estates Agency Sdn Bhd	342	383	0	0	0	725	
05-548208		70	8	0	0	0	78	
05-514304	Socco Sdn Bhd	0	93	0	0	13	106	Durian
		391	0	0	0	0	391	
		0	0	0	0	0	0	Figures n.a
		0	0	0	0	0	0	Figures n.a
04-750397		0	0	0	0	0	48	
		57	0	0	0	0	57	
089-74763		0	0	0	0	0	0	Figures n.a
089-772181		0	0	81	0	0	81	
089-773849		0	0	202	0	0	202	
089-81260		1687	0	1378	0	0	3065	
089-43860/51/42/4281		0	0	283	0	0	283	
01-880653	Dunlop Estates Bhd	0	0	331	31	0	362	
089-783533-7	Dunlop Estates Bhd	7948	1052	5572	56	0	14628	Coconut
		0	0	566	0	0	566	
		0	0	117	0	10	127	
		3196	0	0	0	0	3196	
089-73344		0	0	0	0	0	0	Figures n.a
089-851160	Bena Plantations Sdn Bhd	2691	0	2037	0	0	4728	
089-212177		2691	0	365	37	24	3117	
		3283	0	719	0	0	4002	
		0	0	2019	0	0	2019	
01-880828	Dunlop Estates Bhd	0	0	170	0	10	180	
089-773571		0	0	61	0	0	61	
	Boustead Estates Agency Sdn Bhd	0	0	0	135	17	152	Fruit, pepper
	Boustead Estates Agency Sdn Bhd	148	0	0	0	0	148	
089-72973		0	0	0	0	0	0	Figures n.a
089-213215/214319		303	101	72	0	0	476	
089-76174		0	0	0	0	0	0	Figures n.a
089-215149/215848		0	0	202	0	0	202	
089-772095		0	0	378	0	0	378	
089-611372		0	0	750	0	0	750	

Name of Estate	Address	Manager
■ SABAH Cont.		
Estate Plantation	P O Box 579, 91007 Tawau	Elizabeth Tann
Ryan Plantation Sdn Bhd	P O Box 814, 91008 Tawau	Chin Poh Eu
Firm Corporation Sdn Bhd	P O Box 688, 91008 Tawau	Tan Chang Kok
Foh Loi Sdn Bhd	P O Box 782, 90008 Sandakan	Lai Kim Loi
Francis Lee Estate	P O Box 695, 90007 Sandakan	The Manager
G & G Plantations Sdn Bhd	P O Box 235, 91108 Lahad Datu	Haji Daud Hj Awatzin
Giram Estate	P O Box 19, 91207 Kinak	Toh Ken Pong
HFR Plantations Sdn Bhd	P O Box 688, 91008 Tawau	Datuk Hiew Min Hong
Halusah Ladang Sdn Bhd	Locked Bag 15, 91109 Lahad Datu	Khan Sin Ann
Hap Seng Estate	P O Box 666, 91008 Tawau	The Manager
Hatawa Plantations Sdn Bhd	P O Box 975, 91008 Tawau	Mj Boon Kwee
Hiew Pook Estate	12-14 Mile Jalan Apas, 91000 Tawau	The Manager
Highland Estates Bhd	TB279, Fajar Complex Jln Karim, 91000 Tawau	Rosely D. Kusip
Hing Lee Estate	W D T 420, 90009 Sandakan	Lee Khong Chiang
Hung Yick Estate	W D T 120, 91109 Lahad Datu	P Kodiappan
Jarangan Estate Sdn Bhd	P O Box 8, 91007 Tawau	Datuk J G Bridger
Jat Sheng Plantation Sdn Bhd	P O Box 25, 91007 Tawau	Chow Sai Poong
Jeroco Plantation Sdn Bhd	1026 Dunlop Street, 91000 Tawau	The Manager
Jumbo Estate	W D T 358, 90009 Sandakan	Sucho Bin Hj Kalo
KTS Agriculture Dev. Sdn Bhd	P O Box 297, 91108 Lahad Datu	Dominic Wong Lin Kiong
Kaline Holdings Sdn Bhd	P O Box 975, 91008 Tawau	Mj Boon Kwee
Kalumpang I Estate	c/o Locked Bag No 3, 91009 Tawau	Ooi Hien Hoo
Kalumpang II Estate	c/o Locked Bag No 3, 91009 Tawau	Allan b. Hj Hassan
Kan Choong Estates Sdn Bhd	P O Box 66, 90007 Sandakan	The Manager
Karito Estate	P O Box 125, 91007 Tawau	The Manager
Kebun Rimau Sdn Bhd	P O Box 8, 91007 Tawau	Datuk J G Bridger
Kebun Singa Estate	P O Box 8, 91007 Tawau	Datuk J G Bridger
Koota Co Sdn Bhd	Bukit Tiger, 91000 Tawau	The Manager
Kerajays Oil Palm Bhd	W D T 9, 90009 Sandakan	Soo Yok Sung
Kerjays Enterprise Sdn Bhd	Lot 9 Bandar Kim Fung, WDT 102, 90009 Sandakan	Tan Sew Kee
Kim Hong Co Sdn Bhd	P O Box 380, 90007 Sandakan	The Manager
Kimani Estate	Baluran, 90003 Sandakan	The Manager
Kokorotas Estate	P O Box 203, 24th Mile, Lahad Datu/Sandakan Highway	Victor Jendusan
Kowaja Estate	Mile 1, Jln Dam, P O Box 10, 91107 Lahad Datu	Koh Tai Hong
Kretan Palm Oil Mill	P O Box 181, 90007 Sandakan	The Manager
Kulumpang Dev. Corp. Sdn Bhd	Locked Bag 3, 91009 Tawau	Tan Seng Young
Kung Hing Plantations Sdn Bhd	P O Box 918, 91008 Tawau	Pang Pook Chung
Kuntum Estate Sdn Bhd	P O Box 647, 90007 Sandakan	Keneth Chong
Kuril Plantations Sdn Bhd	Locked Bag 5, 91109 Lahad Datu	Kamaruzaman Md Shariff
L.F.K. Plantations Sdn Bhd	P O Box 112, 90007 Sandakan	Datuk Lai Pook Kim
L.K.S. Plantation	W D T 24, 91009 Tawau	Chin Pook Min
Ladang Cantawan (Sabah) Sdn Bhd	W D T 182, 91109 Lahad Datu	Dr. Chong Kwang Yin
Ladang Orico Sdn Bhd	W D T 417, 90009 Sandakan	Mrs Henry Shlow
Ladang Permai Sdn Bhd	Locked Bag 3, 91109 Lahad Datu	Ismail Ibrahim
Ladang Sri Dalima Sdn Bhd	857 Jalan Kuhara, P O Box 165, 91007 Tawau	Ahmad Manshor Zainal Mastan
Ladang Timah Sdn Bhd	188, Jalan Bakau, P O Box 290, 91007 Tawau	Bnri Tasekcal
Ladang Zaharoz Sdn Bhd	TB 857, Jln Kuhara, P O Box 165, 91007 Tawau	Ahmad Manshor Zainal Mastan
Lagsikan Estate Sdn Bhd	P O Box 113, 90007 Sandakan	The Manager
Lak Koko Y'san T.Puad & T.Razak	Locked Bag 13, 91009 Tawau	Hassan Hj Ahmad
Leeka Holdings Sdn Bhd	P O Box 65, 91007 Tawau	Yap Kim Pan, Chin Chi Keong
Lembaga Kemajuan Tanah Sabah	P O Box 11610, 88817 Kota Kinabalu	Abdul Rahman Zainal
Lembaga Tabung Getah Sabah	Tyk 2 Jln Tun Puad Stephen, 88300 Kota Kinabalu	YB Bujie Galadon
Liang Industrial Co	Mile 4 1/2 Apas Rd, P O Box 368, 91007 Tawau	Liang Kien Chang
Lim Man Kui Kanak-kanak S/B	P O Box 242, 91007 Tawau	Lim Ching On
Linddale Sdn Bhd	c/o P O Box 998, 88817 Kota Kinabalu	Joali b. Kassim
Louis Chew Su Yu Estate	P O Box 626, 90007 Sandakan	The Manager
Luhoh Co-op. Land Dev. So. Ltd.	Batu 12, Sg Manila, 90000 Sandakan	Tan Ken Min
Luth/Usia Estate	W D T 250, 90009 Sandakan	S Panirshelsum
Man Cheon Estates Sdn Bhd	P O Box 184, 90007 Sandakan	Tay Tee Kui
Manila Plantations (Sabah) S/B	2148 Jalan Habib Hussin, 91000 Tawau	T Arulanathan
Manjangan Plantation	P O Box 349, 90007 Sandakan	Lee Sym Ken
Malalap Estate	P O Box 205, 89908 Tenom	R M S Moortny
Mengaris Estate	W D T 250, 90007 Sandakan	P Viganeswaran
Min Seng Plantations Sdn Bhd	36 Miles Jalan Labuk, 90000 Sandakan	The Manager
Mirus Estates Sdn Bhd	P O Box 786, 91007 Tawau	Tirlochan Singh/Abdul Latif Rani
Morotal Estate	W D T 34, 91009 Tawau	Mj Beh Tong
Morotal River Estates Sdn Bhd	P O Box 615, 91008 Tawau	Seok Lip Su
Mosbyn Estate	P O Box 33, 91207 Kinak	The Manager
Nak Estate	90000 Sandakan	The Manager
New Spring Estate	P O Box 81, 90007 Sandakan	The Manager
Ng Ihat Eng Estate	P O Box 54, 91007 Tawau	The Manager
Ngui Ah Kui (Nak) Estate	W D T 420, 90009 Sandakan	Looi Eng Kooi
Ong Estate	W D T 120, 91109 Lahad Datu	P Kodiappan
Pacific Cocoa Plantations S/B	Locked Bag 8, 91109 Lahad Datu	Alex Liew Ah Luk
Pacific Hardwoods Sdn Bhd	W D T 57, 91109 Lahad Datu	Alber Ikuu Gening

Telephone	Agency	Oil Palm	Rubber	Cocco	Coconut	Others	Total Ha	Remarks
089-772690		81	0	61	0	20	162	Coffee
089-772547		0	0	40	0	0	40	
089-771711		0	0	606	0	0	606	
089-611651/611468		700	0	0	0	0	700	
		0	0	0	0	0	0	Figures n.a.
089-82712/82213		0	0	469	0	0	469	
089-851140		368	0	1832	0	0	2200	
089-771711		698	0	259	0	17	974	Fruit, Coffee
06-223265/01-660026		0	0	787	0	0	787	
089-71391/71733	Hap Song Plantation Sdn Bhd	0	0	0	0	0	0	Figures n.a.
089-778855/770181		485	0	405	0	0	810	
089-72251		0	0	0	0	0	0	Figures n.a.
01-880331		0	0	1450	0	4	1454	Coffee
089-83561/01-810382	Boustead Estates Agency Sdn Bhd	920	0	495	0	0	1415	
	Boustead Estates Agency Sdn Bhd	0	0	356	0	0	356	
		20	36	69	0	0	125	
089-771753		0	0	121	0	0	121	
089-771379	Dunlop Estates Bhd	0	0	0	0	0	0	Figures n.a.
089-45015		0	0	0	0	0	0	Figures n.a.
089-82420		0	0	1210	0	0	1210	
089-770182/770181		0	0	789	0	0	789	
089-778196	Taiko Plantations Sdn Bhd	1002	0	0	0	0	1002	
089-778196	Taiko Plantations Sdn Bhd	83	0	294	0	0	377	
089-212295		0	0	0	0	0	0	Figures n.a.
01-880331		0	0	0	0	0	0	Figures n.a.
089-771133		61	0	142	0	0	203	
089-771133		0	0	230	0	0	230	
089-75433		0	0	0	0	0	0	Figures n.a.
089-42988/42916		0	0	1193	0	0	1193	
089-219056/219057		0	0	795	0	5	800	Coffee
089-213441/214066		630	0	157	0	0	787	
089-213893/219176		0	0	0	0	0	0	Figures n.a.
089-82171		0	0	273	0	0	273	
089-83971		0	0	395	0	0	395	
089-43161/2/3	Syt. Kretan Mill Sdn Bhd	6362	0	720	0	0	7082	
089-778196	Taiko Plantations Sdn Bhd	9369	0	3333	0	0	12702	
089-73449/73975		0	0	1619	0	2	1621	Coffee
089-43198/45313		0	0	400	0	0	400	
089-82262		0	0	233	0	0	233	
089-211622/626/21584		1319	0	0	0	0	1319	
		0	0	61	0	0	61	
089-82675		0	0	364	0	0	364	
089-660010		0	0	697	0	0	697	
089-776769/775666	Boustead Estates Agency Sdn Bhd	2311	0	944	0	0	3255	
		0	0	227	0	0	227	
7-72712/7-72689		73	0	93	0	0	166	
089-776769/775666		168	0	0	0	0	168	
089-45590/211143		0	0	0	0	0	0	Figures n.a.
089-771545		0	0	1672	0	0	1672	
089-771555		0	0	358	0	0	358	
088-35811/55022		48053	470	602	0	0	49129	
088-52411/52527		0	0	0	0	0	0	Figures n.a.
089-771592		0	0	243	136	0	379	
089-775830/771023		0	0	80	0	0	80	
088-50999/54805		0	0	203	0	0	203	
		0	0	0	0	0	0	Figures n.a.
089-213441		321	0	0	0	0	321	
	Sime Darby Plantations	0	0	812	0	0	812	
089-213378/212713		0	0	560	0	0	560	
089-774539		229	0	966	533	0	1728	
089-212425		0	0	101	0	0	101	
087-735571		0	587	602	0	0	1189	
01-880692	Sime Darby Plantations	0	0	1414	0	0	1414	
089-4225		0	0	0	0	0	0	Figures n.a.
089-772901		0	0	113	0	0	113	
089-774612		121	162	802	0	0	1085	
089-772884		0	0	121	0	0	121	
089-851204/851244		3282	0	1388	0	0	4670	
089-212944		0	0	0	0	0	0	Figures n.a.
089-43161		0	0	0	0	0	0	Figures n.a.
089-74171		0	0	0	0	0	0	Figures n.a.
089-43879/01-810191	Boustead Estates Agency Sdn Bhd	1038	0	247	0	0	1285	
089-83561/01-810382	Boustead Estates Agency Sdn Bhd	0	0	431	0	0	431	
82449/01-880755		2037	0	966	0	0	3003	
81597/83022		0	0	57	0	105	162	Coffee, Woods

