

Overview of Agri-food Structure, Trade and Policies in Selected South American and East Asian Countries

Country Paper on Malaysia

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List of Abbreviations

ASEAN	Association of South East Asia Nation
AEC	ASEAN Economic Community
AFTA	ASEAN Free Trade Area
BMI	Body Mass Index
Bn	Billion
CER	Closer Economic Partnership
CPI	Consumer Price Index
APEC	Asia Pacific Economic Cooperation
BERNAS	Padi Beras Nasional Berhad
BOT	Balance of Trade
CEPT	Common Effective Preferential Tariff
CIF	Cost, Insurance and Freight
DDA	Doha Development Agenda
EU	European Union
FAO	Food and Agriculture Organisation
FAOSTAT	Food and Agriculture Organisation Statistics
FELDA	Federal Land Development Authority
FELCRA	Federal Land Consolidation and Rehabilitation Authority
FDI	Foreign Direct Investment
FOA	Farmers' Organization Authority
FTA	Free Trade Agreement
GDP	Gross Domestic Product
GMP	Guaranteed Minimum Prices
GNP	Gross National Product
GMAC	Genetic Modification Advisory Committee
GMO	Genetically Modified Organisms
Ha	Ha
HRD	Human Resources Development
IPPC	International Plant Protection Convention
IRPA	Intensification of Research in Priority Areas
IAP	Individual Action Plan
ICT	Information and Communication Technology
IMP	Industrial Master Plan
JAKIM	Department of Islamic Development Malaysia
MFN	Most Favoured Nation
MITI	Ministry of International Trade and Industry
Mn	Million
NAMA	Non-Agricultural Market Access
NAP	National Agricultural Policy
NEI	Net Export Index
NGC	New Generation Co-operatives
RISDA	Rubber Industry Smallholders' Development Authority
RM	Ringit Malaysia (Malaysian Currency)
SALT	Livestock Farms Certification Scheme
SPS	Sanitary and Phytosanitary
SSL	Self Sufficiency Level
SPLAM	Malaysian Aquafarm Certification Scheme
TIFA	Trade and Investment Framework Agreement
TREATI	Trans-EU ASEAN Regional Trade Initiative
UNDP	United Nations Development Programme
USDA	United States Department of Agriculture
WTO	World Trade Organisation
7MP	Seventh Malaysia Plan
8MP	Eighth Malaysia Plan

9MP Ninth Malaysia Plan
USD US Dollar (=RM3.5)

PART 1 Agricultural Production Sector

Introduction

Agriculture in Malaysia is characterized by a dualistic system where the plantation and the smallholder sectors exist side by side. Plantation or estate agriculture is normally a single crop cultivation on a land area of more than 40 ha. The plantation management is more systematic, using modern technology and hired labour. Rubber, oil palm, coconuts, pineapple, cocoa and tea are planted in estates or plantations. In the smallholder sub-sector the farmers cultivate small land areas. Consequently production capacity is low due to the application of limited technology and disorganized farm management techniques. The farm sizes are in the region of between 0.4 to 4 ha. Basically, there are two types of smallholders. The subsistence farmers are those who cultivate their land with cash crops for their own consumption. Agriculture activities include vegetables and fruits trees and a number of poultry and livestock herds. Another category of smallholders are those who cultivate their land with commodities similar to those planted by the plantations.

In the past, emphasis was given to the production of industrial commodities of which the country enjoys export earnings. Since 1998, Malaysia's agricultural development has been guided by the National Agricultural Policy III (NAP III) and its implementation is undertaken in the Malaysia's five years plan (2006-2010). The Ninth Malaysia Plan (9MP) will be an important period for the agricultural sector as it coincides with the ending of the NAP III. The development programs are aimed at expanding food production to improve the food trade balance, increasing export of industrial commodities and ensuring sustainable supply of raw materials to support the growth of domestic agro-based industries.

Agricultural Production Growth

In the Seventh Malaysia Plan 7MP, 1995 -2000, the agricultural value added grew at 1.2 percent per annum, lower than the targeted 1.9 percent. In the Eighth Malaysia Plan (8MP), 2001 – 2005, the agriculture sector grew at 3.0 percent per annum, higher than the Plan target of 2.0 percent (Table 1). Higher growth in the Eighth Malaysia Plan was due to a better performance by oil palm and rubber. Nevertheless, in absolute terms, the agriculture sector's value added increased by 15 percent from about USD5 bn in 2000 to more than USD 6 bn in 2005 and is expected to increase further to around USD 8 bn in 2010. The industrial commodities¹ sub-sector remained the largest contributor accounting for about 62 percent of the total added value in agriculture. The food sub-sector² contributed 38 percent to the agriculture added value with livestock sectors accounting for significant increases (Table2). As shown in Table 1, agricultural sector is expected to grow at a higher rate of 5 per cent per annum. Significant growth is expected to be contributed by cocoa, fisheries and paddy sub-sectors. To increase the contribution of agricultural sector, new sources of growth that include ornamental fish, seaweeds, tuna and floriculture have been identified and implemented in the 9MP.

¹ Industrial commodities are the crops which are planted for industrial inputs/raw materials. They include oil palm, rubber and cocoa which are export oriented.

² Food sub-sector refers to food commodities which include food crops such as paddy, fruits and vegetables; aquaculture and marine fisheries and livestock.

Table 1 Malaysia: Agriculture Value Added, 2000-2010 (USD mn in 1987 prices)

Commodity	1990	1995	2000	2005	2010 ^f	Average Annual Growth Rate (%)	
						8MP)	9MP(Target)
Oil Palm	1,518	1,943	1,674	2,261	2,877	6.2	4.9
Forestry and Logging	661	536	873	862	789	-0.3	-1.7
Rubber	584	499	534	647	730	3.9	2.4
Cocoa	351	234	71	24	39	-19.8	10.8
Fisheries	438	571	712	683	1,107	-0.9	10.2
Livestock	173	239	434	597	709	6.6	3.5
Paddy	171	190	169	181	282	1.4	9.4
Other Agriculture [*]	340	475	865	914	1,329	1.1	7.8
Total	4,236	4,687	5,332	6,167	7,862	3.0	5.0

Notes:^{*}Other agriculture: Include coconut, vegetables, fruits, tobacco and pepper;
f denotes forecast.

Source:Government of Malaysia (1986, 2001 and 2006).

Agricultural Production

As shown in Table 2, production of crude palm oil, beef, mutton, fruits and vegetables have shown remarkable growth due to favorable world prices and expanding markets. The production of crude palm and palm kernel oils are expected to continue to increase in period 2006 – 2010. However, cocoa production recorded a negative 16.3 percent growth during the 8MP. This is due to pests and diseases such as pod borers which wiped out almost all cocoa trees in Malaysia. However, the industry is recovering and it is expected to grow substantially over the next five years, as the government has set its production growth target at 15.5 percent annually in the 9MP. In line with the government policy to increase local food production and reduce imports, the food sub-sector demonstrated a substantial growth in most of the food commodities. Livestock, aquaculture and milk production showed a promising growth in the 8MP.

Table 2 Malaysia: Agricultural Production 2000-2010 ('000 tonnes)

Commodity	2000	2005	2010	Average Annual Growth Rate (%)	
				8MP Achieved	9 MP Target
Agricultural Commodities					
Rubber	928.0	1,124.0	1,293.0	3.9	2.8
Crude palm Oil	10,842.0	14,961.0	19,561.0	6.7	5.5
Palm Kernel Oil	1,384.0	1,868.0	2,570.0	6.2	6.6
Sawlogs ¹	23,074.0	21,334.0	19,475.0	-1.6	-1.8
Cocoa	70.0	28.0	57.0	-16.7	15.5
Pepper	24.0	19.1	30.0	-4.5	9.5
Pineapple	265.7	407.6	1,106.0	8.9	22.1
Tobacco	7.4	14.0	12.0	13.6	-3.0
Flowers ²	120.4	126.4	147.3	1.0	3.1
Food Commodities					
Paddy	2,141.0	2,400.0	3,202.0	2.3	5.9
Fruits	993.0	1,587.0	2,556.0	9.8	3.1
Vegetables	404.0	771.3	1,333.0	13.8	8.0
Coconut	475.7	602.0	660.0	4.8	1.9
Fisheries	1454.0	1,575.0	2,071.0	1.6	5.6
Marine	1,286.0	1,325.0	1,409.0	0.6	1.2
Aquaculture	168.0	250.0	662.0	8.3	21.5
Livestock					
Beef	17.5	28.5	45.0	10.2	9.6
Mutton	0.9	1.5	2.3	10.8	8.9
Pork	159.8	209.0	241.0	5.5	2.9
Poultry	714.3	980.0	1295.0	6.5	5.7
Eggs ³	399.0	443.0	600.0	2.1	6.3
Milk ³	29.0	41.0	68.0	6.9	10.7

Notes: 1 Measured in thousand cubic meters

2. Measured in mn stalks

3. Measured in mn litres

Source: Government of Malaysia (2001 and 2006).

Table 3 shows that in general, the agricultural productivity has increased from 2000 to 2005 and the productivity is expected to further improve in 2010. This productivity improvement was contributed by the application of good quality seeds and latest technology besides the adoption of good farm management practices especially by the estates or plantations. Oil palm, being an important commodity to the country has shown impressive productivity growth. Paddy (rice) as a staple diet has been given special attention by the government to further increase the productivity. The government set a productivity target of 10 tonnes/ha/season for the granary areas³, as a pre-emptive measure to increase the competitiveness of the local growers, so as to sustain their position with the implementation of ASEAN Free trade Area (AFTA)⁴.

³ Granary area is a designated paddy or rice production area.

⁴ Extracted from Government of Malaysia (2006).