Name of Estate	Address	Manager
■ SABAH Cont.		
Palmstate Sdn Bhd	P O Box 531, 91008 Tawau	Paul K L Chin
Pasol Plantations Sdn Bhd	P O Box 203, 90007 Sandakan	J H Clendon
Pan Malaysian Service Sdn Bhd	P O Box 454, 91007 Tawau	Sim Su Wu
Pang Burong Estate	c/o Locked Bag No 3, 91009 Tawau	Mohd Najib b. Abdul Wahab
Pangeran Estate	c/o Locked Bag No 3, 91009 Tawau	Tan Leng Hoo
Paul Chin & Sons Sdn Bhd	P O Box 531, 91008 Tawau	Paul K L Chin
Pembangunan Ladang Hassan S/B	P O Box 1433, 90008 Sandakan	Wesley Lutan
Permata Plantation Sdn Bhd	W D T 24, 91009 Tawau	Alex Koh Thau Phin
Permodalan Plantations Sdn Bhd	Locked Bag 9, 90009 Sandakan	YB Beon Zain
Permodalan Sabah Bhd	W D T 63, 91109 Lahad Datu	K Perumal
Pertama Estates Sdn Bhd	P O Box 1014, 90008 Sandakan	Janis I. S Kong
Pertasa Plantations Sdn Bhd	66 Public Villa, Lahad Datu	Yahaya Osman
Pinang Estate	c/o Locked Bag No 3, 91009 Tawau	Yap Man Yow
Pinang Estate	W D T 143, 91109 Lahad Datu	G N Narayanan
Pinsah Plantations Sdn Bhd	W D T 143, 91109 Lahad Datu	Narayanan s/o Govindan Nambiar
Pulau Bai Estate	W D T 420, 90009 Sandakan	Looi Eng Kooi
Resort Estate	W D T 420, 90009 Sandakan	Lim Tian Lai
Roy Hui Estate	W D T 420, 90009 Sandakan	Looi Eng Kooi
Ruku Ruku	P O Box 850, 90008 Sandakan	E. Hernandez
S.K.P. Tanah Inder Sdn Bhd	Kuala Baling, 91000 Tawau	The Manager
S.P. Pertanian Ulu Dusun	90000 Sandakan	The Manager
Sabah Cocoa Sdn Bhd	W D T 63, 91109 Lahad Datu	Micheel Meijl
Sabah Palm Estate	P O Box 901, 90008 Sandakan	Tan Sri Abdul Kadir Yusoff
Sabah Softwoods Sdn Bhd	P O Box 137, 91007 Tawau	Dr J G Kitting
Sabah Tea Sdn Bhd	Jalan Chulan, Locked Bag 86, 88996 Kota Kinabalu	Sheran S De Alwis
Safima Plantations Sdn Bhd	Lot 4 Bandar Ramai Ramai, WDT 47, 90009 Sandakan	Lim Kim Lu
Sakapp Plantations	c/o Agriculturists Incomp. S/B, W D T No 362, 90009 Sandakan	The Manager
Sanard Agricultural Sdn Bhd	P O Box 11500, 88816 Kota Kinabalu	Wong Yau Chung
Sandala Estate	P O Box 349, 90007 Sandakan	The Manager
Sapong Estate	P O Box 70, 89907 Tenon	Sim Hock Soon
Savitara Kaur Estate	Jalan Rangka, 91000 Tawau	The Manager
See Hoy Chan Plantations (S) S/B	73 Public Villa, 91100 Lahad Datu	Francis Retnam
Segalud Estate	W D T 250, 90007 Sandakan	Ng Khon Wah
Segar Usaha Estate	P O Box 850, 90008 Sandakan	Low Beng Jin
Segar Usaha Sdn Bhd	SI Khiong Building, PO Box 850, 90008 Sandakan	J N Wang
Segaria Estate	P O Box 112, 91308 Semporna	Chok Wong Hoo
Sejati Estate	Locked Bag 62, 90009 Sandakan	Abdul Jalil b. Abdillah
Semporna Estate Sdn Bhd	P O Box 12, 91307 Semporna	The Manager
Seng Ho Estate	91000 Tawau	The Manager
Sg Limau Estate	c/o Locked Bag No 3, 91009 Tawau	Kuo Han Chiang
Sg Manjang Estate	P O Box 112, 90007 Sandakan	Hong Theng Kheng
Sigalong I Estate	c/o Locked Bag No 3, 91009 Tawau	Choy Chew Yuen
Sigalong II Estate	c/o Locked Bag No 3, 91009 Tawau	Guna Rajan
Singh Plantation	P O Box 100, 91107 Lahad Datu	The Manager
Sipit Estate	c/o Giram Estate, P O Box 19, 91207 Kunak	Hijoo Isman
Soo Yui Hen Estate	P O Box 61, 91107 Lahad Datu	The Manager
Spring Field Plantation	Locked Bag 9, 91109 Lahad Datu	Peter Lee Yun Siung
Sri Kunak Estate	c/o Locked Bag No 3, 91009 Tawau	Chong Pak Kam
Samunda Estate	c/o Locked Bag No 3, 91009 Tawau	Jamil b. Marzuki
Sungai Bahru (S) Sdn Bhd	P O Box 851, 91008 Tawau	The Manager
Sungai Batu Estate	W.D.T. 250, 90000 Sandakan	The Manager
Sungai Burong Estate	34 Miles Baling, 91000 Tawau	The Manager
Sungai Estate	91208 Kunak	The Manager
Sungai Bendera Estate	W D T 250, 90009 Sandakan	Aloysius O'Cruz
Sungai Kretam Estate	W D T 250, 90009 Sandakan	Gerard O'Cruz
Sungai Limau Estate Sdn Bhd	W D T 33, 91009 Tawau	Chee Yau Fah
Sungai Pakis/Batu Estate	W D T 250, 90009 Sandakan	Liew Chi Klaw
Sumrite Plantations Sdn Bhd	2148, Jalan Habib Hussin, 91000 Tawau	Radaha Krishnan
Syarikat Kim Hong Co Sdn Bhd	Batu 38, Beluran Road, 90000 Sandakan	Chan Kai Kee
Syarikat Kretam Sdn Bhd	P O Box 81, 90007 Sandakan	Datuk Quek Chiew Yong
Syarikat Ladang Jub Sdn Bhd	W D T 472, 90009 Sandakan	Awaludin Abdul Ghani
Syarikat Memasok Sdn Bhd	Locked Bag 133, 88999 Kota Kinabalu	J T W Wildhen
Syarikat Nam Hing Sdn Bhd	P O Box 130, 91007 Tawau	Ang Eng Kheng
Sykt. Mj Hong Keong & Sons	P O Box 64, 90007 Sandakan	The Manager
Sykt. Perkebunan & Perusahaan	P O Box 112, 91308 Semporna	The Manager
Sykt. Thian Siong Sdn Bhd	P O Box 261, 91108 Lahad Datu	The Manager
Syt. Kemajuan Sabah Sdn Bhd	P O Box 901, 90008 Sandakan	The Manager
T.M. Plantation	W D T 13, 91009 Tawau	The Manager
Tabung Tentera Estate	Locked Bag 7, 91109 Lahad Datu	Peter Ling In Nin
Tasek Estate	91000 Tawau	The Manager
Tengah Nipah Estate	P O Box 138, 91107 Lahad Datu	The Manager
The North Borneo Timbers Bhd	P O Box 137, 91007 Tawau	N N Wadia
The River Estates Sdn Bhd	Tamangpong Estate, P O Box 1209, 90008 Sandakan	Chok Choo Yong
The River Estates Sdn Bhd	P O Box 126, 90007 Sandakan	Somd Nistad
Tiller Sdn Bhd	476 Bandar Sabinda, P O Box 899, 91007 Tawau	Hong Kim Flaw

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
089-771911		22	0	20	0	0	42	
089-213155/215487		8222	0	0	0	0	8222	
089-773322		0	0	198	0	0	198	
089-778196	Taiko Plantations Sdn Bhd	1346	0	201	0	0	1547	
089-778196	Taiko Plantations Sdn Bhd	1650	0	0	0	0	1650	
089-771911/12/13		0	0	81	0	0	81	
089-45682/45703		445	20	688	0	26	1179	
089-612286/612287		0	0	220	0	0	220	
089-81260		0	0	557	143	0	700	Figures n.a
089-660023/420/322		0	0	83	0	307	390	
089-81466		607	0	121	0	0	728	
089-778196	Taiko Plantations Sdn Bhd	2130	0	39	0	0	2169	
01-450146	Plantation Agencies Sdn Bhd	0	0	1070	0	0	1070	
01-450146	Plantation Agencies Sdn Bhd, Fng	0	0	823	0	0	823	
089-43879/01-810191	Roostead Estates Agency Sdn Bhd	0	0	0	175	0	175	
	Roostead Estates Agency Sdn Bhd	0	0	1006	0	0	1006	
089-43897/01-810191	Roostead Estates Agency Sdn Bhd	271	0	132	0	0	403	
	Dunlop Estates Bhd	0	0	195	0	7	202	
03-371489/371348		0	0	0	0	0	0	Figures n.a
089-43372		0	0	0	0	0	0	Figures n.a
089-82384		0	0	1996	0	0	1996	
089-211108/218370		3245	0	0	0	27	3272	Acacia, Cattle Ranch
089-773233-9		453	356	2051	12	27492	30364	Trees, Coffee
088-33911		0	0	1310	0	271	271	Tea, Coffee
089-42761/42731		0	0	1310	0	0	1310	
089-44271 Mins Chin	Plantation Agencies Sdn Bhd	0	0	321	0	0	321	
088-775664		0	0	162	0	0	162	
089-42425		0	0	0	0	0	0	Figures n.a
087-735605		0	1417	357	12	0	1786	
089-82716		0	0	0	0	0	0	Figures n.a
089-217526	Sime Darby Plantations	401	0	223	0	0	624	
089-44430	Dunlop Estates Bhd	482	0	1615	0	0	2097	
089-44430/01-880653		0	0	1441	0	582	2023	
01-810196/01-810193	Roostead Estate Agency Sdn Bhd	0	0	1216	0	0	1216	
089-612464/612463		3455	0	604	0	0	4059	
089-772282/275		0	0	414	0	259	673	Rattan
089-72277		0	0	427	0	0	427	
089-778196	Taiko Plantations Sdn Bhd	0	0	0	0	0	0	Figures n.a
		0	0	311	0	0	311	
089-215846/611622		1360	0	0	0	0	1360	
089-778196	Taiko Plantations Sdn Bhd	0	0	1214	0	0	1214	
089-778196	Taiko Plantations Sdn Bhd	0	0	815	0	0	815	
089-81247		0	0	0	0	0	0	Figures n.a
089-851287		0	0	512	0	0	512	
089-82018		0	0	0	0	0	0	Figures n.a
089-778196	Taiko Plantations Sdn Bhd	0	0	81	0	0	81	
089-778196	Taiko Plantations Sdn Bhd	1806	0	265	0	0	2071	
089-71308		0	0	375	0	0	375	
		0	0	0	0	0	0	Figures n.a
089-75098	Sime Darby Plantations	0	0	762	0	0	762	
		0	0	0	0	0	0	Figures n.a
01-880692	Bona Plantations Sdn Bhd	0	0	2105	0	0	2105	
01-880692	Sime Darby Plantations	0	0	1806	0	0	1806	
089-773048	Sime Darby Plantations	0	0	1272	0	0	1272	
01-880692		0	0	81	0	0	81	
089-774561	Sime Darby Plantations	0	0	1525	0	0	1525	
089-213441		0	0	299	0	0	299	
089-212177		285	0	10	0	0	295	
		3256	0	719	0	0	3975	
089-45705		0	0	1143	0	0	1143	Intercropped
088-45639/55269/518		438	0	485	0	0	923	
089-772285/776794		0	0	348	0	13	361	Coffee
089-781013		0	0	0	0	0	0	Figures n.a
089-81813		0	0	0	0	0	0	Figures n.a
089-214145		43	0	0	0	0	43	
		3005	0	0	0	0	3005	
089-83561/01-810194	Roostead Estates Agency Sdn Bhd	0	0	21	0	2	23	Coffee, others
089-71391/71733	Hap Song Plantation Sdn Bhd	285	0	999	0	0	1284	
		0	0	0	0	0	0	Figures n.a
089-81585,81640		0	0	0	0	0	0	Figures n.a
089-773233-9		49	0	434	0	5	488	Pepper, Coffee
01-338312	The East Asiatic Co (M) Bhd	6448	0	389	0	0	6837	
089-42102/103/104		6238	0	425	0	0	6663	
089-772159/775529		0	0	202	0	0	202	