Table 3 Malaysia: Productivity of Agricultural Commodities 2000-2005 (%)

Commodity	2000	2005	2010
Industrial Commodities			
Oil palm FFB*(metric tonnes/ha/year)	19.1	22.5	25.0
Rubber (metric tonnes/ha/year)	1.2	1.3	1.7
Pepper (metric tonnes/ha/year)	2.1	1.5	1.8
Cocoa (metric tonnes/ha/year)	0.9	1.2	1.6
Tobacco (metric tonnes/ha/year)	1.1	1.4	1.5
Food Commodities			
Paddy (metric tonnes/ha/season)	3.0	4.5	6.0
Aquaculture (metric tonnes/ha/cycle)	0.4	0.4	0.5
Miscellaneous			
Pineapple (metric tonnes/ha/cycle)	16.9	21.1	22.1
Flowers (thousand stalks/ha/season)	155.6	162.9	190.4
Fruits (metric tonnes/ha/season)	3.3	4.8	6.8
Vegetables (metric tonnes/ha/cycle)	10.1	12.1	13.2
Coconut (metric tonnes/ha/year)	3.0	3.3	3.7

Note: *FFB: Fresh fruit bunch

Source: Government of Malaysia (2006).

Food Commodities

In 2005, the value added for food commodities was USD2374 mn. This figure accounts for 38% of the total value added of agriculture, 2% lower than that in 2000. Nevertheless, the share of value added of food commodities to the total agricultural value added is expected to increase to 44% in 2010⁵. The implementation of the National Agricultural Policy III (NAP3) to meet the national food requirements and broaden the export capacity of the agricultural sector has positive impacts on food production. As a result, the self sufficiency levels⁶ (SSL) for food commodities, except rice, improved (Table 4). The impressive growth in livestock production is mainly attributed to the improvement of animal husbandry and shifting from traditional to commercial farming practices especially in the non-ruminant sub-sector. Increase in feed lot and expansion of integrated beef cattle farming in rubber and oil palm plantations have contributed to the increase in beef production. Poultry production increase is due to the contract poultry farming system introduced by fast food chain restaurants such as Kentucky Fried Chicken. The growth in the production of Fruits and vegetables is attributed to the government efforts in consolidating small orchards into larger organized farms and instituting group farming⁷ projects since most of food crops and animal husbandry are being carried out by small holders/farmers. Besides, there are also fruit farms which are commercially developed by private sector including government linked and state linked companies⁸.

⁵ Extracted from Government of Malaysia (2006).

⁶ Measured by the percentage of production against the sum of production, import and stock less export.

⁷ Farmers with small farm sizes from the same area/village are grouped together to form a larger production unit and normally plant similar food crops. The number of farmers per project range from 10 to 50 depending on crop and land area. The group farming are organized and coordinated by the Department of Agriculture.

⁸ Government linked company is a companies established by the federal government while state linked company is a company established by the state government.

Table 4 Malaysia: Self Sufficiency Levels Of Food Commodities
1995-2010(%)

Commodity	1995	2000	2005	2010
Rice	76.3	70.0	72.0	90
Fruits	88.9	94.0	117.0	138
Vegetables	71.6	95.0	74.0	108
Fishery Produce	92.0	86	91.0	104
Beef	19.2	16.0	23.2	28
Mutton	6.0	6.0	9.0	10
Pork	104.0	99.0	100	132
Poultry	110.7	113.0	121.0	122
Eggs	110.3	116.0	113.0	115
Milk	3.5	3.0	5.0	5

Sources: Government of Malaysia (2001 and 2006).

Palm Oil

Palm oil continues to be a dominant contributor to the growth of the agriculture sector. The total area planted has increased tremendously from 641,000 ha in 1975 to 4.2 mn ha in 2005. The increase over the decade is approximately 66 percent. Figure 1 shows the trend of oil palm planted area from 1960 to 2005. Besides estates⁹, smallholders¹⁰ have also contributed significantly to palm oil production. Area planted by the estates and the smallholders has increased by 122 percent and 21 percent, respectively for the last decade (Figure 2). Figure 3 illustrates the production trend for crude palm oil production from 1975 to 2005. Crude palm oil (CPO) production increased from 1.6 mn tonnes in 1975 to 10.8 mn tonnes in 2000 and continued to increase to 15 mn tonnes in 2005. Although planted areas and production have increased, the revenue generated from palm oil had fluctuated. The main reason for this unstable revenue is the palm oil price movements, illustrated in Figure 4.

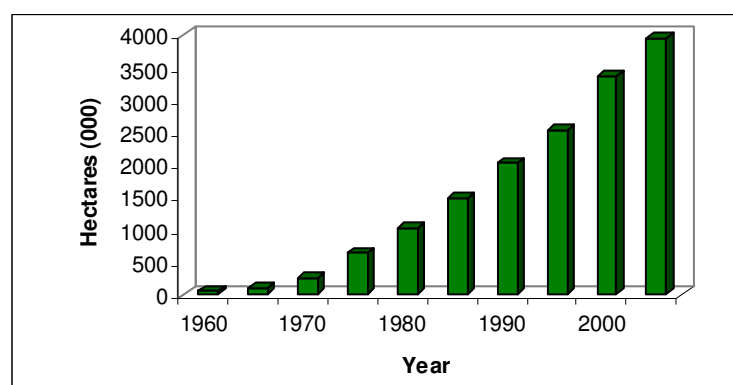


Figure 1 Malaysia: Oil Palm Planted Area 1960-2005

Sources: Department of Statistics, Malaysia and Ministry of Plantation and Primary Commodities (2006)

⁹ An estate or a plantation is an area with more than 100 acres/entity size, planted with an industrial commodity (oil palm or rubber)..

¹⁰ Smallholder is a farmer who plant industrial crops with farm sizes of 0.4 - 4 ha.

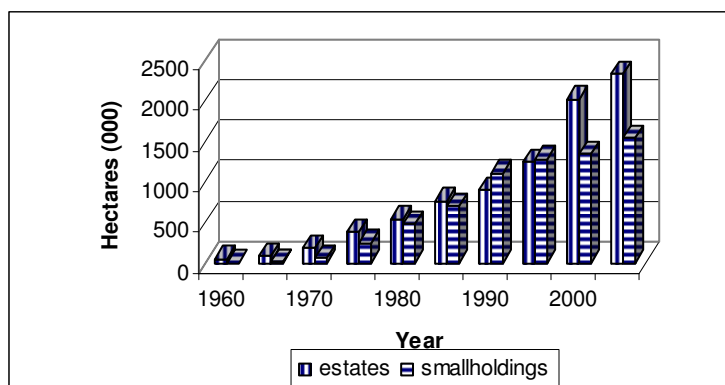


Figure 2 Malaysia: Oil Palm Area Planted by Estates and Smallholders 1960-2005
Source: Department of Statistics, Malaysia

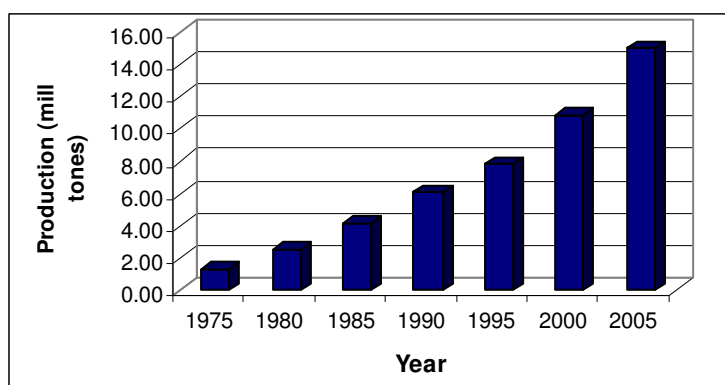


Figure 3 Malaysia: Production of Crude Palm Oil 1975-2005 (Mn tonnes)
Source: Department of Statistics, Malaysia

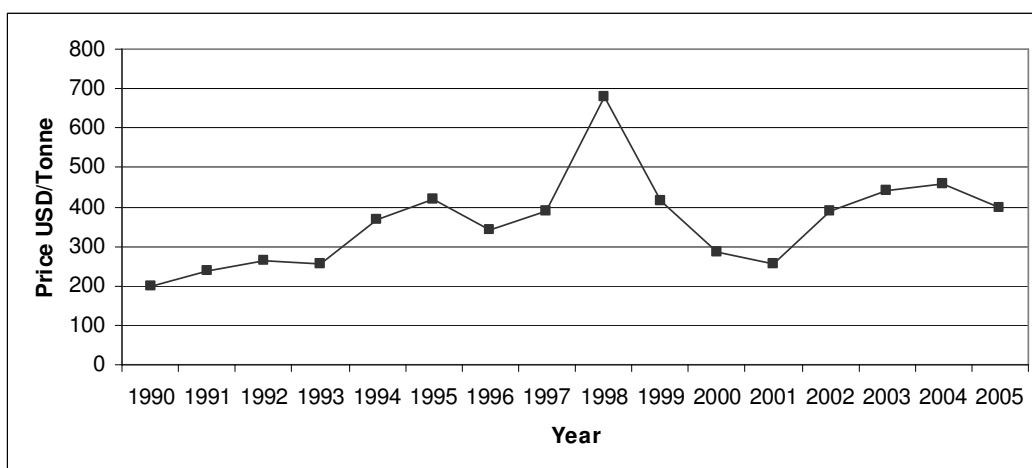


Figure 4 Malaysia: Annual Average Crude Palm Oil Prices (USD/tonne)
Source: Department of Statistics, Malaysia.

Rubber

The rubber industry has sustained its position as one of the major contributors to the primary sector even though its planted area fell from 2.1 mn ha in 1970 to 1.25 mn ha in 2005. A Significant reduction in planted area occurred in the estate sub-sector while smallholders began to reduce their rubber area in the early 1990s (Figure 5). The primary reason for this reduction in area was the low returns from rubber and the conversion to oil palm cultivation which is relatively more lucrative.

The reduction of planted area directly caused the reduction of production of rubber. As shown in Figure 6, rubber production peaked in 1980 (1.5 mn tonnes) before declining in the early 1980s. The production in 2005 was 1.12 mn tonnes. However, in 2006 the estimated production figure by the Department of Agriculture was 1.16 mn tonnes. This increase in production was due to good rubber price resulting from the escalation of oil prices together with an increase in demand for natural rubber especially from the People's Republic of China. Hence, most rubber plantations and smallholders deferred replanting schedule. Rubber production increase resulted from increased tapping and adoption of the Low Intensity Tapping System by the smallholders.

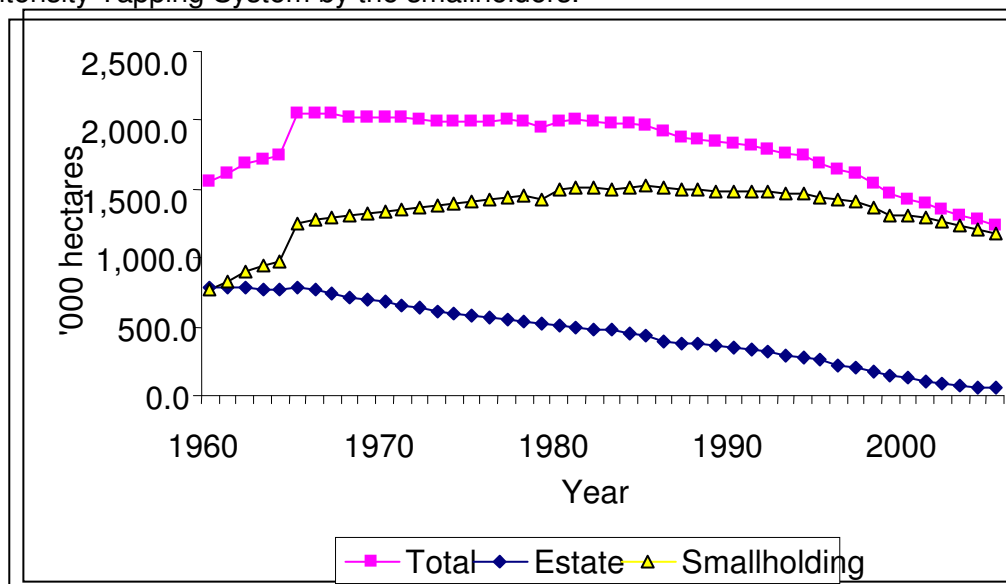


Figure 5 Malaysia: Rubber Area Planted by Smallholders and Estates, 1960-2005
Source: Department of Statistics, Malaysia various issues

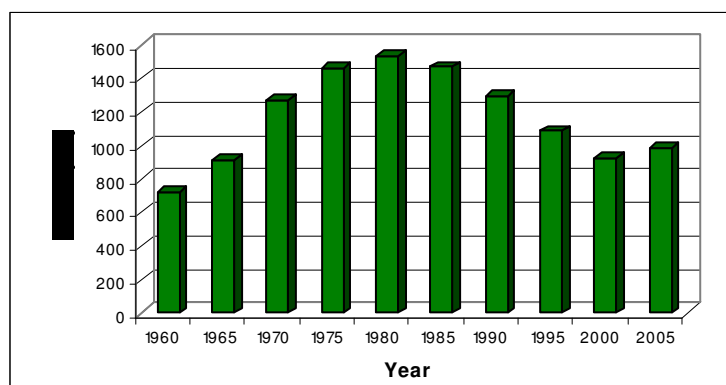


Figure 6 Malaysia: Total Rubber Production, 1960-2005 ('000 tonnes)
Source: Department of Statistics, Malaysia, various issues

Cocoa

There was an impressive growth of the Malaysian cocoa industry in the 1970s and 1980s. The area planted increased to about 393 thousand ha in 1990, with a total bean production of 247, thousand tonnes in that year. However, after 1990, the area planted and production declined due to prolonged low prices of the commodity, infestation of cocoa pod borer and high production costs that led to a large scale felling of cocoa trees. Production was reduced from 247, thousand tonnes in 1990 to about 70 thousand tonnes in 2000 and continued its downward trend to around 7 thousand tonnes in 2004 (Figure 7). Currently, area planted by smallholders accounts for 80% of the total planted area. Figure 8 shows the trend of cocoa planted area by estate and smallholders. Due to production and price

problems the planted areas have reduced tremendously since the beginning of the 1990s. The estate sub-sector responded faster in terms of reducing planted areas.

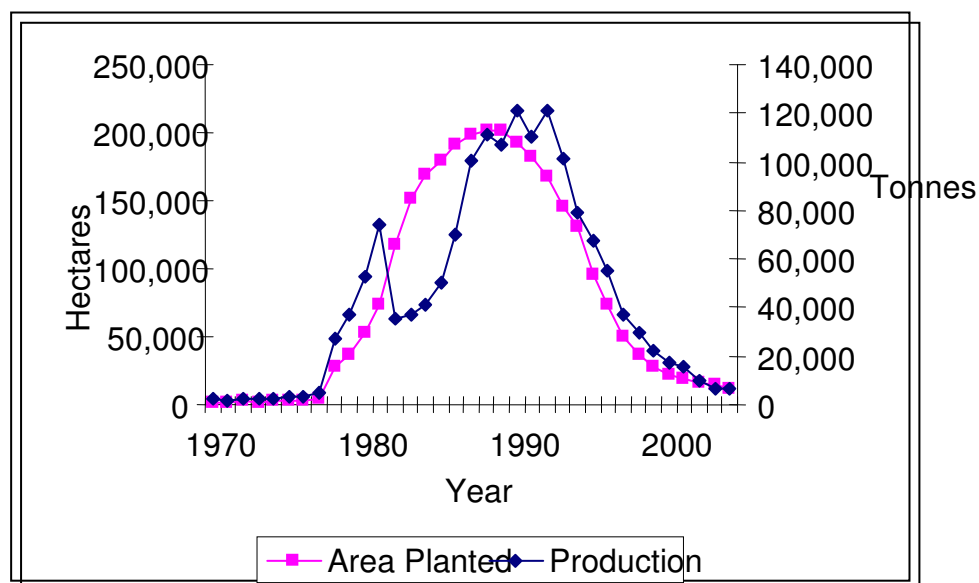


Figure 7 Malaysia: Total Cocoa Area Planted (ha) and Production (tonnes), 1990-2005

Source: Department of Agriculture(2001) and Ministry of Plantation and Primary Commodities (2006)

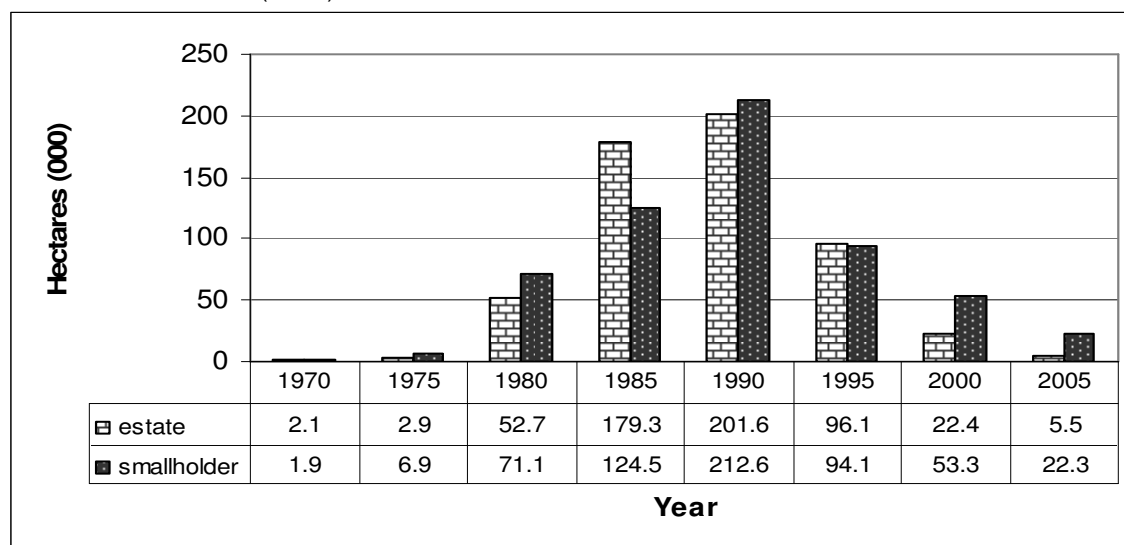


Figure 8 Malaysia: Cocoa Area Planted by Smallholders and Estates, 1970-2005 ('000 ha)

Sources: Department of Statistics, Malaysia and Department of Agriculture

Pineapple

The Malaysian pineapple industry is the oldest agricultural export sector. Due to economic reasons, pineapple farmers have converted the land into other crops particularly oil palm, that bring more income and is less labour intensive. Pineapple cultivation can be divided into two production systems, namely the smallholding and the estate sectors. Pineapple estates accounted for an average of 62% of total pineapple area in Malaysia. In 1980, an area of about 7 thousand ha was planted with pineapple under the estate system. However, it was reduced to around 4,8 thousand ha in 1988 and 1989. The estate hectareage has now remained stable at 5,000 ha. However, smallholders' hectareage have fluctuated throughout the years but showed a declining trend. In 1980, the total area was about 3.9 thousand ha. It then increased to 4.1 thousand ha in 1990, but declined to 1.9

thousand ha in 1997 (Figure 9). This happened because pineapple production is very responsive to market situation. When the Asian financial crisis affected Malaysia, almost all the industries suffered except agriculture. Many smallholders started to make a come back to pineapple production. Areas under smallholders expanded from about 1.9 thousand ha in 1997 to above 3 thousand ha in 1999. Within a short while, as the economy continued its recovery, some of the smallholders left their farms to venture into other lucrative crops.