Name of Estate	Address	Manager
■ SABAH Cont.		
Trusjadi Plantations Sdn Bhd	Lot 5 Sinsuran Con., P O Box 68, 89507 Penampang, Kota Kinabalu	Joseph Fong
Tundong Estate	c/o Locked Bag No 3, 91009 Tawau	Poo Choo Song
Tungud Estate	Beluran, 90000 Sandakan	The Manager
Tye Yang Estate	Locked Bag 11, 81109 Lahad Datu	Michael Len Yoo Leang
UMH (East Malaysia) Sdn Bhd	Locked Bag 20, 91009 Tawau	Kwok Lip Su
United Dev. Co-op. Society Ltd	P O Box 81, 90007 Sandakan	The Manager
Usukan Abai/Usukan Bilung Estate	P O Box 8, 91007 Tawau	Datuk J G Bridger
Voon Nam & Chong Sz Nyen Estate	P O Box 765, 91008 Tawau	The Manager
Wing Yew (Tawau) Sdn Bhd	P O Box 323, 91007 Tawau	Jimmy Chen Chai Ni
Woodford Estates	P O Box 10, 89807 Beaufort	Wong Len Yu
Yik San Estate	P O Box 745, 91008 Tawau	The Manager
■ SARAWAK		
Anib Plantations Sdn Bhd	P O Box 1780, 93762 Kuching	Saardi Fachruddin
Batu Niah Estate	Locked Bag Service No 14, 98009 Miri	Abdullah Basu Hanifah
Lembaga Kemajuan Tanah Sarawak	P O Box 1433, 93762 Kuching	Hj Aweng Zain Pengiran Hj Salleh
Sarawak Oil Palm Sdn Bhd	P O Box 547, 98007 Miri	R A Shephered/D P Nesbit
Seatex Estate	52nd Mile, Miri/Bintulu Rd P O, 98000 Miri	Ho Kim Ang
■ SELANGOR		
Abaco Estate	43500 Semenyih	Mj Song Sun
Aik Joo Estate	Kajang, 43100 Ulu Langat	The Manager
Amper Tenang Estate	P O Box 4, 43807 Dengkil	Wong Kim Liam
Ann Kiat Estate	42700 Banting	The Manager
Asiajaya Sepakat (M) Sdn Bhd	Lot 1 Jln 243, 46100 Petaling Jaya	Lim Swee Kwang
Athlone Estate	P O Box 204, Kapar, 42200 Kelang	The Manager
Bah Koon Plantations Sdn Bhd	Kuala Langat	The Manager
Balau Estate	c/o Concessara Estate, Bangi, 43000 Kajang	Yip Kai King
Ban Guan Huat Estate	Bukit Rotan, 45700 Kuala Selangor	The Manager
Ban Song Estate	10th Mile, Jalan Kapar, 41400 Kelang	The Manager
Ban Soon Estate	31 Miles, Morib, Kuala Langat	The Manager
Bandar Estate	c/o Bukit Darah Estate, 47000 Sungai Buloh	T Ratnraj
Banting Hock Hin Estate	598 Taman Mubillah, 42700 Banting	Lim Koon Eng
Barang Kali Estate	Batang Kali Post Office, 44300 Ulu Selangor	The Manager
Batu Papat Estate	4 Jalan Istana, 41000 Kelang	The Manager
Beaumont Estate	1 1/4 Mile Jalan Kapar, 41400 Kelang	The Manager
Bedford Estate	42800 Tanjung Sepat	The Manager
Belata River/Sungei Gumut Estate	44100 Kerling	V.V. Pius
Berjuntai Estate	c/o Bukit Darah Estate, 47000 Sungai Buloh	T Ratnraj
Braemar Estate	c/o Semenyih Estate, PO Box 201, 43500 Semenyih	S Rockey
Bristol Estate	48000 Rawang	The Manager
Brooklands Estate	Peti Surat No 9, 42700 Selangor	T M B Krishnan
Broome (Balau) Estate	41000 Bangi	The Manager
Bukit Badong Estate	c/o Bkt Blimbing Est, P O Box 2, 45000 Kuala Selangor	Ramzah b. Hj Abdullah
Bukit Berantong Estate	Bkg Berkunci 216, 48009 Rawang	Booy Pak Chan
Bukit Blimbing Estate	P O Box 2, 45000 Kuala Selangor	Ramzah b. Hj Abdullah
Bukit Cheoding Estate	Tanjung Daibelas, Kuala Langat, 42700 Bangi	The Manager
Bukit Cheoding Estate	4 Miles Bukit Cheoding, Kuala Langat	The Manager
Bukit Cheraka Estate	P O Box 202, 45809 Jeram	Tan Miang Heng
Bukit Cloh Estate	Peti Surat 4, 45809 Jeram	Chan Wing San
Bukit Darah Estate	47000 Sungai Buloh	T Ratnraj
Bukit Hitan Estate	47100 Pachang	Lim Yoo Boo
Bukit Jelutong/Ratak Estate	40800 Shah Alam	Muhammad Hj Mufar
Bukit Kemuning Estate	Locked Bag 201, 40990 Shah Alam	K Darmasumanj
Bukit Kapar Estate	10 Miles Bukit Kapar, 42200 Kelang	The Manager
Bukit Kerayong Estate	P O Box 204, 42200 Kapar	Othman b. Waht
Bukit Lagong Estate	Kuang, 48050 Rawang	Tanby Omar b. Muhammad
Bukit Minyak Estate	c/o Bukit Btjaba Estate, 45600 Batang Berjuntai	Mohd Hathi b. Hj Isbak
Bukit Rajah Estate	Peti Surat 2007, 41720 Kelang	Chong Kim Yee
Bukit Rimau Estate	45000 Kuala Selangor	The Manager
Bukit Talang Estate	P O Box 1, 45000 Kuala Selangor	Yang See Chan
Bukit Timah Plantation Sdn Bhd	224 Main Road, Sasaran, 45800 Jeram	The Manager
Bukit Tinggi Estate	P O Box 2003, 41990 Klang	Kok Sang Choo
Bukit Tinggi Estate	Bangi, 43000 Kajang	H Sowl
Castlefield Estate	Pachang Post Office, 47100 Pachang	The Manager
Chamber Estate	48000 Rawang	The Manager
Chan Choy Estate	6 Road 12/17A, 46200 Petaling Jaya	The Manager
Chan Choy & Sons Estate	1 Jalan Ruko, 43000 Kajang	The Manager
Cheras Estate	43000 Kajang	The Manager
Chin Huat Estate	12th Mile Jalan Kapar, 42200 Kelang	The Manager
Chong Hin Estate	4 Jalan Istana, 41000 Kelang	The Manager
Choo Gook Phoo Enterprise S/B	107 Jalan Tenjau Badar, 42000 Port Kelang	The Manager
Coalfields Estate	P O Box 210, 47000 Sungai Buloh	The Manager
Concessara Estate	P O Box 4, Bangi, 43000 Kajang	Yip Kai King
Damasara Estate	Batu Tiga, 40000 Shah Alam	Ariffin b. Osman

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
088-211008/211979		0	0	607	0	0	607	
089-778196	Taika Plantations Sdn Bhd	2055	0	0	0	0	2055	
07-716097		0	0	0	0	0	0	Figures n.a
089-83561/01-810195	Boustead Estates Agency Sdn Bhd	452	0	377	0	0	829	
089-772131/878/166		0	0	850	0	0	850	
089-43161/2/3		349	0	0	0	0	349	
089-771133		202	0	142	0	0	344	
089-76079		0	0	0	0	0	0	Figures n.a
089-772688/772083		54	0	90	0	5	149	Coffee
087-211531		121	541	0	0	0	662	
		0	0	0	0	0	0	Figures n.a
443061/443058		0	0	432	0	0	432	
01-333120	Austral Enterprises Bhd	3926	0	0	0	0	3926	
24375-8		14442	5550	893	0	0	20885	
085-414860/414903		5003	0	21	0	0	5024	
01-290004	Plantation Agencies Sdn Bhd	1265	0	0	0	0	1265	
03-8167213		0	316	0	48	0	364	Intercropped
03-563038		0	0	0	0	0	0	Figures n.a
03-8686304/8186305	Kumpulan Guthrie Sdn Bhd	756	165	0	0	157	1078	Tan
03-371046		0	0	0	0	0	228	
03-7767268/7560835		10423	0	1964	0	835	13222	Durians
03-308232	Highlands & Lowlands Bhd	1280	0	0	0	0	1280	
03-374223/254		0	0	0	0	0	0	Figures n.a
03-8138216	Boustead Estates Agency Sdn Bhd	312	154	68	0	0	534	
071-401083		0	0	0	0	0	0	Figures n.a
03-316344/625		0	0	0	0	0	47	
03-386216/217		0	0	0	0	0	55	
03-6554285	Shalimar Developments Sdn Bhd	310	0	0	0	0	310	
03-8671130		144	0	0	0	0	144	
03-343018		0	0	0	0	0	820	
03-318093	Chong Hin Trading Co Sdn Bhd	0	0	0	0	0	0	Figures n.a
03-314044/152/830		130	24	0	0	0	154	
03-374206		0	0	0	0	0	350	
03-8081234	Nat. Land Finance Co-op Soc., Ltd	175	858	0	0	0	683	
03-6554285	Shalimar Developments Sdn Bhd	293	0	0	0	0	293	
03-8138228	H.M.P. Bhd	0	201	0	0	0	201	
03-354232	Kumpulan Guthrie Sdn Bhd	0	835	0	0	0	835	
03-8671042	Dunlop Estates Bhd	1662	0	0	0	42	1704	
03-338232		0	0	0	0	0	918	
03-8719140	H.M.P. Bhd	165	205	0	0	0	370	
03-6916405	Sime Darby Plantations	1106	175	0	0	0	1281	
03-8891186	H.M.P. Bhd	0	0	0	387	0	387	Intercropped
03-373030		0	0	0	0	0	0	Figures n.a
03-373217		0	0	0	0	0	0	Figures n.a
03-3508244		1605	0	0	43	0	1648	
03-8747255	Sime Darby Plantations	2044	0	0	0	0	2044	
03-6554285	Shalimar Development Sdn Bhd	401	0	0	0	0	401	
03-5701217		0	598	0	0	0	598	
03-5591457	Kumpulan Guthrie Sdn Bhd	845	0	0	0	0	845	
03-5111588	M's Associated Ests Agencies S/B	719	0	0	0	0	719	
03-3508232	Kumpulan Guthrie Sdn Bhd	0	0	0	0	0	0	Figures n.a
03-6554232	Kumpulan Guthrie Sdn Bhd	1281	0	0	0	0	1281	
03-8719031	Kumpulan Guthrie Sdn Bhd	71	773	0	0	0	844	
03-3415882	Sime Darby Plantations	85	0	0	0	0	85	
03-401354		2424	0	0	0	0	2424	
		0	0	0	0	0	174	
03-8891180	Kumpulan Guthrie Sdn Bhd	2085	0	0	0	0	2085	
03-397048		73	0	0	0	0	73	
03-3320515	Kumpulan Guthrie Sdn Bhd	1587	0	0	0	0	1587	
03-8250537	Dunlop Estates Bhd	535	394	0	0	19	948	
03-701758	Harrisons M'sian Plantations Bhd	0	610	0	0	0	610	
03-668703/171		0	0	0	0	0	108	
03-565953		0	0	0	0	0	51	
03-331508		0	0	0	0	0	44	
03-331131	Dunlop Estates Bhd	30	665	0	0	14	709	
03-488182		0	0	0	0	0	44	
03-318093	Chong Hin Trading Co Sdn Bhd	0	0	0	0	0	0	Figures n.a
03-387016-8		57	0	0	0	0	57	
03-354216	Taika Plantations Sdn Bhd	1484	0	0	0	0	1484	
03-8138216	Boustead Estates Agency Sdn Bhd	254	305	0	0	0	559	
03-5111748	Sime Darby Plantations	480	260	0	0	0	740	

Name of Estate	Address	Manager
■ Selangor Cont.		
Dengkil Estate	Kajang, 43100 Ulu Langat	The Manager
Dengkil Oil Palm Plantation S/B	Dengkil, 43800 Sepang	The Manager
Dokomite Estate	Batu Caves Post Office, 68100 Batu Caves	The Manager
Dusun Durian Estate	42700 Banting	Tuan Syed Yassin Syed Aed Kadir
East Estate	42960 Carey Island	Ismail b. Mohammed
Elmina Estate	P O BOX 204, 47000 Sungai Buloh	Chen Perishing
Eng Hong Estate	c/o Bkt. Telang Estate, PO Box 1, 45000 Kuala Selangor	Yang See Chuan
Eng Hong Plantations Sdn Bhd	P O Box 205, 42700 Banting	Toe Hing Hui
Eng Hup Estate	1/2 Mile Subang Road, Batu Tiga, 40000 Shah Alam	The Manager
Eng Seng Palm Oil Estate	Tanjung Daa Belas, Kuala Langat, 42700 Banting	The Manager
Eng Soon Estate	42200 Kapar	M K Daniels
Esoot Estate	Tanjong Malim Post Office, Ulu Selangor	The Manager
Estate dan Kaur	68100 Gombak	The Manager
Permanang Palm Oil Mill	Sungai Peleak, 43950 Sepang	The Manager
Foh Hin Estate	11th Mile Kg. Baru Cheras, 43000 Kajang	The Manager
Gedong Estate	Tanjong Sepat, 42800 Ulu Langat	The Manager
Garli Estate	c/o Bukit Hitam Estate, 47100 Puchong	The Manager
Galloway Estate	P O Box 5, 43807 Dengkil	Tissu Chi Pui & Stephen
Glengowie Estate	c/o Semenyih Estate, PO Box 201, 43500 Semenyih	S Rockyey
Glensmaric Estate	Batu Tiga, 40000 Shah Alam	The Manager
Glunggang Baya Estate	Kelantan, 42700 Kuala Langat	The Manager
Golconda Estate	Kapar, 42200 Kelang	The Manager
Golden Hope Estate	42000 Port Kelang	The Manager
Gracia/Tarun(Bk. Tunggul) Est.	P O Box No 1, 43500 Semenyih	The Manager
Guru Nanak Estate	Lot No 587/42 Green Park, 48000 Rawang	The Manager
IPMB Latex Sdn Bhd	P O Box 205, Jalan Kelang lama, 58990 Kuala Lumpur	Bien Hock Nien
Haron Estate	P O Box 2005, 41720 Kelang	The Manager
Hong Lian Estate	P O Box 89, 41710 Kelang	The Manager
Highlands Estate	P O Box 2003, 41720 Kelang	The Manager
Hock Joo Plantations Sdn Bhd.	26A Jalan Istana, 41000 Kelang	The Manager
Hoh Su Hong Estate	5 Road S/35, 46000 Petaling Jaya	The Manager
Hong Bee Estate	Dengkil, 43900 Sepang	The Manager
Hongkong Estate	43000 Kajang	The Manager
Hua Aik Estate	176 Jalan Pasar, Sungai Peleak, 43950 Sepang	The Manager
Hup Aik Estate	19 Lorong Palas, Southern Park, 41200 Kelang	The Manager
Hup Lee Estate Co	Makin Batu, 42700 Kuala Langat	The Manager
Hup Song Estate	Jalan Paip, Mera, 42200 Kelang	The Manager
Jalan Acob Estate	42200 Kapar	Hj. Abdul Rahim b. Hj Othman
Jaya Selangor Estate	P O Box 205, 45600 Batang Berjuntai	P Ramadas
Jaya Estate	7th Mile, Jalan Bernam, 45500 Tanjung Karang	The Manager
Kajang Estate	c/o Semenyih Estate, PO Box 201, 43500 Semenyih	S Rockyey
Kamasan Estate	P O Box 7, 45000 Kuala Selangor	Lee Kim Thye
Kapar Estate	5 Miles Kapar Road, 42100 Kelang	The Manager
Kelantan Plantations Sdn Bhd	P O Box 204, 42709 Banting	Chai Tai Yuen
Komajuan Tetap (M) Sdn Bhd	42700 Kuala Langat	The Manager
Kepong Estate	Kepong P O, 52100 Rawang	Toh Ban Ho
Kepong/Bijong Estate	c/o Kepong Estate, 52100 Kepong	The Manager
Kerling Estate	P O Box No 202, 44109 Kerling	S Gopalan
Kion Lee Estate	24 Jln Petai, Pandamaran Ind Est., 42000 Port Klang	Yu See Lan
Killinghall Estate	Petaling	The Manager
Kim Garden Estate	1 1/4 Miles Jalan Kapar, 42200 Kelang	The Manager
Kinrara Estate	Petaling Post.	The Manager
Klang Estate	2nd Mile, Jalan Tap, Kapar, 42200 Kelang	The Manager
Kolej Pertanian	Universiti Pertanian Malaysia, 43400 Serdang	The Manager
Kuala Langat Estate	Kelang	The Manager
Kuala Selangor Estate	Locked Bag No 2, 45700 Bukit Rotan	Andrew Lee
Kuala Selangor Group of Estates	P O Box 3, 45000 Kuala Selangor	The Manager
Kus Lading-Lading Kuala Selangor	Panit Penambang, 45000 Kuala Selangor	K Duraimanian
Kundang Estate	Pengkalan Kundang, 48020 Roseng	Aloysius Low Hock Siang
Lam Soon Management Services S/B	18 Section 14/14, 46100 Petaling Jaya	The Manager
Lambour Estate	45800 Jeram	The Manager
Lapan Utan Estate	45000 Kuala Selangor	The Manager
Lee Co (Klang) Sdn Bhd	Kuala Langat	The Manager
Lian Hong Oil Palm Estate	Kerling, 44100 Ulu Selangor	The Manager
Lian Hsat Estate	Ulu Langat	The Manager
Lian Hup Estate	43950 Sungai Peleak	The Manager
Lian Fong Plantations Sdn Bhd	666 Jalan Trlok Burnut, 42700 Banting	The Manager
M'sian Leprosy Relief Assoc.	47000 Sungai Buloh	The Manager
MAIRA	Proj. S'intendent's Off. MAIRA, 47000 Sg Buloh P O	Valu & Velian s/o Palnoappan
Madingley Estate	P O Box 1, 43007 Kelang	M K Thon
Meru Estate	6 Miles Meru Road, 41050 Kelang	The Manager
Midlands Estate	2 1/2 Mile Jalan Batu Tiga, 41300 Kelang	The Manager
Minyak Estate	P O Box 202, 45600 Batang Berjuntai	The Manager
Mon Repos Estate	45200 Sabak Bernam	F P Ekoroth
Morib Palm Oil Mill Sdn Bhd	Tanjong Sepat Post Office, 42800 Kuala Langat	The Manager