From a total of 19 thousand ha in 1970, pineapple harvested area was reduced to about 7 thousand ha in 2000 but it increased to 10.6 thousand ha in 2005. Malaysia produced about 308 thousand tonnes of pineapple in 1970. It decreased to about 182 thousand tonnes in 1985 then, increased to around 249, thousand and 340 thousand tonnes in the years 2000 and in 2005, respectively (Figure 10). Reemphasis by the government in the Third National Agricultural Policy has revitalized the pineapple industry.

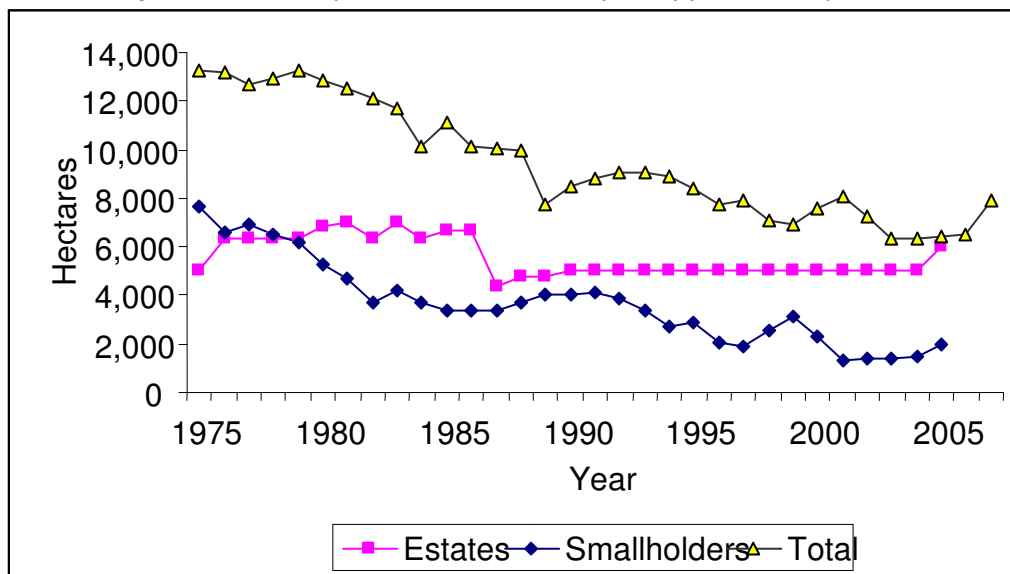


Figure 9: Area under Pineapple in Malaysia, 1980 – 2005 (ha)
Source: Malaysian Pineapple Industry Board

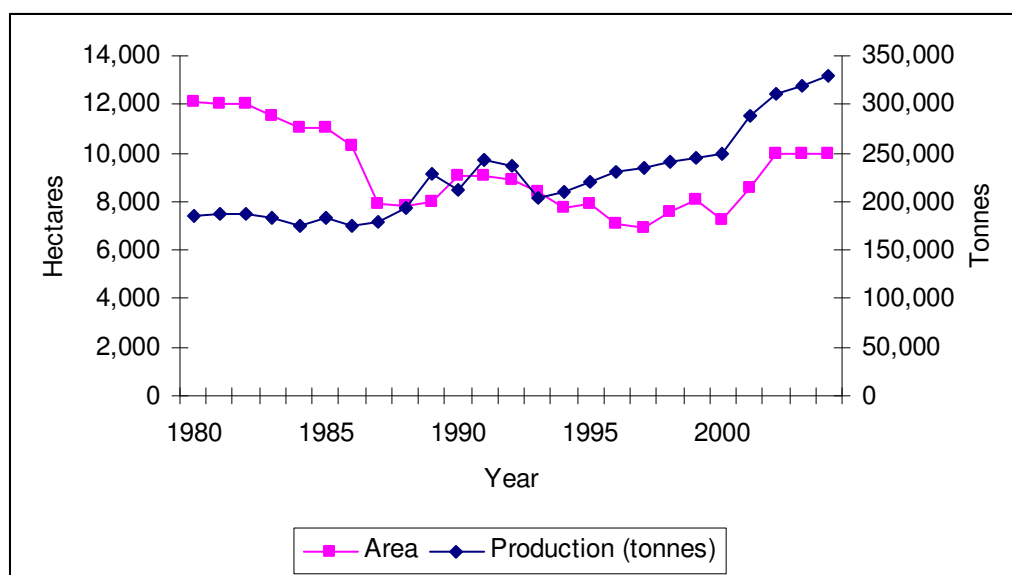


Figure 10 Malaysia: Pineapple Production and Harvested Area, 1980-2005
Source: FOASTAT.

Fruits

Fruits production, of late, have gained recognition as one of the important contributors to the agricultural sector. To meet the expanding demand for fresh and processed tropical fruits, the NAP3 has identified 13 fruit types to be developed. The fruits that have been promoted are bananas, papayas, pineapple, watermelon, carambola, mango, durian, jackfruit, rambutan, citrus, duku langsung/dokong, cempedak, guava, sapodilla, and mangosteen. The hectareage under major fruits (excluding pineapple) has increased from 168 thousand ha in 1990 to 219, thousand ha in 2005. The increase in acreage has resulted in an increase in combined outputs of major fruits from 842 thousand tonnes in 1985 to 1.5 mn tonnes in 2005. The growth of the industry is expected to continue in the coming years. Table 5 shows the hectareage planted with major fruit types in Malaysia. . Area planted with durian increased significantly in early nineties due to good prices and demand for the fruit. Bananas area planted shows somewhat fluctuating pattern over the last two decades. Rambutan's hectareage dropped significantly from 22 thousand ha in 1990 to 156 thousand ha in 2005. This was due to cutting down of old and unproductive trees and they are not being replanted.

Vegetables

The vegetable industry is an important component and a comparatively profitable sub-sector in Malaysia. Vegetables are grown mainly by small farmers who live in the outskirts of densely populated towns. Temperate vegetables with higher values such as tomatoes, cabbage, carrot, cauliflower and broccoli are grown on the highlands. The area under vegetable has not changed very much over the years. The most significant change occurred during 1991-1994. During this period the annual growth rate of areas planted with vegetables was 16.5 percents. However the areas planted fluctuated and never declined below 33,000 ha with the highest recorded at 44,000 ha in 2003. The production of vegetable is in tandem with the planted area. Figure 11 presents the total production and hectareage of vegetable from 1990-2005. The production of vegetable shows an increasing trend. Although the vegetable areas are relatively constant, the productivity has improved.

Table 5 Malaysia: Area Planted with Selected Fruits, 1990-2005 (ha)

Fruit Type	1990	1995	2000	2005
Watermelon	5,189	5,214	4,614	5,926
Starfruit	1,533	1,486	755	660
Papaya	2,267	1,551	1,720	1,618
Cempedak	8,781	8,434	7,501	6,058
Sapodilla	1,374	1,224	1,173	1,205
Dukulangsats	9,475	36,563	16,148	13,995
Durian	56,952	108,005	104,507	117,619
Guava	2,168	2,216	1,276	1,937
Lemon	1,819	4,289	6,821	6,748
Mango	7,995	8,212	6,917	5,119
Mangosteen	2,523	7,836	7,303	7,744
Jackfruit	2,268	2,427	2,200	3,286
Bananas	30,066	31,033	24,412	31,035
Rambutan	22,344	17,899	19,468	15,977
Total	167,679	247,766	215,112	218,927

Source: Department of Agriculture, Malaysia (2001 and 2007)

Figure 11 : Area and Production of Vegetables, Peninsular Malaysia 1990-2005

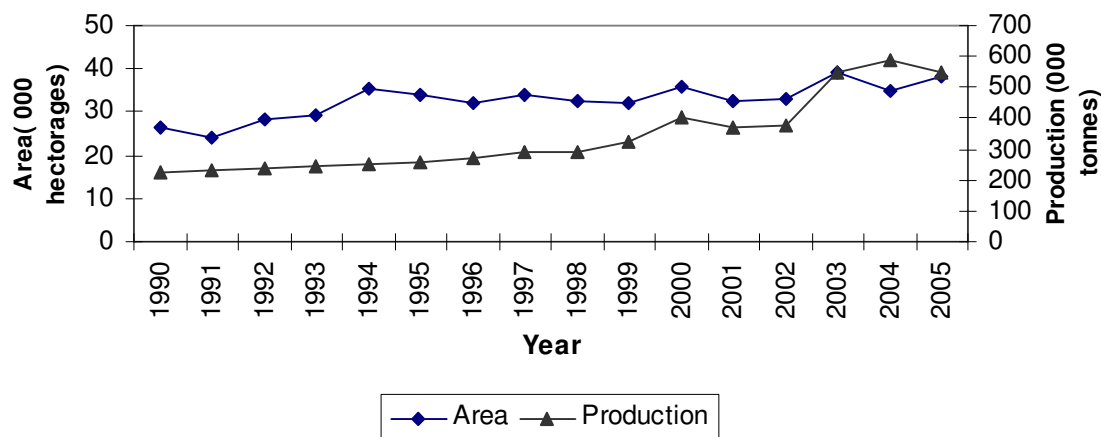


Figure 11 Malaysia: Area and Production of Vegetables, Peninsular Malaysia, 1990-2005
Source: Department of Agriculture (2003 and 2005)

Paddy

The paddy sector in Malaysia has rather stagnated over the years. The total planted area was about 699,000 ha in 2005, out of which 240,000 ha received irrigation and can be double cropped (Figure 12). The production level has also fluctuated through the years because of weather and production uncertainties. Production in 2005 is about 2.18 mn tonnes, of which 83 % are produced in Peninsular Malaysia. The national average yield has been hovering around 3.0 tonnes/ha with a low of 2.2 tonnes/ha in 1984 and a high of 3.4 tonnes/ha in 2004.