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
03-373275		0	0	0	0	0	0	Figures n.a
03-336266		0	0	0	0	0	0	Figures n.a
03-663422		0	0	0	0	0	71	
03-8671062	H.M.P. Bhd	2347	0	0	32	2	2381	Mango
03-3318611	H.M.P. Bhd	2517	0	0	0	0	2517	
03-6554215	Kumpulan Guthrie Sdn Bhd	1977	0	0	0	0	1977	
03-8891180		161	0	0	0	0	161	
03-8671121	K C Teh & Co	237	0	0	0	0	237	
03-319096		0	0	0	0	0	0	Figures n.a
03-3508162		0	0	0	0	0	0	Figures n.a
03-346060		504	0	0	0	0	504	
03-661316		0	0	0	0	0	1169	Figures n.a
03-331312		681	0	0	0	0	681	
		0	0	0	0	0	102	
03-374261		0	0	0	0	0	0	Figures n.a
03-701217		0	0	0	0	0	434	
03-8186228	H.M.P. Bhd	317	969	0	0	0	1286	
03-8138228	H.M.P. Bhd	118	284	0	0	0	402	
03-590261		0	0	0	0	0	813	
03-371854		0	0	0	0	0	0	Figures n.a
03-395124		0	0	0	0	0	399	
03-381357	Harrisons M'sian Plantations Bhd	0	0	0	0	0	0	Figures n.a
03-350537		0	0	0	0	0	532	
03-816470		84	49	0	0	0	133	
03-7929633/778/568	H.M.P. Bhd	0	0	0	0	0	0	Figures n.a
03-318361	Kumpulan Guthrie Sdn Bhd	0	551	0	0	21	572	
03-310611		0	0	0	0	0	133	
03-319147	Highlands & Lowlands Bhd	1593	0	0	0	0	1593	
03-397227		160	226	0	0	0	386	
03-568944		0	0	0	0	0	52	
03-312614		0	0	0	0	0	0	Figures n.a
03-701758		0	0	0	0	0	596	
06-787216		0	0	0	0	0	0	Figures n.a
03-326106		0	0	0	0	0	0	Figures n.a
03-387160/389435		0	0	0	0	0	0	Figures n.a
03-387016/017/018	Choo Geok Pheow Enterprise S/B	0	0	0	0	0	0	Figures n.a
03-3508246	Sime Darby Plantations	1369	0	0	0	0	1369	
03-8719029	Roustead Estates Agency Sdn Bhd	264	69	0	0	0	333	
03-398086		58	0	0	0	0	58	
03-8138228	H.M.P. Bhd	588	0	0	0	0	588	
03-8891943		226	27	0	0	0	253	
03-8671461	Systems & Securities Sdn Bhd	0	0	0	0	0	0	Figures n.a
03-374262		266	0	0	0	0	266	
		0	0	0	0	0	0	Figures n.a
03-6268141	Dunlop Agro-Management Sdn Bhd	413	129	0	0	0	542	
03-668141		0	0	0	0	0	805	
03-8081019	Taiko Plantations Sdn Bhd	0	1223	0	0	0	1223	
03-3686892/3318728		73	0	0	0	0	73	
03-701377		0	0	0	0	0	731	
03-314044/152/830		94	106	0	0	0	200	
03-701955	Associated Estates Agencies	0	746	0	0	0	746	
03-308295		97	32	0	0	0	129	
03-586101		0	0	0	0	0	400	
03-319428		0	0	0	0	0	0	Figures n.a
03-8891364	H.M.P. Bhd	567	209	0	0	0	776	
03-391396	Associated Estates Agencies S/B	486	0	0	119	0	605	
03-8891396	Associated Estates Agencies S/B	605	0	0	0	0	605	
03-6051206	Pekeliling Land Sdn Bhd	0	384	0	0	0	384	
09-452258		1773	0	91	0	0	1864	
03-395244		0	0	0	0	0	283	
03-391155		0	0	0	0	0	155	
03-371150		0	0	0	0	0	0	Figures n.a
06-787214		0	0	0	0	0	0	Figures n.a
		0	0	0	0	0	76	
03-371222/496/441		112	0	32	0	0	144	
03-641323		0	0	0	0	0	268	
03-6561323	Taiko Plantations Sdn Bhd	93	104	0	0	0	197	
03-9486332	Plantation Agencies Sdn Bhd	166	413	1	0	0	580	
03-310617		0	0	0	0	0	0	Figures n.a
03-8719862/3/4	Soefin Co Bhd	2608	0	0	0	0	2608	
03-671245		105	0	0	30	0	135	
03-374204/311/312		194	0	0	0	0	194	

Name of Estate	Address	Manager
■ Selangor Cont.		
Nam Bee Rubber Estate Sdn Bhd	Ulu Selangor	The Manager
Newson Baloh Estate	16 1/2 Miles, Sg Piong, 47000 Sungai Buloh	Tan Boon Bau
Newton Estate	19 Jalan Besar, P O Box 1, 41700 Kelang	Lee Eng Chew
Nj Brothers Rubber Estate	5 Miles Meru Road, 41050 Kelang	The Manager
Nj Soon Haat & Partners	4 Miles Kampong Jawa, 44100 Kelang	The Manager
Nigel Gardner Estate	P O Box 201, 45600 Batang Berjuntai	The Manager
North Estate	42968 Carey Island	Quah Chok Kee
North Hammock Estate	P O Box 201, 41720 Kelang	Tan Kim Chooi
P.P. Penyelidikan Getah Malaysia	47000 Sungai Buloh	Abdullah b. Hassan
PORIM Research Station (Serdang)	43300 Serdang	The Manager
Palaniappa Estate	39 Sultan Street, 41000 Kelang	The Manager
Permatang Plantations Sdn Bhd	Jalan Kelanang Bintang, 42700 Kuala Langat	The Manager
Pilmoor Estate	Batu Tiga, 40000 Shah Alam	Aziffin b. Osman
Poh Ann Estate	36 Miles Bukit Changgang, 42700 Kuala Langat	The Manager
Pr. Pl. Palaniappa Pillai Estate	97 Welman Street, 48000 Rawang	The Manager
Prang Besar Estate	P O Box 205, 43009 Kajang	Tuan Syed Yassin
Puchong Estate	12th Mile, Jalan Puchong, 47100 Puchong	Phua Thong Geok
R.R.I. Experiment Station	47000 Sg Buloh	Abdullah b. Hassan
Raja Masa Estate	45009 Kuala Selangor	Cheah Fook Wan
Rajaghiri Estate	Bukit Rotan, 45000 Kuala Selangor	The Manager
Rinching/Cairo Estates	43509 Semenyih	D Narayanansamy
Riverside Estate	P O Box 1, 45000 Kuala Selangor	The Manager
Rothianay Estate	45700 Bukit Rotan	Lee Kim Kee
Sabak Bernam Estate	45207 Sabak Bernam	Tan Teok Wah
Seafield Estate	P O Box 208, Pnj.Pos, Kom. PKNS 40990 Shah Alam	V Rajaran
Sedgeley Estate	Peti Surat 206, 43009 Kajang	Chang Poh Sang
Selangor Oil Palm Corp. S/B	Ladang Sg Labu, 43900 Sepang	Haji Muzlan b. Haji Ahmad
Selangor River Estate	45700 Bukit Rotan	Seng Kim Huat
Semenyih Estate	P O Box 201, 43500 Semenyih	S Rocky
Sepang Estate	43900 Sepang	A D Blicoe
Serdang Blah Estate	610 Main Road, 42700 Banting	The Manager
Serendah Estate	P O Box 202, 48200 Serendah	Lee Kien Shin
Sg Belata/Sg Gumut Estates	44100 Kerling	V P Vondangor
Sg Gapi Estate	48200 Serendah	Beh Wan Yee
Sg Jernih Estate	P O Box 204, 44109 Kerling	Wong Chen Pheng
Shallmar Estate	c/o Bukit Darah Estate, 47000 Sungai Buloh	T Ratnraj
Shelford Estate	c/o Kuala Selangor Estate, 45700 Bukit Rotan	The Manager
South Estate	42968 Carey Island	Quah Chok Kee
Sri Alam Estate	3 Miles Jalan Dengkil, 43800 Ulu Langat	The Manager
Sri Changkat Estates	Kajang, 43000 Ulu Langat	The Manager
St Andrew Estate	P O Box 210, 45600 Batang Berjuntai	Yeo She Siong
Stesen Percubaan Institut	Penyelidikan Getah, 47000 Sungai Buloh	The Manager
Strathairlie Estate	47000 Sungai Buloh	Chen Pershing
Strathmore Estate	45600 Batang Berjuntai	Gan Ah Soon
Subang/Shah Alam Estate	P O Box 206, Batu Tiga, 40000 Shah Alam	Tan Yoke Cheng
Sungai Bilot Estate Sdn Bhd.	78 Jalan Tenyaji Kelana, 41000 Kelang	The Manager
Sungai Labu Estate	43900 Sepang	The Manager
Sungai Pelek Plantations Sdn Bhd	83 Jalan Besar, Sungai Pelek, 43950 Sepang	The Manager
Sungai Ranai Estate	43000 Kajang	The Manager
Sungai Remok Estate	Batang Kali, Ulu Yam Baru, 44300 Ulu Selangor	The Manager
Sungai Serdang Estate	12 1/2 Miles Jln Bk. Keralyong, 42200 Kelang	The Manager
Sungai Beranang Estate	c/o Bkt. Kamuning Est PO Box 201, 40990 Shah Alam	K Duraimaniam
Sungai Buloh Estate	Peti Surat 5, 45700 Bukit Rotan	Peter Leggatt
Sungai Choh Estate	P O Box 206, 48009 Rawang	Alex Joseph
Sungai Kapar Estate	42209 Kapar	Hong Yook Foo
Sungai Rawang Estate	43950 Sungai Pelek	Tuan Ya b. Tuan Darahman
Sungai Renjan Estate	P O Box 206, 41990 Kelang	Lee Kweng Peng
Sungai Rinching Estate	43500 Semenyih	Hong Cheng Hin
Sungai Sedu Estate	42700 Banting	Ling Ting Hing
Sungai Tinggi Estate	P O Box 202, 45600 Batang Berjuntai	The Manager
Sydney Estate	Semenyih, 43500 Ulu Langat	The Manager
Sykt. Macey Sdn Bhd	Ulu Yam Bahru, 44300 Ulu Selangor	The Manager
Sykt. Malin Bali	Ulu Yam Bahru, 44300 Ulu Selangor	The Manager
Teck Hong Estate	68100 Gombak	The Manager
Tekali Estate	Petaling Jaya	The Manager
Teluk Merbau Plantation	43950 Sepang, Sungai Pelek	V Panchapakesan
Teluk Piah Estate	45000 Kuala Selangor	The Manager
Temasya Development Sdn Bhd	Kelang	The Manager
Tonnamram Estate	45600 Batang Berjuntai	Abdul Tatip Mohd Zain
Thanganallay Estate	Jalan Kebun Kelang, Kelang	The Manager

Telephone	Agency	Oil Palm	Rubber	Cocos	Coconut	Others	Total Ha	Remarks
03-664829		0	0	0	0	0	0	Figures n.a
03-3319469		40	6	0	0	0	46	
03-386216/217		47	0	0	0	0	47	
03-386212/217		0	0	0	0	0	0	Figures n.a
03-8891076	Socfin Co Bhd	0	3009	0	0	0	3009	
03-3318611	H.M.P. Bhd	2205	0	665	670	0	3540	
03-3413848		917	624	39	0	0	1580	
03-6561121/1122/1123		0	1267	0	0	0	1267	
03-856031		0	0	0	0	0	0	Figures n.a
03-310837		33	29	0	0	0	62	
03-371461		0	0	0	0	0	0	Figures n.a
03-5111748	Sime Darby Plantations	102	208	0	0	0	310	
03-336086		0	0	0	0	0	0	Figures n.a
03-8257597/7598	H.M.P. Bhd	0	41	0	0	0	41	
03-232877		1114	394	0	158	13	1679	Mango, Durian
03-6561121/8		216	137	5	0	0	358	
03-8891314	Sime Darby Plantations	0	1267	0	0	0	1267	
03-391418		1211	0	0	0	0	1211	
03-8138263	Plantation Agencies Sdn Bhd	325	0	0	0	0	325	
03-391190	Highlands & Lowlands Bhd	435	280	16	0	0	731	
03-8891590		2085	0	0	0	0	2085	
03-671208/671254	Kumpulan Guthrie Sdn Bhd	189	0	0	0	0	189	
03-5111773	Sime Darby Plantations	876	0	44	1607	0	2527	
03-8257599	Taiko Plantations Sdn Bhd	622	223	0	0	0	845	
03-7567500	PRMS Holdings Sdn Bhd	904	0	0	0	0	904	
03-8891073	Sime Darby Plantations	2412	0	0	0	0	2412	
03-8138228	H.M.P. Bhd	1187	0	543	0	0	1730	
06-671388	H.M.P. Bhd	70	236	0	0	0	306	
03-371237		2924	710	0	0	0	3634	
03-6916414	Boustead Estates Agency Sdn Bhd	112	0	0	0	0	112	
03-6081234	Plantation Agencies Sdn Bhd	182	726	0	0	0	908	
03-6011276	Taiko Plantations Sdn Bhd	175	858	0	0	0	1033	
03-8091011	Taiko Plantations Sdn Bhd	48	1103	0	0	0	1151	
03-6554285	Shalinor Developments Sdn Bhd	114	977	0	0	0	1091	
03-391564	Harrisons M'sian Plantations Bhd	304	0	0	0	0	304	
03-3318611/3318728	H.M.P. Bhd	188	0	0	0	0	188	
03-916155		2275	0	0	0	0	2275	
03-8719109	Price Waterhouse	0	0	0	0	0	215	
03-441221/2/3		0	0	0	0	0	145	
03-8719109	Price Waterhouse	331	295	0	0	0	626	
03-6554215	Kumpulan Guthrie Sdn Bhd	0	1267	0	0	0	1267	
03-8719133		668	0	0	0	0	668	
03-7462515	Kumpulan Guthrie Sdn Bhd	187	35	0	0	0	222	
03-351109		348	593	0	0	0	941	
03-992621/2/3		225	96	0	0	0	321	
06-671301		0	0	0	0	0	0	Figures n.a
03-311341		52	47	0	0	0	99	
03-206856/208047		0	0	0	0	0	243	
03-319569/560		0	0	0	0	0	274	
03-8110030/5111588	Associated Estates Agencies S/B	0	0	0	0	0	112	
03-8891016	Sime Darby Plantations	68	436	0	0	0	504	
03-6916241	Plantation Agencies Sdn Bhd	2329	0	284	0	0	2613	
03-3911350	Kumpulan Guthrie Sdn Bhd	521	966	0	0	0	1487	
06-661212	Kumpulan Guthrie Sdn Bhd	926	0	0	0	0	926	
03-8361453	Sime Darby Plantations Bhd	466	0	0	0	0	466	
03-8138250	Taiko Plantations Sdn Bhd	449	176	0	0	0	625	
03-8682300	H.M.P. Bhd	0	542	0	0	0	542	
03-8719862/3/4	Socfin Co Bhd	2427	0	0	0	0	2427	
03-338237		550	3016	0	0	0	3566	
03-287563		0	0	0	0	0	429	
03-450362		0	0	0	0	0	0	Figures n.a
03-663265/660830		0	0	0	0	0	0	Figures n.a
03-223043/223057		0	0	0	0	0	0	Figures n.a
06-661366	The East Asiatic Co (M) Bhd	3075	0	0	0	0	3075	
03-391560		0	0	0	0	0	301	
03-520797		0	0	0	0	0	235	
03-8719104	Sime Darby Plantations	1624	0	0	0	0	1624	
03-312033		0	0	0	0	0	0	Figures n.a