The eight main granaries contributed to about 70 % of the national rice production. Together with the secondary granary areas, they account for 85 % of the total paddy cultivated areas. The balance of another 15 % of planted area represents the non-irrigated rice areas, which included rain fed paddy fields and hill or upland paddy, which is mainly concentrated in Sabah and Sarawak. In these areas, single cropped paddy cultivation is widely practiced with little or no inputs. Productivity is low ranging between 0.7 tonne/ha in Sarawak and 1.8 tonne/ha in Sabah. The current self sufficiency level is 72.4 percent.

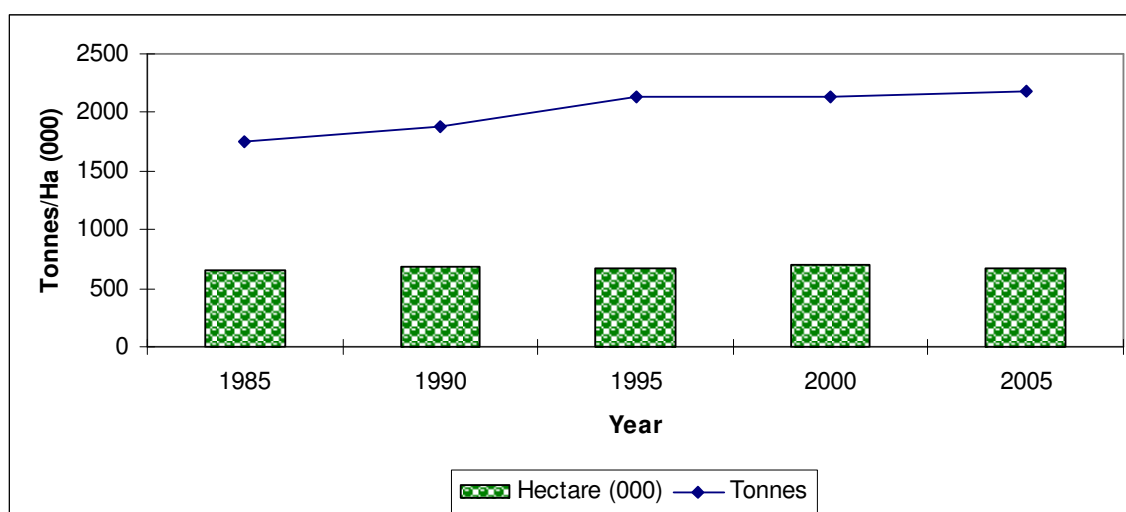


Figure 12 Malaysia: Planted Area and Production of Paddy, 1985-2005

Source: Department of Agriculture, (2003 and 2005)

Livestock and Poultry

Total physical production of livestock products are shown in Table 6. In terms of livestock meat production in 2005, poultry is currently the number one largest producer with about 980 mn tonnes, followed by pork (209,010 tonnes), beef (28,540 tonnes) and mutton (1,460 tonnes). With respect to production trends, it can be seen that poultry has increased while pork had decreased through the years. Due to the Nipah virus outbreak that occurred in 1998 the pork production plunged until early 2000 but it has shown some recovery beginning 2002. Beef and mutton productions have shown upward trends as the government policy to promote the livestock industry has yielded some results. The increase in production was largely contributed by the rearing of cattle and goats in oil palm and rubber plantations as well as feedlot rearing system. The development of "beef valley"¹¹ is expected to further enhance the beef production in the country.

Table 6 Malaysia: Total production of livestock products, 1990 - 2005

Year	Beef (Tonnes)	Mutton (Tonnes)	Pork (Tonnes)	Poultry Meat ('000 Tonnes)	Chicken /Duck Eggs (mil. eggs)	Milk (mil. Litre)
1990	13,742	666	226,599	388.6	5,555	28.89
1991	14,311	681	233,277	436	5,612	29.01
1992	14,833	668.8	250,893	544.1	6,320	31.18
1993	15,263	616.2	262,771	610.7	6,288	33.12
1994	15,188	708	284,789	639.8	6,578	35.48
1995	16,919	671	283,359	687.4	6,817	36.77
1996	15,875	614	276,119	645.3	6,951	36.22
1997	15,993	555.4	282,316	712.86	7,038	33.89
1998	16,708	738.7	260,172	673.36	6,922	31.97
1999	18,300	893.6	158,685	690.04	6,710	28.83
2000	17,501	888	159,818	714.32	6,642	29.58
2001	19,159	976.1	184,702	766.1	6,952	32.17
2002	22,189	1,130	192,900	855.42	7,003	35.96
2003	23,970	1,300	198,130	859.61	7,165	36.58

¹¹ Also known as the National Feedlot Centre, which is a beef production centre, led by an anchor private company on a 2000 ha farm. It will involve 300 satellite farms nation wide. Besides production the center will also act as the breeding stock development.

2004	25,920	1,320	203,500	927.49	7,230	38.77
2005	28,540	1,460	209,010	980.05	7,381	41.1

Source: Department of Veterinary Services

Fisheries

Malaysia is well endowed with marine resources but total fishery landing from coastal areas amounted to about 1 mn tonnes in 2005. Coastal fishing has remained rather constant for the past several years. Deep sea fishing which has been recently promoted by the government has started to register increases. There was a 25% increase in deep sea fish landing from 2000 to 2005. Aquaculture production has indicated a 24 % increase in the same period (Figure 13). The increase in total landing was contributed by the increase in deep sea fishing.

The coastal areas are normally over exploited by small scale fishers who utilize various means of low technology catching equipments. These might include the banned purse seine and drift nets which usually capture all kinds of fish irrespective of age and species. Deep sea fishing involves high tech instruments in the capture of fish in the open deep sea. Aquaculture farming includes rearing fish in inland ponds, cages in brackish water ex-mining pools and concrete tanks. Total area of aquaculture farming has also been rather stagnant in the past five years (Table 7). Aquaculture farming has been dominated by pond and ex-mining pool systems.

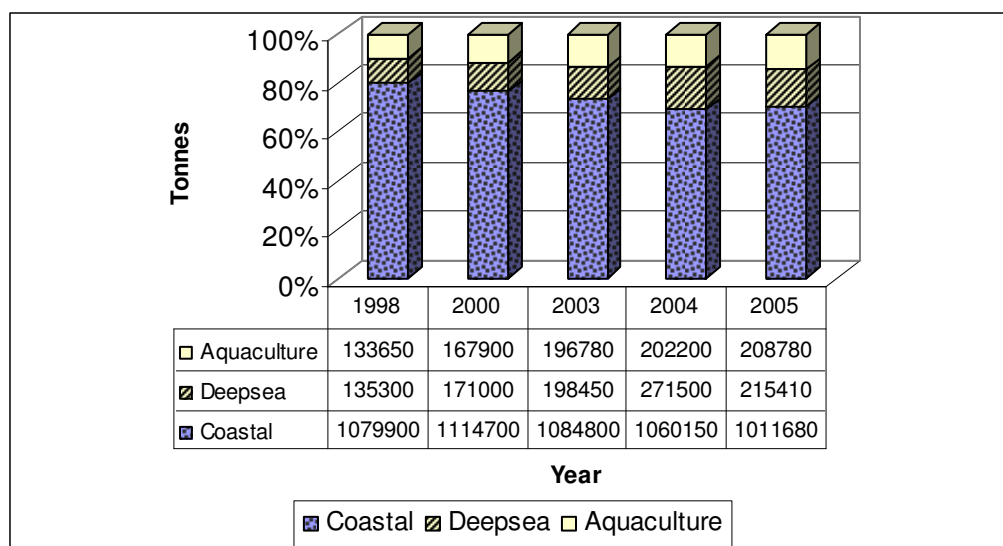


Figure 13 Malaysia: Total Fishery Landings: Marine and Aquaculture, 1998-2005

Source: Department of Fisheries Malaysia, various issues

Table 7 Malaysia: Aquaculture Areas by Aquaculture System

Type	2000	2003	2004	2005
Ponds	5066	4821.05	4891.88	4739.1
Ex-mining pools	1635.41	2352.09	2104.77	1688.8
Cages	19.48	23.84	20.97	24.56
Concrete tank	5.67	8.65	11	10.66
Pen culture	108.01	85.1	85.68	93.3
Total	6834.57	7290.73	7114.3	6556.42

Source: Department of Fisheries Malaysia, various issues.

Floriculture

The floriculture industry has become increasingly important in Malaysia's economy. Malaysia has one of the richest and most diverse floras in the world. The warm and humid weather has enabled the plants to grow throughout the year. There are more than 10,000 species of flowering plants in Malaysia. In general, floricultural products have been divided into three main groups: cut flowers, ornamental or decorative plants and potted plants.