Name of Estate	Address	Manager
■ Selangor Cont.		
Thannimelai Estate	10 Jalan Detok Tabai, 44000 Kuala Kubu Bahru	The Manager
The Petaling Rubber Estates Ltd	42960 Carey Island, P. Kelang	Haji Abu Hassim b. Saat
Timah Karak Plantation Sdn Bhd	224 Main Road, Sasaran, 45800 Jeram	The Manager
Tiong Ho Realty Sdn Bhd	845 Jalan 17/22, 46400 Petaling Jaya	The Manager
Tong Hong Realty (M) Sdn Bhd	224 Main Road, Sasaran, 45800 Jeram	The Manager
Tongkar Oil Palm Bhd	Kuala Langat	The Manager
Torkington Estate	45200 Sabak Bernam	The Manager
Tuan Mae Estate	Peti Surat 202, 47000 Sungai Buloh	D G Schubert
Tumbuk Estate	42800 Tg Sepat P O	Ang Kim Kiat
Ulu Selangor Estate	44000 Kuala Kubu Bharu	Chow Pooi Wah
Ulu Yam Estate	48009 Rawang	Khor Eng Soong
Wallambrosa Estate	Kapar, 42200 Kelang	The Manager
West Country Estate	43000 Kajang	Hj Kim Guan
West Estate	42960 Carey Island	Mohd Ali Hj Ahmad
Western Gate Sdn Bhd	43500 Semenyih	The Manager
Woon Chong Sam Estate	1 Road 12/8A, 46200 Petaling Jaya	The Manager
Yap Estate	Tanjong Dua Balas, 42700 Banting	The Manager
Yew Lian Plantations Sdn Bhd	c/o Ladang Sabak Bernam, 45207 Sabak Bernam	Phuar Song Koo
Yong Peng Realty Sdn Bhd	4 Jalan Istana, 41000 Kolang	The Manager
Yu Hoh Palm Oil Plantation S/B	Tanjong Sepat, 42800 Kuala Langat	The Manager
Yu Lee Plantations Sdn Bhd	Ulu Yam Baru, 44300 Ulu Selangor	The Manager
■ Singapore 1026		
Chee Fong Estate	3-B Victoria Park Road, Singapore	Foo Kok Hui
■ TERENGGANU		
Ayer Puteh Estate	Peti Surat 19, 24007 Kemaman	Low Ah Kaw
Bari Estate	21500 Sungai Tong, Setiu	Mohd Noridin b. Abd Jalil
Batu Puteh Estate	Kerteh, 24000 Kemaman	The Manager
ESPEK-Gardong	809 Berkunci No. II, 21709 Kuala Berang	The Manager
ESPEK-Terengganu Tengah I	Karung Berkunci No. II, 23309 Dungun	Gopinathan
ESPEK-Terengganu Tengah II	Karung Berkunci No. II, 23309 Dungun	Abd. Rahman B. Yunus
ESPEK-Terengganu Tengah III	Karung Berkunci No. II, 23309 Dungun	Hj. Ramli b. Kassim
ESPEK-Terengganu Tengah IV	Karung Berkunci No. II, 23309 Dungun	Kamruddin b Hamid
Felcra Banggol Gajah Mati Estate	Ulu Terengganu	The Manager
Felcra Bukit Kapah Estate	Karung Berkunci No. 7, 21700 Kuala Berang	The Manager
Felcra Terengganu Tengah I - V	24000 Kemaman	The Manager
Fikri Estate	21500 Sungai Tong, Setiu	Razak b. Maki
Gajah Mati Estate	23200 Bukit Besi, Dungun	Abd Wahab b. Hassan
Lokan Estate	21500 Sungai Tong, Setiu	Haji Wan Abdullah b. Long
Jerangau Cocoa Estate	Makil Pos Pelar, 21800 Ajil, Hulu Terengganu	Abd Halim b. Yusof
Juan Hup Kongs Estate	K-526 (2nd Flr) Jln Sulaiman, 24000 Kemaman	The Manager
Ketengah Jaya Sdn Bhd	Dewan Undangan Negeri Building, Kuala Terengganu	The Manager
Kotengah Perwira Estate	Makil Pos Chengah Baharu, 24000 Kemaman	Mohd Janji Hashim
Koperasi Polis Estate	Tebak, 24000 Kemaman	The Manager
Kretay Estate	24000 Kemaman	The Manager
Kump Ladang Ladang Terengganu S/B	102-102A Jalan Sultan Ismail, 20200 Kuala Terengganu	Haji Yahya b. Hashim
Ladang Rakyat Terengganu Sdn Bhd	Mukim Bandi, 24000 Kemaman	The Manager
Lee Hung Plantations Sdn Bhd	Bandi, 24000 Kemaman	The Manager
Lemo Estate	Ayer Puteh, 24000 Kemaman	The Manager
Lim Kien Chong Enterprises S/B	K-110 Jalan Che Teng, 24000 Kemaman	The Manager
Lokan Estate	63 Miles Jalan Kuala Terengganu, 23000 Dungun	The Manager
Mwar Estate	Hulu Cukai, 24000 Kemaman	The Manager
Pelantoh South Estate	P O Box 10, Pelantoh South Est, 24010 Kemaman	Palanisamy s/o Sinappan
Pinang Bas Estate	23200 Bukit Besi, Dungun	Haji Mohd Aris b. Limut
Sawit Cherul Estate	PT 310 & 365 Ulu Cukai, 24000 Kemaman	The Manager
Sentosa Estate	21500 Sungai Tong, Setiu	Mamat b. Abas
Setia Timor Estate	Bandi, 24000 Kemaman	The Manager
Sungai Besul Estate	23200 Bukit Besi, Dungun	YM Tenyku Harun b. Tenyku Ahmad
Sungai Mas Estate	Sungai Mas, 24000 Kemaman	The Manager
Sykt. Angkasa Plantations S/B	P O Box 26, 24000 Kemaman	The Manager
Tayor Estate	21500 Sungai Tong, Setiu	Mohamad b. Abu Bakar
Tebak Estate	P O Box 14, 24007 Kemaman	Mohd Kamal b. Hj Mukhtar
Ulu Cukai Estate	Chukai, 24000 Kemaman	The Manager

The list is compiled from various sources. The publisher has made every effort to ensure the accuracy of the information presented. The publisher assumes no responsibility for any errors or unintentional omissions however caused.

Telephone	Agency	Oil Palm	Rubber	Cocoa	Coconut	Others	Total Ha	Remarks
03-341080		0	0	0	0	0	62	
03-3318611	H.M.P. Bhd	2407	0	0	0	0	2407	
03-397048		114	87	0	0	0	201	
03-571504		130	0	0	0	0	130	
03-398086		445	74	0	0	0	519	
03-371093		0	0	0	0	0	0	Figures n.a
03-671208/348	Highlands & Lowlands Bhd	876	0	1587	442	0	2905	Intercropped
03-6554220	Taiko Plantations Sdn Bhd	1676	0	0	0	0	1676	
03-8574202	Plantation Agencies Sdn Bhd	378	0	0	0	0	378	
03-8041316	Associated Estate Agencies S/B	43	489	0	0	0	532	
03-6916376	Simo Darby Plantations	557	823	215	0	0	1595	
03-398304	Highlands & Lowlands Bhd	926	0	0	0	0	926	
03-948271	Dunlop Estates Bhd	93	531	0	0	0	624	
03-3318611/3318728	H.M.P. Bhd	3255	0	0	133	0	3388	Intercropped
03-138254		0	0	0	0	0	0	Figures n.a
07-560168		0	0	0	0	0	0	Figures n.a
03-371341		0	0	0	0	0	0	Figures n.a
03-671659	Kumpulan Guthrie Sdn Bhd	398	0	0	0	0	398	
03-323085/311664		1004	0	0	0	0	1004	
03-311758		0	0	0	0	0	0	Figures n.a
03-310611		0	0	0	0	0	0	Figures n.a
591569		56	0	0	0	0	56	
01-950102	Top Plantation Management S/B	1400	0	0	0	0	1400	
09-664635	Kum Ladang Ladang Trengganu S/B	0	0	0	0	0	0	Figures n.a
03-371836		0	0	0	0	0	0	Figures n.a
01-330584	Estet Pekabon Kecil Sdn Bhd	0	0	0	0	0	0	Figures n.a
01-332736	Estet Pekabon Kecil Sdn Bhd	2277	0	0	0	0	2277	
01-970265	Estet Pekabon Kecil Sdn Bhd	1811	0	0	0	0	1811	
01-970275	Estet Pekabon Kecil Sdn Bhd	1883	0	0	0	0	1883	
01-970285	Estet Pekabon Kecil Sdn Bhd	1956	0	0	0	0	1956	
09-31369	FEICRA	0	0	0	0	0	0	Figures n.a
09-811269	FEICRA	0	0	0	0	0	0	Figures n.a
09-30209	FEICRA	0	0	0	0	0	0	Figures p.a
09-633177	Kum Ladang Ladang Trengganu S/B	1250	0	0	0	0	1250	
09-837288	Kum Ladang Ladang Trengganu S/B	0	0	0	0	0	0	Figures n.a
01-970147	Kum Ladang Ladang Trengganu S/B	14	14	0	0	0	28	
09-811254	Kum Ladang Ladang Trengganu S/B	0	0	0	0	0	0	Figures n.a
09-591415		14	14	0	0	0	28	
09-540277		3238	0	0	0	0	3238	
01-970025	Boustead Estates Agency Sdn Bhd	3887	0	0	0	0	3887	
09-22222		0	0	0	0	0	0	Figures n.a
09-30345		0	0	0	0	0	0	Figures n.a
09-623677/623217	Kum Ladang Ladang Trengganu S/B	16881	5443	731	0	0	23055	
09-204024		0	0	0	0	0	0	Figures n.a
09-41815/41677		0	0	0	0	0	0	Figures n.a
09-591360		50	0	0	0	0	50	
09-22959/28959		0	0	0	0	0	0	Figures n.a
01-950747		1286	0	0	0	0	1286	
09-837377	Kum Ladang Ladang Trengganu S/B	0	0	0	0	0	0	Figures n.a
09-664625		0	0	0	0	0	0	Figures n.a
09-26482	Kum Ladang Ladang Trengganu S/B	352	1646	0	0	0	1998	
09-837336	Kum Ladang Ladang Trengganu S/B	0	0	0	0	0	0	Figures n.a
09-31021/2		0	0	0	0	0	0	Figures n.a
01-970146	Kum Ladang Ladang Trengganu S/B	1230	0	0	0	0	1230	
01-335596		0	0	0	0	0	0	Figures n.a
09-30255		1807	0	0	0	0	1807	
		0	0	0	0	0	0	Figures n.a