The floricultural industry in Malaysia has recorded a strong growth over the last 22 years beginning in 1980, especially in the export of fresh cut flowers. Table 7 shows the number of flower farms and the ownerships of those farms. Large commercial farms were started in order to meet the increasing demand for fresh cut flowers particularly for orchids from both local and foreign markets. The area under flower cultivation had expanded rapidly over the years in Malaysia (Figure 14). Production of cut flowers in 2005 was about 135 mn cuttings, slightly lower than in 2003 (Figure 15). The government is encouraging the expansion of flower production, of both lowland and highland varieties, to meet the expanding market, in particular overseas demand. The government's policy to encourage expansion in the sector includes various tax incentives such as pioneer status, export and promotion incentive and investments tax allowances. The farmers have shown positive response to the incentives as evidenced by the increase in production area as well as exports.

Table 7 Malaysia: Number of Flower Farms by Categories of Producers, 1995-2005

Year	Number of producers by category		
	Company	Individual	Government
1995	131	327	24
1997	125	287	25
1999	101	199	14
2001	134	207	5
2003	128	262	4
2005	291	247	4

Source: Department of Agriculture, Malaysia , (2007)

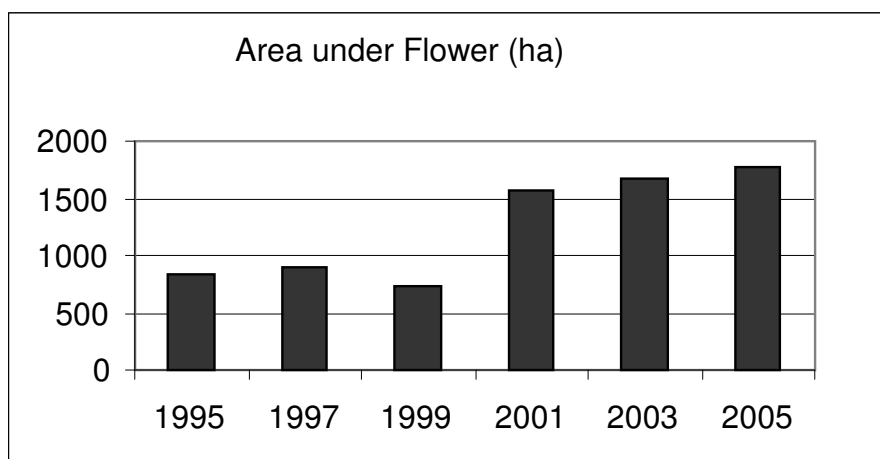


Figure 14 Malaysia: Area under Flower Cultivation, 1990-2005 (ha)

Source: Department of Agriculture, Malaysia, 2007

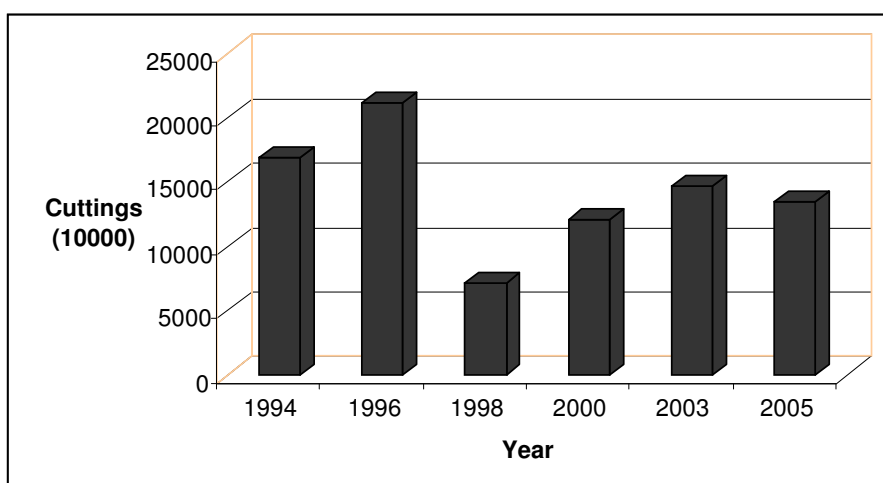


Figure 15 Malaysia: Production of Flowers, 1994 –2005(cuttings)
Source: Department of Agriculture, Malaysia, (2004 and 2007)

Forestry

The timber industry is an important resource-based industry in Malaysia that continues to play an important role in its socio-economic development. Total forest area in 1990 was 19,618 thousand ha. In 2004, the area has decreased to about 18,341 thousand ha. Production of logs showed a decreasing trend from 40,100 thousand cubic metres in 1990 to 22,039 thousand cubic metres in 2004. In 2004, Peninsular Malaysia accounted for 32% of the total forest areas produced 21% of the total log production. On the other hand Sabah produced 25% of total logs from 24% of total forest area. Sarawak which has largest portion (44%) of forest area produced 55% of total logs produced (Table 8).

Table 8 Malaysia: Forest Area and Production of Logs, 1990 - 2004

Year	Peninsular		Sabah		Sarawak		Total	
	Ha (000)	Cubic metres (000)	Ha (000)	Cubic metres (000)	Ha (000)	Cubic metres (000)	Ha (000)	Cubic metres (000)
1990	6,270	12,819	4,648	8,443	8,700	18,838	19,618	40,100
1995	5,887	9,030	4,517	6,519	8,499	16,092	18,903	31,641
2000	5,980	5,072	4,425	3,727	8,291	14,274	18,696	23,073
2004	5,870	4,573	4,380	5,415	8,091	12,051	18,341	22,039

Source: Department of Statistics, Malaysia (2003 and 2005)

Land Utilization for Agriculture

Agricultural land use increased from about 5.9 mn ha in 2000 to 6.4 mn ha in 2005, as shown in Table 9. This is mainly due to the opening up of new land for oil palm cultivation in Sabah and Sarawak. Increases in hectarage were also recorded for vegetables and fruits. Land use for oil palm, fruits and vegetables continued to grow in the 9MP. Cocoa hectarage is expected to re-bounce from 33 thousand ha to 45 thousand ha in the plan period.

Table 9 Malaysia: Agricultural Land Use, 2000–2010 ('000 ha)

Commodity	1990	1995	2000	2005	2010
Oil Palm	2029	2479	3,377	4,049	4,555

Rubber	1,823.1	1,696.0	1,431	1,250	1,179
Paddy	662.6	666.3	478	452	450
Fruits	117.3	244.5	304	330	375
Coconuts	314.1	283.9	159	180	180
Cocoa	419.8	275.0	76	33	45
Vegetables	31.4	36.3	40	64	86
Tobacco	10.2	10.5	15	11	7
Pepper	11.5	8.6	13	13	14
Total	5,419.0	5,700.1	5,893	6,383	6,891

Source: Government of Malaysia (1986, 2001 and 2006).

Land Ownership and Size Limiting Legislation

In Malaysia, ownership of land is ownership of the means of production. Rural land is the base for agricultural production and urban land is for production of living space. In the rural areas vast tracts of land are owned by corporations for the cultivation of mostly industrial commodities alongside smallholders who own land for commercial production of crops and self sustenance. Since land is a State matter, individual State Governments in Malaysia place a heavy emphasis on the use of land, The right of land, being a State matter, is provided in the Constitution of Malaysia. Even though it is the state matter, there is a National Land Council comprising of state representatives with a Federal Minister as a chairman. The main function of this Council is to formulate a national policy for the promotion and control of the utilization of land throughout the country for mining, agriculture and forestry or any other purpose in consultation with the Federal and State Governments and the National Finance Council. It is mandatory for the Federal and State Governments to follow the policy formulated.

As far as land use for agriculture is concerned, there is no production restriction policy. Increase in the production of food commodities is a policy stated in the NAP3. This will be achieved through productivity improvement as well as through new farms. So far, the state governments have been very cooperative with the federal government in the provision of new farm sites. Nevertheless, a challenge faced by the sectors is the conversion of agricultural land for other uses such as industrial, residential and urban uses.¹²

Agricultural Employment

There were 1.47 mn people employed in the sector, representing 14.8% of total labour force in 2005. In the seventies the number of employment in this sector increased significantly due to increasing area planted with industrial crops such as oil palm, rubber and cocoa. New agriculture land development for oil palm plantation and net settlements took place during the same period. The highest number of employment recorded was in 1980 when 2.06 mn were employed in this sector. Figure 16 illustrates the employment trend in agriculture, forestry and fishing sectors.

Table 10 shows the employment in the major primary commodities. Generally, oil palm is an important sector for agricultural employment, compared to other commodities. Employment in rubber production dropped from 98,386 in 1990 to 15,555 in 2003. Cocoa which was an important crop that provided 56,422 jobs in 1990 was left with only 6,500 employees in 2003. Employment in other crops such as pineapple, pepper and tobacco plantations for the last decade has not changed significantly. Since coconut has not been given the priority in the present agriculture policy, the employment in this industry is minimal.

¹² Extract from the Third National Agriculture Policy III (Government of Malaysia, 1999).

Structural changes in the Malaysian economy led to the migration of rural labour to the manufacturing, construction and service sectors which are located in urban areas. Labour shortage in agriculture and non-agricultural sectors has compelled the Malaysian government to open the door to foreign labors. The total foreign labour in agriculture in 2005 was 27,975. Figure 17 shows the breakdown of foreign labour by agricultural sector.

While employment in agriculture is contracting, labour productivity has improved over the years. The productivity has increased to USD4501 in 2005 from 2437 in 1990. With 6.2 percent annual growth, the value added per worker is expected to increase to USD 6085 in the 9MP (Figure 18).

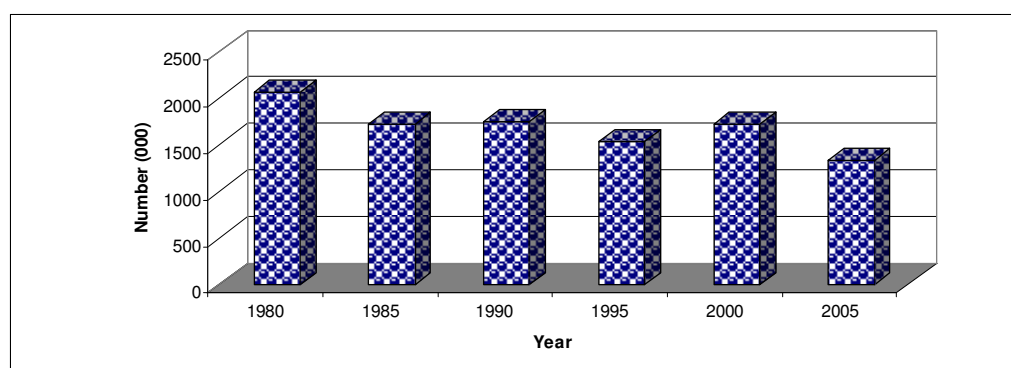


Figure 16 Malaysia: Employment in Agriculture, 1980-2005

Source: Department of Statistics, Malaysia, various issues.

Table 10 Malaysia: Employment in Major Commodities Sectors, 1960 - 2003

Year	Rubber	Oil Palm	Cocoa	Coconut	Pineapple	Pepper	Tobacco
1960	285.3	15.6	na	7.5	1.8	na	Na
1965	262.1	18	na	5.3	2.7	na	Na
1970	205.4	36.409	0.713	3.6	na	na	Na
1975	185.5	75.975	1.377	4.7	na	na	Na
1980	160.4	100.963	21.161	4.174	1.63	30.6	26.296
1985	124.0	106.539	47.653	2.447	7.597	38.0	29.442
1990	98.386	115.285	56.422	2.464	7.0	56.035	28.421
1995	53.171	240.422	28.294	1.21	7.003	57.401	23.684
2000	26.531	390.818	7.765	1.255	7.387	68.079	24.088
2003	15.555	334.821	6.5	1.4	7.351	67.828	12.31

Source: Department of Statistics, Malaysia (various issues)

As shown in Table 11, the estimates of agricultural employment by activity for the past five years are decreasing except for smallholders. The number of paddy farmers (farm operators) has decreased to 239,000 in 2005 as compared to 306,000 in 2000. However, the number of industrial crops small holders has increased from 358,000 in 2000 to 414,000 in 2005. The government's campaigns in promoting foods production has not received a significant response in terms of new farmers. These can be seen in terms of the numbers of farmers (fruits and vegetables), livestock farmers, aquaculture farmers as well as paddy farmers.

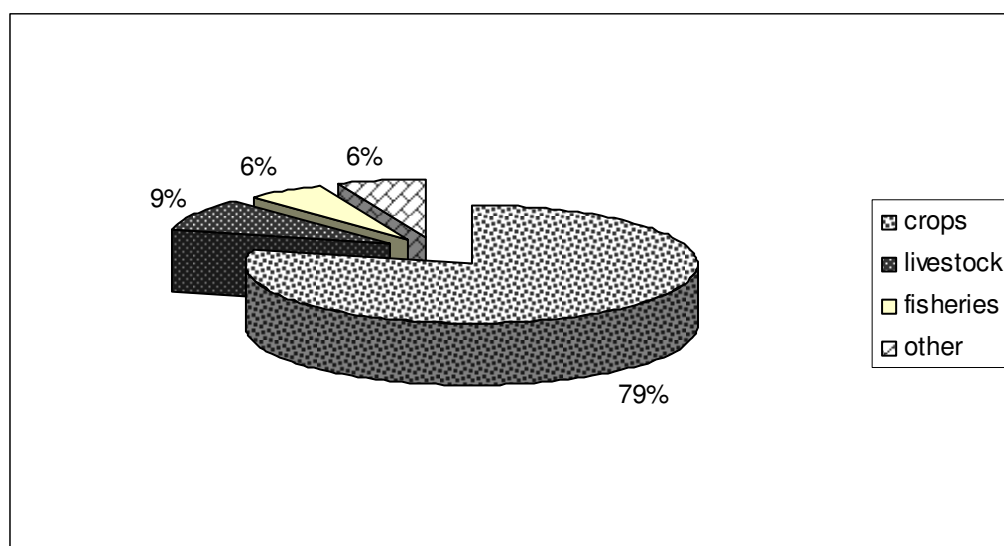


Figure 17 Malaysia: Foreign Labour by Agricultural Sector, 2005
Source: Department of Agriculture, Malaysia (2007)

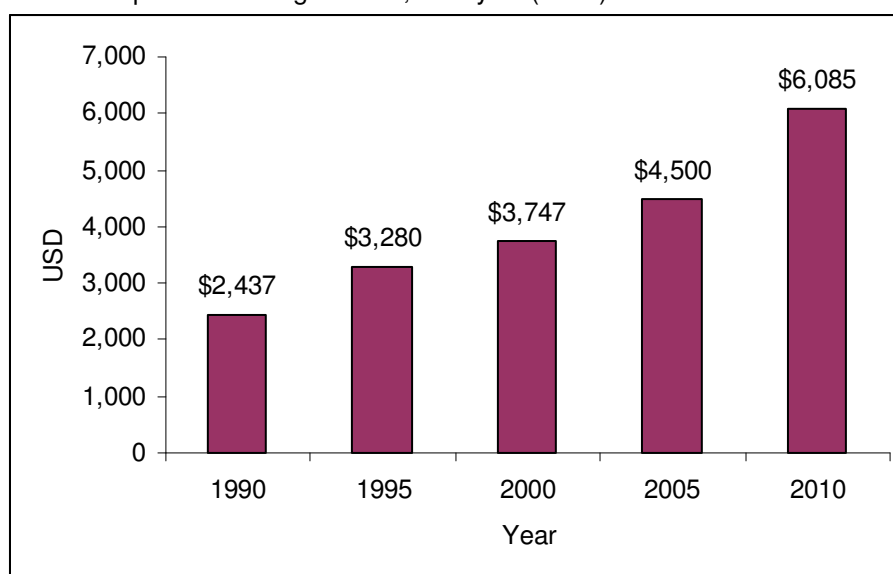


Figure 18 Malaysia: Productivity in Agriculture, 1990 – 2010 (USD)
Source: Government of Malaysia (1986, 2001 and 2006).

Table 11 Malaysia: Employment Estimates of Agriculture by Activity ('000)

Category	2000	2001	2002	2003	2004	2005
Paddy farmers	306	300	297	287	252	239
Farmers	277	254	238	244	222	191
Livestock farmers	39	35	37	36	36	33
Fishermen	116	121	104	103	125	114
Aquaculture farmers	8	7	3	4	6	5
Smallholders	358	286	305	378	400	414

Source: Department of Agriculture, 2007

Agricultural Production Institution

Land Settlement Scheme

Land and agriculture reform in Malaysia is best described in terms of land allocations for agriculture production. There are three major allocation programs: the Federal Land Development Authority (FELDA), the Rubber Industry Smallholders' Development Authority (RISDA) and the Federal Land Consolidation and Rehabilitation Authority (FELCRA). The goals of each are basically to encourage the production of export or industrial crops, resettle poor rural households on land settlement schemes and form efficient production units by consolidating smallholders.

FELDA is the largest and oldest resettlement scheme. Initiated in 1956, it now covers 450,190 ha and supports 103,158 households. Oil palm is planted on 71 percent of the land schemes, rubber on 27.5 percent and sugar cane and other minor crops on the remainder. The basic approach is to identify a suitable site of approximately 2,000 ha for the settlement of 400 families.

Through RISDA the government introduced replanting scheme to replace old unproductive rubber trees. Besides, the government supported the production of palm oil, cocoa and other crops by allowing the use of rubber replanting grants for planting those crops. Both replanting and research grants for rubber are funded by a duty levied on each kilogram of rubber exported. The management and utilization of the proceeds are under the control of RISDA. These grants are available to both smallholders and estates and are intended to cover the cost of replacing trees as well as some of the income forgone by farmers while waiting for the new trees to mature. In the period of 1991 to 2001 the grants amounted to USD1,625.79 per ha for rubber replanting for holdings of less than 4.05 ha and USD 1,177.53 for larger holdings.

Integrated Agricultural Development Projects (IADP)

The in-situ development program for other than rubber and oil palm was mainly with the development of land already assigned to smallholders with diverse agricultural crops planted. However paddy has been given a special attention. Eight IADPs were developed and designated as granary areas. Table 12 shows some statistics of the IADPs.

Table 12 Malaysia: Basic Information on Integrated Agricultural Development Projects (IADP), 2006

Project Name	Project Hectareage	Agricultural Hectareage	No. of Farm Families
Northwestern Selangor	199,199	82,044	9,332
KETARA	258,736	65,828	2,884
Kalaka-Saribas	161,000	62,313	10,000
Krian Sungai Manik	66,282	30,560	15,126
Kemasin Semarak	68,350	46,560	4,100
Penang IADP	104,636	67,095	5,247
MADA	126,155	109,501	48,500
KADA	82,900	64,555	18,668
Samarahan	86,170	67,000	13,200
Seberang Perak	17,307	16,437	n.a

Source: Government of Malaysia (2001 and 2006).

Agribusiness Cooperatives

Prior to the formation of Farmers' Organization Authority (FOA) and the Farmers' Organization (FOs) in 1973, there were 1531 agro-based cooperative societies and 119 farmers associations serving farmers in the rural areas. These cooperatives and associations were governed by different ministries. To solve the problem of overlapping functions, the Farmers' Organizations Act 1973 was enacted to specifically reorganize the farmers' associations and agro-based co-operatives. Farmers' associations were dissolved and re-registered as farmers' organizations while the agro-based co-operatives were reorganized to become member units of the farmers' organizations. The FOA, which is a

government statutory body, carries out activities according to the following functions: firstly, registration of farmers' cooperatives; secondly, provides management services for the efficient operations of the FOs and successful implementation of their projects, and; thirdly, provides and expedites economic and social development of the FOs. In ensuring good management of FOs, the FOA places its officer to act as the manager of an AFO. In 2006 there were 271 area farmers organization in the country with 712,803 memberships. Figure 19 illustrates the number of Area Farmer Organization (AFO) and memberships from 2000 – 2006.