Palm Oil Mills Listed Alphabetically by State

Name of Palm Oil Mill	Address	Manager
II JOHOR		
Adela Palm Oil Mill	P O Box 73, 81507 Kota Tinggi	Harun Nasir The Manager
Air Tawar 2 Palm Oil Mill	P O Box 17, 81907 Kota Tinggi	Wong Kim Kwi Lee Cheong Meng The Manager
Air Tawar Palm Oil Mill	P O Box 17, 81907 Kota Tinggi	
Ayer Jemp Palm Oil Mill Sdn Bhd	Batu 54 Jalan Johor, 86100 Ayer Hitam	
Ban-Dany Palm Oil Industries S/B	1 Mile Jln Gambir, Parit Salonga, 83000 Batu Pahat	The Manager
Bandary Palm Oil Industries S/B	29-5 (1st Floor) Jalan Rahmat, 81000 Batu Pahat	Prabakaran a/l Selvarajah The Manager
Bellington Palm Oil Mill	P O Box 61, 86007 Kluang	John Abraham Loh Chun Choy The Manager
Buan Heng Palm Oil Mill	c/o P O Box 105, Seccal P O, 81300 Seccal	
Bukit Benuar Oil Mill	P O Box 513, 86009 Kluang	
Bukit Besar Palm Oil Mill	Maklil Pos Bukit Besar, 81000 Kulai	
Bukit Canteak Palm Oil Mill	P O Box 5, 86700 Kahang, Kluang	The Manager
Bukit Pasir Palm Oil Mill S/B	P O Box 163, Bukit Pasir, 84007 Muar	Lee Theng Hooi Muzali b. Mubob Tan Hoo Joo The Manager
C.E.P. Bengang Palm Oil Mill	Boq Berkunci 111, 86300 Kemaman	The Manager
Chua's Palm Oil Mill	P O Box 104, 85400 Chua'ng	
Chan Wing Palm Oil Mill	Boq Berkunci 524, 86009 Kluang	
Cina Plantations Sdn Bhd	92 Jalan Gurney, 72100 Bahau	The Manager
Coronation Palm Oil Mill	P O Box 504, 86007 Kluang	The Manager
Dunlop Est. Bhd Kahang P Oil Mill	P O Box 519, 86009 Kluang	Gan Kok Joo Nevir b. Awan Zahr b. Mahmood
ESPEK-Sy Anehat Palm Oil Mill	Maklil Pos Jemaluang, 86810 Merising	
ESPEK-Ulu Keratong Palm Oil Mill	18-B, Ting, 1, Bang. VVN, Logan, Jalan Dulah Kasap, 85000 Segamat	
Felcra Kilang Sawit Bukit Kepong	Wg 16, Jalan Labiah-Muar, P O 12, 85300 Labih	Abdul Rahim Haji Abu Bakar The Manager
Fook Lee Heng Plantations S/B	268 Jalan Abiad 1, Tim Polanai, 80400 Johor Bahru	
Fraser Palm Oil Mill	K B 111, 81000 Kulai	Lim Hoo Tin Cheng Yee Chan The Manager
Gowali Palm Oil Mill	K B 102, 85109 Batu Awan,	
Johor Oil Palm Plantations S/B	P O Box K8 531, 86007 Kluang	M R Chidran The Manager
Johore Labia Palm Oil Mill	P O Box 101, 85400 Chua'ng	
K.K.S. Kulim (M) Bhd	Locked Bag 733, 80710 Johor Bahru	
Kahang Palm Oil Mill	K B 533, 86009 Kluang	ME. Rosli Ismail The Manager
Kelang Sawit Muar Bhd	P O Box 510, 84007 Muar	
Kong Hong Plantations Bhd	45 Jalan Merian, 84000 Muar	
Keratong 2 Palm Oil Mill	P O Box 63, 85007 Segamat	Bakr: Abd. Kadir Roswli Hassan Soh Chor Chiew The Manager
Keratong 3 Palm Oil Mill	P O Box 63, 85007 Muar	
Keratong 9 Palm Oil Mill	P O Box 4, 85007 Segamat	Tay Chooi Leong Raja Sulaiman Bairan Fun Foo Tsing The Manager
Keratong Palm Oil Mill	c/o P O Box 78, 85007 Muar	
Kilang Kelapa Sawit Siang	K B 518, 81909 Kota Tinggi	The Manager
Kilang Kelapa Sawit Tiram	K B 733, 80990 Johor Bahru	
Kilang Myk Kelapa Sawit Lum S/B	Block 13, Makin of Keratong, P O Box 80, 85007 Segamat	
Kim Loong Palm Oil Mill Sdn Bhd	Locked Bag 106, 81800 Ulu Tiram	
Kit Leo Plantations Bhd	1202A Johor Tower, Jin Gerejs, 80100 Johor Bahru	
Kluang Oil Palm Processing S/B	4 12 Miles Jalan Mersing, 86000 Kluang	
Kluang Rubber Co (M) Bhd	P O Box 64, 86007 Kluang	The Manager
Kualai Palm Oil Mill	W/P Lembang Taib Andak, 81000 Kulai	The Manager
Kualai Palm Oil Mill	Boq Berkunci 108, 81000 Kulai	
Kulai Palm Oil Mill	Maklil Pos FELDA Taib Andak, 81000 Kulai	Ho Kai Joo Abd. Aziz Muhamad U A Hamid Ismett The Manager
Kulim Palm Oil Factory	Ulu Tiram, K B 733, 80990 Johor Bahru	
Ladang Bukit Bajang	P O Box 60, 85007 Segamat	The Manager
Ladang Jantai Oil mill	Triang Post Office, Triang	The Manager
Ladang Pano!	P O Box 509, 86007 Kluang	The Manager
Lendak Palm Oil Mill	K B 110, 86609 Paloh	Soh Kai Yue The Manager
Lepau Kabu Palm Oil Mill	Pahi, 18000 Kuala Krai	
Lok Heng Palm Oil Mill	P O Box 55, 81907 Kota Tinggi	Muzlan Hamid The Manager
Masai Palm Oil Mill	P O Box 1, Kong Kong Road, 81757 Masai	Yusop Ismail The Manager
Nitar Palm Oil Mill	P O Box 7, Kahang, 86700 Kluang	
Nordana Oil Mill	Panchor, 84500 Muar	The Manager
Pakloh Palm Oil Mill	11 1/2 Miles Jalan Mersing, 86000 Kluang	
Paloh Palm Oil Mill	Pwli Surat 104, 86609 Paloh	The Manager
Pekan Jaya Palm Oil Mill	Lot 3460m Makin Layang-Layang, 86000 Kluang	Leong Sow Kung The Manager
Pengerang Palm Oil Mill	P O Box 103, 81600 Pengerang	Aruldas Khadairun Yusaf The Manager
Penggali Palm Oil Mill	Locked Bag 101, 81000 Kulai	
Perusahaan Minyak Sawit Bintang	TST 3, 86600 Paloh	

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Telephone	Agency	Mill Capacity
07-821263	PELDA	Figures n.a
07-891556	PELDA	54 mt/hr
07-831555	PELDA	Figures n.a
07-784370	Asiatic Development Bhd	Figures n.a
07-443550		20 mt/hr
01-333764	PELDA	60 mt/hr
07-561444		100 mt/month
07-722040	H.M.P. Bhd	25 tonnes
07-857101	PELDA	27 mt/hr
07-781257	Kahang Palm Oil Mill Sdn Bhd	Figures n.a
06-934125	Kumpulan Emas Sdn Bhd	20 mt/hr
07-785109	Sime Darby Plantations	40 mt/hr
07-961295	Kumpulan Guthrie Sdn Bhd	
07-901211	Sime Darby Plantations	60 mt/hr
06-841091		100 mt/month
07-711671	Kian Hoe Plantations Bhd	Figures n.a
07-511135	Dunlop Agro-Management Sdn Bhd	20 tonnes/hr
01-330581	Estet Pokoban Kecil Sdn Bhd	20 m/tons
01-332810	Estet Pokoban Kecil Sdn Bhd	
06-901605	PELDA	30 tonnes ffb/hr
07-136644		52 mt/month
07-631540	Taiko Plantations Sdn Bhd	30 mt/hr
07-989245	Dunlop Estates Bhd	Figures n.a
07-783121/2		Figures n.a
07-961204/209/962	Socfin Co Bhd	60 tonnes
07-789181	PELDA	54 mt/hr
06-937231/2		Figures n.a
06-921076		207 mt/month
01-337231	PELDA	54 mt/hr
01-333753	PELDA	54 mt/hr
01-337182	PELDA	60 mt/hr
	Chin Teck Plantations Bhd	Figures n.a
07-821243	Eastern Plantation Agency (J) SB	30 tonnes ffb/hr
07-611310/309/308	Eastern Plantation Agency (J) SB	40 tonnes ffb/hr
01-710023		30 tons/hr
07-651411/412/413		Figures n.a
		Figures n.a
07-711360/712817		Figures n.a
07-711066	Kluang Estate (1977) Sdn Bhd	4200 tonnes FFB
07-881609	PELDA	36 tonnes/hr
07-631240	Sime Darby Plantations	Figures n.a
07-631609	PELDA	36 mt/hr
613024	Eastern Plantation Agency (J) SB	30 tons
07-917288	Boustead Estates Agency Sdn Bhd	30 tonnes/hr
	Regional Agriculture Corp. S/B	20 tonnes/hr
07-711411/2/3	Pamol Plantations Sdn Bhd	30000 tonnes p.a.
07-783021	Taiko Plantations Sdn Bhd	50 mt/hr
09-66257	Boustead Estates Agency Sdn Bhd	Figures n.a
07-821295	PELDA	54 mt/hr
07-66311/2	Keck Seng (M) Bhd	Figures n.a
01-337096	PELDA	60 mt/hr
06-936264/7/8	Harrisons M'sian Plantations Bhd	Figures n.a
07-712394	Boustead Estates Agency Sdn Bhd	Figures n.a
07-783001	Taiko Plantations Sdn Bhd	40 mt/hr
07-881224/631	Eng Hee Kilang Kelapa Sawit S/B	Figures n.a
07-812205	Plantation Agencies Sdn Bhd	20 tonnes ffb/hr
07-681231	PELDA	54 mt/hr
	Yong Peng Realty Sdn Bhd	Figures n.a

Name of Palm Oil Mill	Address	Manager
■ Johor Cont.		
Pukin Estate	P O Box 82, 85007 Segamat	The Manager
Rengan Estate	86300 Rengam	The Manager
Rubberwood Project	P O Box 105, 81000 Kulai	Manshindra Paul
Soderak Palm Oil Mill	P O Box 726, 80990 Johor Baru	Tung Sae Kai
Segamat Oil Mill Sdn Bhd	19 Jalan Genuang, 85000 Segamat	The Manager
Selancar 2A Palm Oil Mill	P O Box 98, 85007 Segamat	Thian Joo Kwee
Selancar 2B Palm Oil Mill	P O Box 98, 85007 Segamat	Ho Kok Loon
Selumpur Palm Oil Mill	K B 518, 85009 Segamat	Chong Tat Sung
Semenchu Palm Oil Mill	P O Box 63, 81907 Kota Tinggi	Teh Kok Kee
Semporna Palm Oil Mill	Kota, 81600 Pengorotang	The Manager
Sening Palm Oil Mill	P O Box 33, 81907 Kota Tinggi	Abdullah Hj. Yusof
Seong Thyé Plantations Sdn Bhd	Ladang Padang Kahang Kluang, 86700 Kluang	The Manager
South Johor Palm Oil Processing	P O Box 1, 81400 Senai	The Manager
Southern Malay Palm Oil Mill	P O Box 103, 86300 Rengam	The Manager
Sungai Tawing Palm Oil Mill	P O Box 531, 86009 Kluang	The Manager
Sungei Bagan Rubber Co. (M) Bhd	P O Box 64, 86007 Kluang	Mohd Tamil b. Hj Rashid
Sykt Perusahaan Kelapa Sawit S/B	9 1/4 Miles Jalan Labis, 83700 Yong Peng-Batu Pahat	The Manager
Tai Tak Palm Oil Mill	21-22 Miles Jalan Kota Tinggi, 81900 Kota Tinggi	The Manager
Tanah Merah Factory	P O Box 505, 84900 Tangkak	The Manager
Telok Songat Palm Oil Mill	P O Box 513, 81909 Kota Tinggi	Abd. Halim Hj. Ashari
Tenggaroh 4 Palm Oil Mill	P O Box 67, Tenggaroh, 86807 Mersing	The Manager
Tenggaroh Palm Oil Mill	P O Box 67, 81907 Kota Tinggi	Mohd. Rasak Abdullah
Tereh Estate Mill	K B 518, 86009 Kluang	Quah Chia Seang
Tunjuk Laut Mill	K B 523, 81909 Kota Tinggi	Teo Chong Han
Ulu Remis Palm Oil Mill	P O Box 107, 81850 Layang-Layang	Chin Teck Kee
Ulu Sebel Palm Oil Mill	TST 22, 81000 Kulai	The Manager
Wa Ha Palm Oil Mill	c/o FELDA Wa Ha, P O Box 3, 81907 Kota Tinggi	Halima Kamoni
Yong Peng Palm Oil Mill	P O Box 104, 83700 Yong Peng	Satwaan Memon
Yule Catto Plantations Sdn Bhd	P O Box 507, 86007 Kluang	The Manager
■ KEDAH		
Batu Lintang Oil Palm Mill	09800 Serdang	Mat Saad bin Ramli
Bukit Mertajam Oil Mill	Sungai Kob, 09700 Karangan	The Manager
Island Oil Palm Plantations S/B	c/o Chong Eng Sawmill, Bakar Arang, 08000 Sungai Petani	The Manager
Plantation Latex (M) Sdn Bhd	Riverside Estate, P O Box 1, 08007 Sungai Petani	Choo Sook Chin
Selama Factory	09800 Serdang	Wong Teck Yong
■ KELANTAN		
Chiku Palm Oil Mill	Pejabat Pos Gua Masang, 18100 Gua Masang	Mat Hassan Mohamed
Gua Masang Estate	Gua Masang, 18300 Ulu Kelantan	The Manager
Konahang Palm Oil Mill	P O Box 35, 17509 Tanah Merah	Wahdat Mat Min
Kuala Pertang Palm Oil Mill	18000 Kuala Krai	Koo Ping Kham
Ladang Kuala Gris	18000 Kuala Krai	Mohd Tahir bin Mohamed
■ KUALA LUMPUR		
Ng Chin Siu & Sons Rubber Esta	19 Jalan Ampang, 50450 Kuala Lumpur	The Manager
Perdn Lqg Tabung Haji S/B	6th Flr Bgn Bank Rakyat, 140 Jln Ipoh, 51200 Kuala Lumpur	The Manager
■ MALACCA		
Asiatic Research Centre	K B 1021, 76460 Tebong (Wakil Pos)	Chan Chee Leong
Diamond Jubilee Oil Mill	25 MS Jalan Chabu/Asahan, 77000 Jasin	The Manager
Sri Lingga Palm Oil Mill S/B	32nd Miles Kuala Linggi, 78200 Kuala Sungai Baru Pos	The Manager
Tebong Factory	Karung Berkunci 1021, 76460 Tebong (Wakil Pos)	M N Bakaran
■ NEGERI SEMBILAN		
Air Kuning South Palm Oil Mill	Air Kuning South, 73410 Air Kuning	The Manager
Gemas Lim Chin Moh Realty S/B	1 Batu Anam Road, 71400 Gemas	The Manager
Gemas Oil Mill	Lot 514/515 Makim Gemas, 71000 Tampin	The Manager
Guthrie Palm Products Sdn Bhd	Kilang Kelapa Sawit Tanah Merah, P O Box 45, 71007 Port Dickson	H. Fernandez
Jomina & Sungai Sendayan Estates	71100 Siliau	The Manager
Kok Foh Palm Oil Mill	72109 Bahau	Koo Koo Bu
Ladang Sungai Labu	c/o Nilai Post Office, 71800 Nilai	The Manager
Pasoh Palm Oil Mill	Wakil Pos Simpang Pertang, 72300 Simpang Pertang	Sushan Sunderaj
Pengkalen Kemas Oil Mill S/B	c/o Cheena Brothers Realty, 71200 Linggi-Rantau	The Manager
Prosper Palm Oil Mill Sdn Bhd	Lot 162 Ladang Goddess, 72100 Bahau	The Manager
Rantau Palm Oil Mill	71290 Rantau	Chow Eng Tzer
Senama Palm Oil Mill	c/o Senama Estate, 72100 Bahau	The Manager
Serting Hillr Palm Oil Mill	Bandar Baru Serting, 72100 Bahau	Abd. Majid Abd. Razak
Serting Palm Oil Mill	Kompleks Bandar Baru Serting, 72100 Bahau	Ismail Hassan
Tanah Merah Palm Oil Mill	Bt 6 1/4 Jln Sepang, PO Box 45, 71007 Port Dickson	Henry Fernandez
Ulu Kancong Palm Oil Mill	71200 Rantau	Gan Tong Chee

Telephone	Agency	Mill Capacity
07-917466	Syt Pukin Ladang Kelapa Sawit SB	30 mt/hr
07-785101		30 mt/hr
07-631241	Asiatic Development Bhd	Figures n.a
07-661030	Yula Cotto Plantationa Sdn Bhd	30 tonne ffb/hr
07-911022/3/9		Figures n.a
01-337034	FELDA	60 mt/hr
01-337373	FELDA	60 mt/hr
07-916967	Dunlop Estates Bhd	Figures n.a
07-821145	FELDA	54 mt/hr
07-361659/912205	Agalison Sdn Bhd	20 mt/hr
07-821277	FELDA	54 mt/hr
07-781245		Figures n.a
07-591443/881		Figures n.a
07-786390/188	Eng Hoe Plantations Sdn Bhd	Figures n.a
07-783121/2	Kumpulan Guthrie Sdn Bhd	
09-978317	Kluang Estates (1977) Sdn Bhd	1500 tonnes FFB
07-455012		Figures n.a
07-916881/883	Ladang Tai Tak (Kota Tinggi) S/B	Figures n.a
06-981310	Asiatic Development Bhd	Figures n.a
03-2419044	Boustead Estates Agency Sdn Bhd	20 tonnes
	FELDA	Figures n.a
01-337112	FELDA	60 mt/hr
611611	Eastern Plantation Agency (J) SB	30 mt/hr
01-761767	Eastern Plantation Agency (J) SB	30 tonnes ffb/hr
07-787126	Kumpulan Guthrie Sdn Bhd	
07-860211	Johore Tenggara Oil Palm Sdn Bhd	30 mt/hr
01-337141	FELDA	60 mt/hr
07-471311	Kumpulan Guthrie Sdn Bhd	
07-711611		30 mt/hr
05-517844	Taiko Plantations Sdn Bhd	Figures n.a
03-2419044	Boustead Estates Agency Sdn Bhd	30 tonnes/hr
04-412551/751		200 mt/month
04-481001	Asiatic Development Bhd	Figures n.a
04-547253	Asiatic Development Bhd	Figures n.a
01-333390	FELDA	60 mt/hr
09-901982	Chin Teck Plantations Bhd	10 mt/hr
09-956734	FELDA	54 mt/hr
09-966387	Taiko Plantations Sdn Bhd	20 mt/hr
09-785333	m/s Taiko Plantations Sdn Bhd	10 M/ton
03-225877/78/79/80		40 mt/hr
01-987767		30 mt/hr
06-466143	Asiatic Development Bhd	Figures n.a
06-591302	Harrisons M'sian Plantations Bhd	Figures n.a
06-981401/2		Figures n.a
06-466227	Asiatic Development Bhd	Figures n.a
06-979229	Nam Boo Company Sdn Bhd	Figures n.a
07-981121/122		100 mt/month
07-981323		30 mt/hr
06-729811	Kumpulan Guthrie Bhd	35 t.p.h.
06-876229	Chin Teck Plantations Bhd	20 mt/hr
	Austral Enterprises Bhd	20 mt/hr
		20 mt/hr
06-899211	FELDA	54 mt/hr
06-782221		Figures n.a
06-774906/7		Figures n.a
06-641288	Kumpulan Guthrie Sdn Bhd	
06-841258	Nagri Sembilan Oil Palms Bhd	7000 tonnes
01-337095	FELDA	60 mt/hr
06-842734	FELDA	60 mt/hr
	Kumpulan Guthrie Bhd	35 t/hr
06-641233/641357		32 tonnes ffb/hr

Name of Palm Oil Mill	Address	Manager
PAHANG		
Bukit Goh Palm Oil Mill	c/o FELDA Bukit Goh, 26050 Kuantan	Lim Choong Khoo
Bukit Kipayang Palm Oil Mill	Triang Post Office, 28300 Triang	Kamardin Mohd. Ali
Bukit Mendil Palm Oil Mill	Triang Post Office, 28300 Triang	Low Peng Wah
Bukit Sagu Palm Oil Mill	P. O. Box 69, 25700 Kuantan	Mohd. Faizy Hj. Daud
Bukit Senorang Palm Oil Mill	Lot 788 & 789 Kemayan, 28000 Temerloh	The Manager
Charuk Puting Palm Oil Mill	28000 Temerloh	The Manager
Chenor Palm Oil Mill	Sungai Jerik, 26400 Bandar Pusat Jenjeka	Choong Yun Kan
Chini 2 Palm Oil Mill	Makil Pos, Bandar Chini Satu, 26600 Pekan	Rahmat Yusof
Chini 3 Palm Oil Mill	Makil Pos, Bandar Chini Satu, 26600 Pekan	Lee See Chin
Dara Lam Soon Palm Oil Mill	Ladang Kg Merba, Km 4, 26700 Masjidan Shah	Lee Kooi Kian
Far East Holding Sdn Bhd	LKFP Negeri Pahang, Jln Gambut, 25000 Kuantan	The Manager
Jahor Palm Oil Mill	25990 Kuantan	M Pathmanathan
Jengka 18 Palm Oil Mill	Makil Pos FELDA Seroja, 28030 Temerloh	Subakaran N. Bhaskaran
Jengka 3 Palm Oil Mill	Makil Pos Kuala Sentol, 26400 Kuantan	Abd Bakar Mohamed
Jengka 4 Palm Oil Mill	Makil Pos Kuala Sentol, 26500 Maran	Abd. Kadir Ibrahim
Jengka 8 Palm Oil Mill	Bandar Pusat Jenjeka, 26400 Jenjeka	Hj. Kharudin Kulub
Jengka 9 Palm Oil Mill	Bandar Pusat Jenjeka, 26400 Jenjeka	Mohd. Khairudin Abdullah
Juntai Palm Oil Mill	28380 Kemayan	Ir. Lee Chee Kuan
Kamren Plantations Co Sdn Bhd	28200 Muncarak	The Manager
Kesaul Palm Oil Mill	Triang Post Office, 28300 Triang	Jalaludin Hamzah
Kemayan Oil Palm Bhd	c/o Triang Post Office, 28300 Triang	The Manager
Keraton 9 Palm Oil Mill	Bandar Pusat Jenjeka, 26400 Jenjeka	The Manager
Kota Bahagia Palm Oil Mill	Keraton.	The Manager
Kota Gelanggi Palm Oil Mill	27000 Jerantut	Syed Hassan Syed Mahmud
LKFP Negeri Pahang	Bandar LKFP, Jalan Gambut, 25000 Kuantan	The Manager
Lepar Hilir Palm Oil Mill	Makil Pos Lepar Hilir 1, 26300 Gambang	Abd. Rahman Mat Yusof
Lepar Utara 4 Palm Oil Mill	Makil Pos Sri Jaya, 26030 Kuantan	Azmi Mat Ali
Lepar Utara 6 Palm Oil Mill	Makil Pos Kota Gelanggi 2, 27000 Jerantut	Nazri Sulaiman
Lian Hap Mfg Co Sdn Bhd (Estate)	Block 12 Ulu Keraton, Rompin	The Manager
Mampaga Palm Oil Mill	P O Box 7, 28707 Bontong	Rosli @ Arli M. Yatim
Neran Palm Oil Mill	P O Box 224, 25720 Kuantan	Toy Hong Hong
Padang Piol Palm Oil Mill	Makil Pos FELDA Padang Piol, 27040 Jerantut	Mat Saor Sapie
Pahang Enterprise Palm Oil Mill	Sri Jaya N/V, 37 Mile Maran, Kuantan	The Manager
Panching Palm Oil Mill	P O Box 257, 25730 Kuantan	Hashim Abdullah
Raub Oil Mill Sdn Bhd	P O Box 16, 27607 Bukit Kemun, Raub	Vincent Williams
Selancar Palm Oil Mill	26800 Kuala Rompin	The Manager
Selendang 2 Palm Oil Mill	26800 Kuala Rompin	The Manager
Selendang Palm Oil Mill	Pejabat For Kuala Rompin, 26800 Kuala Rompin	Zuraidie Wan Ahd. Rashid
Senantan Palm Oil Mill	P O Box 27, 28407 Mentakab	The Manager
Seroja Palm Oil Mill	Makil Pos FELDA Seroja, 28030 Temerloh	Loa Hock Keong
Sg Mel Palm Oil Mill	27000 Jerantut	Shahabudin Othman
Sg Merba Palm Oil Mill	K B 4, 26700 Masjidan Shah	Lee Kong Kian/Kelana b. Sukardi
Seem Seng Palm Oil Mill Sdn Bhd	19 1/2 Miles Jln Sungai Lumbina, 25200 Kuantan	The Manager
Sri Senagore Palm Oil Mill S/B	Lot 2218 Maran Industrial Est, 26500 Maran	The Manager
Suburban Palm Oil Mill	Rok 14 Makim of Keraton, 26600 Pekan	The Manager
Sungai Koyan Palm Oil Mill	Pejabat Pos Raub, 27650 Raub	Mxlan Yusuf
Sungai Tokan Palm Oil Mill	Makil Pos PPP Tan Razak, 27000 Jerantut	Zulkafli Mat Rani
Sykt Pukin Ladang Kelapa Sawit	Makim Keraton, Rompin	The Manager
Tee Teh Palm Oil Mill	Block 10, Keraton	The Manager
Tementi Palm Oil Mill	Triang Post Office, 28300 Triang	Mohd. Yusuf Md. Idris
Torsang Palm Oil Mill	c/o FELDA Torsang 2, Makil Pos Batu Malim, 27610 Raub	Wan Mohd. Bakar
Tinor Oil Palm Plantation Bhd	Jalan Sekolah, 26500 Maran	The Manager
Triang Palm Oil Mill	Pejabat Pos Triang, 28300 Triang	Muhammad Bostaman bin Muhammad
Ulu Jempol Palm Oil Mill	Bandar Pusat Jenjeka, 26400 Jenjeka	The Manager
PENANG		
Ban Eng Cheang	11A Kim Biar Aik Road, 10400 Penang	The Manager
Batu Kawan Palm Oil Mill	14109 Sirpang Apat, P. Wellesley	Ling Eng Kong
Guan Palm Oil Ind. Sdn Bhd	2399 Jln Mejat Harun, 14000 Bukit Mertajam	The Manager
Hilir Oil Palm Sdn Bhd	242 Beach Street, 10300 Penang	The Manager
M P Mathew Palm Oil Mill	691 Main Road, Sg Bakap, 14200 Sg Jawi, P. Wellesley	The Manager
Malpas Industries Bhd	Mk 11 Jln Changkat, Nibong Tebal, 14300 Seberang Prai Selatan	The Manager
United Oil Palm Industries S/B	878 Jln Bandar Bahru, Sg Kecil, Seberang Prai	The Manager
PERAK		
Anson Oil Industries Sdn Bhd	Baru 2 1/2 Jalan Maharaja Lela, 36000 Teluk Intan	Teoh Ah Ton
Besout Palm Oil Mill	Pajabat Pos Sungkai, 35600 Sungkai	San Yew Wah
Bukit Bersatu Oil Palm Inds. S/B	Batu 5 Jalan Kamunting, 34600 Kamunting, Taiping	Ong Chin Lee
Changkat Chermin Palm Oil Mill	Batu 13 1/2, 32400 Nyer Tawar, Manjung	Shahruzzaman b. Abd Halim
Charlesland Estate	74 Barrack Road, 34000 Taiping	The Manager
Chuan Cheon Palm Oil Mill	6th Mile Jalan Maharajalela, 36000 Teluk Intan	The Manager
Cicely Estate	35 Jalan Bandar, 36000 Teluk Intan	The Manager
Eng Thye Plantations Bhd	34150 Kuala Kurau	The Manager
Federal Palm Oil Mill	7th Mile Jalan Changkat Jong, 36000 Teluk Intan	The Manager
Felcra Kilang Sawit Nasaruddin	Km 37, Jalan Tronoh, 32600 Bota	A. Karim Ramee

Telephone	Agency	Mill Capacity
09-538585	PELDA	36 mt/hr
09-255100	PELDA	54 mt/hr
09-208266	PELDA	36 mt/hr
01-337187	PELDA	60 mt/hr
09-271243/244	Sykt Perananan Bk Senorang S/B	35 mt/hr
09-26925	LEPP	Figures n.a
09-462264	Kumpulan Guthrie Sdn Bhd	60 mt/hr
01-333754	PELDA	54 mt/hr
01-337184	PELDA	30 tons
03-7574366/7568992	Lam Soon Management Services S/B	30 tons/hr
09-511522		8000 mt/annum
09-520701	Kumpulan Guthrie Sdn Bhd	
01-337035	PELDA	54 ton/hr
	PELDA	54 mt/hr
	PELDA	36 mt/hr
09-462286	PELDA	60 mt/hr
09-462559	PELDA	54 mt/hr
09-462585	PELDA	30 ton
09-208392	Chemara of Guthrie	15 mt/day
09-247244	PELDA	54 mt/hr
09-58231		Figures n.a
	PELDA	Figures n.a
09-555294	Boustead Estates Agency Sdn Bhd	30 mt/hr
09-265808	PELDA	54 mt/hr
09-522335		20 mt/hr
01-337094	PELDA	60 mt/hr
01-333384	PELDA	60 mt/hr
01-333374	PELDA	27 mt/hr
07-911784		40000 mt/annum
01-333755	PELDA	54 mt/hr
09-538255	PELDA	54 mt/hr
09-263442	PELDA	27 mt/hr
09-61399	Barlow Boustead Estates Agency	30 mt/hr
01-337112	PELDA	60 mt/hr
09-351200		30 tons/hr
	PELDA	Figures n.a
	PELDA	Figures n.a
09-445300	PELDA	60 mt/hr
01-337035	Ng Chin Siu & Sons Rubber Eats	Figures n.a
	PELDA	54 mt/hr
09-201250	Austral Enterprises Bhd	20 mt/hr
03-7574366/7568992	Lam Soon Management Services S/B	30 tons/hr
09-41344		Figures n.a
09-471400/471401		20 mt/hr
	Susurban Properties Sdn Bhd	Figures n.a
09-352567	PELDA	54 mt/hr
09-471239	PELDA	27 mt/hr
		Figures n.a
01-3337436	Too Teh Sdn Bhd	Figures n.a
	PELDA	54 mt/hr
01-337113	PELDA	54 mt/hr
09-471245	PELDA	20 mt/hr
	PELDA	60 mt/hr
09-462267	PELDA	Figures n.a
04-364421		62 mt/month
04-526719	Taiko Plantations Sdn Bhd	20 mt/hr
04-511717/8		Figures n.a
04-22564		300 mt/day
524817	Plantation Agencies Sdn Bhd	40 tonnes ffb/hr
04-524466/280		Figures n.a
04-531121/2		Figures n.a
05-621722/621955		15 mt/hr
01-337093	PELDA	54 mt/hr
05-821504/823809		20 m/tons
05-942805	Lak Perbadanan Fim Sdn Bhd	60 ton/hr
05-823008		160 mt/month
05-621982/622314		Figures n.a
05-625202		400 tonnes
04-537129/462		4000 mt/month
05-621538/622077		Figures n.a
05-361357	PELDA	30 tonnes ffb/hr

Name of Palm Oil Mill	Address	Manager
■ Perak Cont.		
Foong Lee Sawiminyak Sdn Bhd	9th Mile Jalan Lintang, 31100 Sungai Siput	The Manager
Industries Sdn Bhd	P O Box 60, 36007 Teluk Intan	The Manager
Gula Estate Palm Oil Mill	34350 Kuala Kurau	The Manager
Hatim Rubber Estate	13th Miles, Jln Kuala Trong, 34800 Trong	The Manager
Jendarata Palm Oil Mill	Division 3, Jendarata Estate, 36009 Teluk Intan	Toh Tai San
Kampung Palm Oil Mill	34300 Bagan Sora	Soo Ting Kok
Kilang Minyak Kelapa Sawit	Changkat Cormin, 32400 Ayer Tawar	The Manager
Kuantan Trading Oil Mill Sdn Bhd	HK & Shanghai Bank, Station Rd, 30000 Ipoh	Yan Sin Fah
Lima Rias Palm Oil Mill	Lima Bds Estate, 35800 Slim River	D W E Hay
Malamaju Bina Palm Oil Mill	Jalan Selama, 34130 Kubu Gajah, Selama	Lee Chew Geng
Nova Scotia Palm Oil Mill	Batu 5, Jln Maharajalela, 36009 Teluk Intan	Yeo Chai Song
Pantai Ramis Palm Oil Mill	Lot 790 Jalan Ayer Tawar, 32500 Cangkat Kruing	Lee Boon Chye
Perak Motor Co Sdn Bhd	P O Box 53, 36007 Teluk Intan	The Manager
Pertubuhan Peladang Kawasan	Kampung Gajah, 36000 Teluk Intan	The Manager
Selaba Palm Oil Mill	4 1/2 Miles, Jln Changkat Jong, 36000 Teluk Intan	The Manager
Seri Pelangi Palm Oil Mill	Bt 11 1/4 Jln Bidar, PO Box 89, 36008 Teluk Intan	N Thoralraj
Southern Perak Palm Oil Mill	36400 Hatan Melintang	Julian L Than
Sungai Samak Palm Oil Mill	Ulu Bernam Post Office, 36500 Hillir Perak	The Manager
Sykt Cahaya Mada Perak Oil Mill	P O Box 12, 35007 Tapah	The Manager
Sykt Peladang & P'usahaan Minyak	Batu 4 1/2 Jalan Maharaja Lela, 36000 Teluk Intan	The Manager
Sykt Pertanian Klg K. Sawit S/B	Batu 12 Jalan Bidar, 36000 Teluk Intan	Khoai Beng Aun
Synn Palm Oil Sdn Bhd	1st Mile Jalan Kampong Dow, 34000 Simpang-Taipung	The Manager
Taipung Oil Industries	9 1/2 Mile Jalan Kampong Dow, 34000 Taipung	The Manager
Tali Ayer Palm Oil Mill	34300 Bagan Sora	Mohlis Ahmad Milatu
Tanjong Halim Palm Oil Mill	B/K No 3, 35909 Tanjong Malim	Burhan B. Sidek
Temerloh Mill	34800 Trong	Lim Hy Chian
Trolak Palm Oil Mill	Pajabat Pos Sungai, 35600 Sungai	Tan Yan Khon
Ulu Bernam Palm Oil Mill	Ulu Bernam Estate, 36500 Ulu Bernam	S Manoharan
■ SABAH		
Apas Balung Palm Oil Mill	c/o Locked Box 28, 91009 Tawau	The Manager
Bal Plantations Sdn Bhd	P O Box 135, 91007 Tawau	W Tully
Beaufort Palm Oil Mill	P O Box 152, 89807 Beaufort	The Manager
Binaang Palm Oil Mill	91200 Kunak	The Manager
Chu Lip Kong	P O Box 256, 90007 Sandakan	The Manager
Danau Palm Oil Mill	98700 Limbang, Bahagian Kelina	The Manager
Permanah Palm Oil Mill	Sg. Pelek, 43950 Sepang	The Manager
Poh Loh Sdn Bhd	P O Box 782, Tanah Merah, 90008 Sandakan	The Manager
Giras Oil Mill	P O Box 19, 91007 Kunak via Tawau	The Manager
Hap Seny Palm Oil Mill	41st Miles Jalan Besar, 91000 Tawau/Sempoerna	The Manager
Havy's Oil Mill Sdn Bhd	c/o Sydney Estate, 43500 Semenyih Post Office	The Manager
Jaya Oil Mill Sdn Bhd	4 Kampong Jawa, Kelana	The Manager
KL-Kapong (Sabah) Mill I	Locked Bag No 3, 91009 Tawau	Lim Eng Hu
KL-Kapong (Sabah) Mill II	Locked Bag No 3, 91009 Tawau	Muzuki b. Talib
Ladang Pamol Sabah	Baluran, P O Box 201, 90007 Sandakan	The Manager
Lai Fook Kim Estates Sdn Bhd	P O Box 112, 90007 Sandakan	Stephen M T Lee
Lembaga Kemajuan Tanah N Sabah	91100 Lahad Datu	The Manager
Lembaga Kemajuan Tanah N Sabah	P O Box 1610, 88724 Kota Kinabalu	The Manager
Merotal Palm Oil Mill	P O Box 135, 91007 Tawau	The Manager
Mustyn Palm Processing Sdn Bhd	P O Box 77, 91107 Lahad Datu	The Manager
Mukah Palm Oil Mill	P O Box 616, 96007 Sibn	The Manager
Miah Palm Oil Mill	P O Box 661, 98007 Miri	The Manager
Sabah Agric Deopt (Palm Oil) S/B	Sg. Sepatong, P O Box 132, 91308 Sempoerna District	The Manager
Sabatpalm Oil Mill	P O Box 901, 90003 Sandakan	Moh Siau Fong
Sabahat A Palm Oil Mill	c/o FELDA Sabahat 3, 91100 Lahad Datu	Zakaria Mohamed
Seqaria Palm Oil Mill	P O Box 132, 91308 Sempoerna	The Manager
Silabukan Palm Oil Mill	P O Box 211, 91108 Lahad Datu	The Manager
Suan Lamba Palm Oil Mill	P O Box 1253, 90008 Sandakan	The Manager
Sungai Manila Palm Oil Mill	P O Box 1253, 90008 Sandakan	The Manager
Syarikat Kemajuan Sabah Sdn Bhd	P O Box 901, 90008 Sandakan	The Manager
Sykt Kretam Sdn Bhd	P O Box 81, 90007 Sandakan	Leong Yim Ming
Tomangpong Estate Oil Mill	Tomangpong Estate, PO Box 1269, 90008 Sandakan	Wong Sui Hean
Unas Palm Oil Mill	NR 85, 91000 Tawau	Abdul Halim Ahmad
■ SARAWAK		
Sarawak Oil Palm Sdn Bhd	P O Box 547, 98007 Miri	R A Shepherd/D P Nesbit
■ SELANGOR		
Brooklands Palm Oil Mill	Peti Surat 214, 42700 Banting	Chong Yen Chee
Bukit Kerayong Palm Oil Mill	Bukit Kerayong Road, 42200 Kapar	D Balakrishnan
Bukit Rajah Palm Oil Mill	Batu 3 1/2, Jln Meru, P/S 147, 41910 Kelang	Francois Xavier
Bukit Rotan Palm Oil Mill S/B	45000 Kuala Selangor	The Manager
Bukit Talang Palm Oil Mill	P O Box 1, 45000 Kuala Selangor	Lee Kim Tiak

Telephone	Agency	Mill Capacity
05-987713		Figures n.a
05-622399	Ganda Palm Services Sdn Bhd	Figures n.a
05-557129	Rhg Thye Plantations Bhd	Figures n.a
05-887302		600 mt/annum
05-661822	United Plantations Bhd	50 tonnes ffb/hr
04-555814	Kumpulan Guthrie Sdn Bhd	
05-930801/802	Ladang Perbadanan Fina Sdn Bhd	20-30 mt/hr
05-510366	Tay Fian Hin Sdn Bhd	30 mt/hr
05-428326	Socfin Co Bhd, KL	30 m/tonnes
05-804412	Plantation Agencies Sdn Bhd	20 tonnes ffb/hr
05-621911	Sime Darby Plantations	60 mt/hr
01-510058/540383	Plantation Agencies Sdn Bhd	20 tonnes ffb/hr
05-691784/455		Figures n.a
05-650224		150-200 mt/month
05-621698/699	Harrisons M'sian Plantations Bhd	14 mt/hr
05-601298	United Plantations Bhd	30 tonnes ffb/hr
05-636233		20 tonnes/hr
05-641123/412612	Harrisons M'sian Plantations Bhd	Figures n.a
		30 mt/hr
		30 mt ffb/hr
05-514218	Chen & Co	Figures n.a
05-821239/570		Figures n.a
05-822028/055		Figures n.a
04-555336	Sime Darby Plantations	30 mt/hr
04-496081	Taiko Plantations Sdn Bhd	20 mt/hr
887130	Plantation Agencies Sdn Bhd	20 tonnes ffb/hr
05-486735	FELDA	27 mt/hr
05-636261	United Plantations Bhd	50 tonnes ffb/hr
089-73767	LKINS	Figures n.a
783533-7		22 ton ffb/hr
087-211733	Lembaga Kemajuan Tanah N Sabah	10 mt/hr
	Bena Plantations Sdn Bhd	36000 mt/annum
089-213215/214319		5000 mt/annum
082-54111	Jabatan Pertanian Sarawak	Figures n.a
06-787388	Southern Realty (M) Sdn Bhd	40 mt/hr
089-45452/43849		Figures n.a
089-71409	Harrisons M'sian Plantations Bhd	Figures n.a
	Hap Plantation Mills Sdn Bhd	Figures n.a
03-338236		Figures n.a
03-318093/641		Figures n.a
01-880405	Taiko Plantations Sdn Bhd	60 mt/hr
01-880405	Taiko Plantations Sdn Bhd	30 mt/hr
089-43155/45487	Pamol Plantation Sdn Bhd	Figures n.a
215846/611622		20 mt/hr
		20 mt/hr
		10-50 mt/hr
088-55811	Bal Plantations Sdn Bhd	24 mt/hr
089-783526	Bal Plantations Sdn Bhd	Figures n.a
089-85244		
084-21688/26403	Lembaga Kemajuan Tanah Sarawak	Figures n.a
085-34393	Lembaga Kemajuan Tanah Sarawak	Figures n.a
089-51035/53340	Sabah Agric Development Sdn Bhd	Figures n.a
089-211108	Asiatic Development Bhd	Figures n.a
01-337040	FELDA	60 mt/hr
089-781194	Houstead Estates Agency Sdn Bhd	Figures n.a
089-81789	LKINS	Figures n.a
089-44117	LKINS	Figures n.a
089-45888	LKINS	Figures n.a
089-214145		20 mt/hr
089-212177		Figures n.a
01-338312	The East Asiatic Co (M) Bhd	40 tonnes ffb/hr
01-334207	FELDA	60 mt/hr
414860/414903		27 mt ffb/hr
03-8671033	Dunlop Estates Bhd	Figures n.a
03-3508209	Kumpulan Guthrie Sdn Bhd	
03-3428233	Sime Darby Plantations	Figures n.a
03-401083/391083		Figures n.a
03-391401	Kumpulan Guthrie Sdn Bhd	

Name of Palm Oil Mill	Address	Manager
■ Selangor Cont.		
Dusun Durian Palm Oil Mill Elmira Palm Oil Mill Golconda Palm Oil Mill Kg Kuantan Palm Oil Mill Sdn Bhd Lam Soon Management Services S/B	42700 Banting 47000 Sungai Buloh c/o Golconda Estate Kepar, 42200 Kepar Batang Berjuntai Post Office, 45600 Kuala Selangor 18 Section 14/14, 46100 Petaling Jaya	The Manager Ong Kok Wang The Manager The Manager The Manager
Lee Chin Cheng Dengkil Oil Palm Minyak Palm Oil Mill Merib Palm Oil Mill Sdn Bhd Riverside Palm Oil Mill Semesia Oil Palm Mill Sepang Estate Oil Mill Seri Lelangit Palm Oil Mill S/B Sungai Soda Palm Oil Mill Sungai Tongi Palm Oil Mill Teluk Merbau Plantation Oil Mill	Lot 6180, 31 Milestone, 43000 Dengkil-Kajang P O Box 202, 45609 Batang Berjuntai Tanjung Sepat Post Office, 42800 Kuala Langat P O Box 4, 45000 Kuala Selangor Ladang Sq Labu, 43900 Sepang Sepang Palm Oil, 43900 Sepang 15th Miles Jalan Banting, 42600 Jenjarom 42700 Banting Makil Pos Sg. Dumur, 44010 Kuala Kubu Bharu 41950 Sepang, Sungai Pelek	The Manager A B F Robert The Manager The Manager Haji MdZlan b. Haji Ahmad The Manager The Manager The Manager The Manager Kusrudin Abdullah Chung Maw Sing
Tonnaraman Palm Oil Mill Tuan Mee Palm Oil Mill Tumbak Palm Oil Mill West Estate Oil Mill	45600 Batang Berjuntai Peti Surat No 209, 47000 Sungai Buloh 42800 Tg Sepat P.O. Carey Island, 42000 Port Kelang	Wong Yee Yow Wong Yee Sang Arq Kim Kiat The Manager
■ TERENGGANU		
Durian Mas Palm Oil Mill Jakor Valley Palm Oil Mill Jaya Palm Oil Mill Jerangau Barat Palm Oil Mill Jerangau Palm Oil Mill Kemaman Palm Oil Mill Kerteh Palm Oil Mill Kilang Kelapa Sawit Kilang Sawit Panji Alam Sdn Bhd Rakyat Kotengah Perwira Sdn Bhd	23000 Dungun Ulu Jabor, 24000 Kemaman Sungai Tongi, 21500 Kuala Terengganu Makil Pos FELDA Jerangau, 21820 Ajil Makil Pos FELDA Jerangau, 21820 Ajil P O Box 10, 24010 Padang Raba, Kemaman P O Kotengah Jaya, 23300 Paka Batu 25 Jln Kelantan, Sg Tongi, 21500 Setiu Bandar Ulu Cukai (Bandar D), 24000 Makim Kemaman Makil Pos Chenoh, 24000 Kemaman	The Manager The Manager The Manager Zulkapli Mohamed Mahawati Saadi Busin Palanisamy s/o Sinapang Chia Chin Seong Razak b. Mada The Manager The Manager
Rasau Kertih Palm Oil Mill Sungai Tongi Palm Oil Mill	c/o FELDA Paka, 23000 Dungun 23rd Miles Sungai Tongi, 21500 Kuala Terengganu	The Manager The Manager

03-371062/520	Harrisons M'sian Plantations Bhd	Figures n.a
03-6554214	Kumpulan Guthrie Sdn Bhd	Figures n.a
03-395124	Southern Realty (M) Sdn Bhd	Figures n.a
03-401154		30 mt/hr
09-452258		
03-136239		Figures n.a
03-8719864/3/2	Soefin Co Bhd	20 ton
03-174204/311/312		20 mt/hr
03-391401	Highlands & Lowlands Bhd	20 mt/hr
03-7567500	PRNS Holdings Sdn Bhd	40 tons
06-758229	Harrisons M'sian Plantations S/B	Figures n.a
03-373304/5		Figures n.a
03-171300	Harrisons M'sian Plantations S/B	18 tonnes
01-337051	FELDA	60 mt/hr
06-661366	The East Asiatic Co (M) Bhd	20 tonnes ffb/hr
03-8719062/9557	Sime Darby Plantations	90 mt/hr
03-6554245	Taiko Plantations Sdn Bhd	27 mt/hr
03-8574202	Plantation Agencies Sdn Bhd	10 tonnes ffb/hr
01-118733/611/728	Harrisons M'sian Plantations S/B	Figures n.a
09-821211/235	RISDA	Figures n.a
09-20701	Roustead Estates Agency Sdn Bhd	Figures n.a
09-664290		60 mt/hr
01-117086	FELDA	54 mt/hr
09-811276	FELDA	27 mt/hr
01-950747		80 mt
09-870295	FELDA	54 mt/hr
09-664290	Kan. Ladang-Ladang Trengganu S/B	30 ton
09-23544		Figures n.a
09-23544/54		Figures n.a
05-871255	FELDA	Figures n.a
09-34290/34324	Kumpulan Ladang Persekutuan S/B	Figures n.a

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