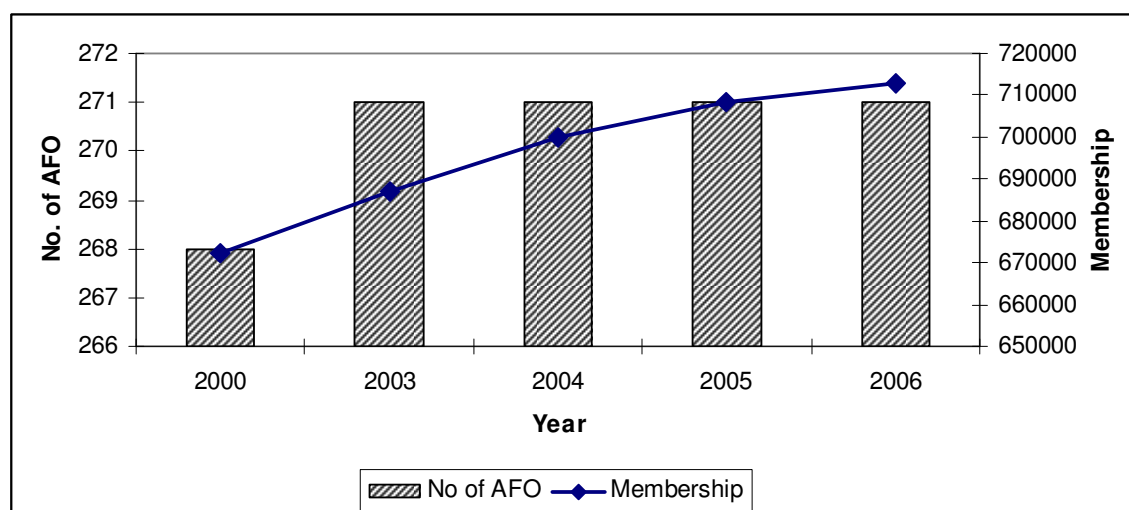


Figure 19 Malaysia: Number of Area Farmer Organization (AFO) and Memberships, 2000-2005

Source: Department of Agriculture (2004 and 2007).

Agricultural Policies

Public sector intervention in agricultural production and marketing started since Malaysia attained her independence in 1957. The self-sufficiency program in rice was among the earliest food production policy. A guaranteed minimum price (GMP) was also introduced to encourage production. The GMP was maintained at higher than the world price as it was recognized that the country did not have a cost advantage in rice production. The development of new high yielding varieties of paddy gave a big boost to the attainment of output and income enhancement goals. Then the government decided to construct irrigation facilities in major growing areas to enable paddy to be planted twice a year. Apart from infrastructure facilities and GMP, the government also introduced other support measures. In 1978 the government introduced fertilizer subsidy program with the objective to improving farm income. Again in 1980, the government introduced price subsidy scheme to encourage greater marketable surplus. Currently, paddy farmers are given a coupon value at USD 65.29 per tonne of paddy sold. These interventions have been revised several times and the amounts of supports have been increased over the years. In 1997 the GMP was revised from USD 12.91 to USD 14.47 per 100 kg. These policies are still being maintained until today. On the trade side, BERNAS, a government's state trader is given the right to be the sole importer of rice.

Rubber smallholdings remain an important contributor to the Malaysian agriculture sector and to the economy. To improve the farmers' income and farm productivity, the government introduced replanting scheme to smallholders whose rubber trees were old and unproductive. The scheme was introduced in 1952. Through the scheme the smallholders were allowed to replant other crops than rubber such as oil palm, fruit trees and rubber for timber species. To enable its implementation, the government established

cess¹³ collection and procedures at the rate of USD 0.26 per kg of rubber exported. The replanting grants of USD260 per ha was introduced in 1952 and it has been revised 7 times due to the increase in replanting costs. The current grant rate is USD1,842.10/ha for rubber replanting with rubber and integration with other crops production such as vegetables. The grant amounting to USD 1,170.53/ha for holdings of less than 2.5 ha is allocated for replanting of rubber with other crops.

Evolution of Agriculture and Forestry Policies

Prior to 1984, there was no comprehensive agriculture policy. Today the development of the Malaysian agriculture sector is governed by the NAP3 after it has been revised twice.

The first National Agricultural Policy (NAP1) was promulgated in 1984. With abundant land, the country pursued expansionary policies on export crops, in particular oil palm and cocoa. The Government undertook heavy investments in infrastructure, institutional building and new land development to develop these crops in order to earn foreign exchange, create employment and income earning opportunities as well as reduce poverty. Attention was also given to *in-situ* development to resolve the problems of uneconomic farm size, non-remunerative crops and low productivity especially among smallholders. The NAP1 period (1984-1991) marked an important threshold in the transformation and development of the Malaysian economy. This era saw the rapid expansion of the manufacturing sector and altered the relative importance of the agricultural sector in the economy. The overall development of the agricultural sector was beset with problems including labour shortages and rising wages and increasing competition of land for other uses. Favourable policies towards industrialisation also created unattractive conditions for agricultural investments and consequently led to the outflow of resources from agriculture.

Subsequently, NAP1 was reviewed and NAP2 (1992-2010) was introduced. Greater emphasis was given to address productivity, efficiency and competitiveness issues in the context of sustainable development and linkages with other sectors of the economy. The policy also outlined strategies for expanding food production, greater role of the private sector, marketing reform and accelerated agro-based industrial development. Efforts to further liberalise the agricultural sector were intensified. The National Forestry Policy was also revised in 1992 to place greater emphasis on the importance of biological diversity, conservation and sustainable management of forests for the well being of current and future generations.

During the 1992-1996 period, further structural changes in the economy have led to increasing resource constraints for agricultural and forestry development. The establishment of the World Trade Organisation (WTO) and the 1997/98 financial crisis in the country and the region, posed new issues and challenges to the agricultural and forestry sectors. The formulation of NAP2 did not anticipate such rapid and sudden changes in the domestic and international economy and therefore did not adequately address the new issues and challenges. This calls for the formulation of new policies and strategies to strengthen the sector's robustness to changes in external factors and enhance its global competitiveness as well as to ensure continuous growth of Malaysian agriculture.

Third National Agriculture Policy (NAP3), 1998 - 2010

¹³ Cess is a form of tax collected from production or exports at certain rate. In Malaysia two commodities are affected by cess, namely rubber and oil palm. Revenue from cess collected is used for R & D and replanting scheme/incentive.

In the NAP3, two strategic approaches are adopted. The first is the agro-forestry approach and second is the product-based approach. The first approach is aimed at addressing the increasingly scarce resources including land and raw material availability. In this approach, agriculture and forestry are viewed as mutually compatible and complementary, thereby providing a scope for joint development. The product-based approach is adopted to reinforce and complement the cluster-based agro-industrial development as identified in the Second Industrial Master Plan 1996-2005 through strengthening both inter and intra-sectoral linkages including the development and expansion of intermediate and supporting industries. This approach emphasises on satisfying the specific needs of niche markets and consumers world-wide. In this approach key products and markets are identified based on market demand, preferences and potential. Market demand and preferences are translated into strategies for upstream primary agricultural production to enhance production and marketing of the agricultural produce.

The overriding objective of NAP3 is the maximisation of income through the optimal utilisation of resources in the sector. This includes maximising agriculture's contribution to national income and export earnings as well as maximising producers' income. The specific objectives are: (i) to enhance food security; (ii) to increase productivity and competitiveness of the sector; (iii) to deepen linkages with other sectors; (iv) to create new sources of growth for the sector; and (v) to conserve and utilise natural resources on a sustainable basis.

Policy Directions for the Development of Product Groups

Food product group

This group which consists of rice, livestock, fisheries, fruits and vegetables primarily serves the domestic market. The production structure, except for poultry, comprises mainly of small and medium scale units. This agricultural industry group, however, is showing signs of consolidation to larger scale operations and is becoming increasingly more commercialised. Production of food crop commodities is promoted in effort to reduce food import bills via increasing self sufficiency. Permanent Food Park is an initiative to increase food production. The project which was introduced in 2000 has established 32 parks covering 4,085 ha. In effort to increase the current self sufficiency level for beef, which is of 23%, the government is in the midst of realizing the National Feedlot Centre (NFC). The NFC will be the main component of the Beef Valley Farm with area of 2000 ha.

Industrial crops, forestry and wood-based product group

This group consists of oil palm, rubber, cocoa and forestry and is a vital source of raw materials to the resource-based industries. It mainly serves the export market and is an important revenue earner for the country. The structure of production and marketing for most products of this group is highly organised with advanced managerial and technological practices. Recent high petroleum prices mooted the government to relook at the potential of palm oil based diesel. Bio-fuel continued to be an important agenda in the agricultural resource development.

Floricultural products and aquarium fish

Malaysia as the source and exporter of tropical floricultural products, aquarium fish and related products will be extensively promoted. Government support and commitment will be directed to establish Malaysia as the global centre for these products. This includes the establishment of national and international logistics and marketing network. Potential areas for immediate establishment of large scale commercial production will be identified through zoning and alienation of land on longer-term leasehold basis. Large scale automated

production and post-harvest handling will be encouraged so as to reduce cost and reliance on labour. R&D will be intensified to produce new species and varieties, and to develop cost-effective production and post-harvest handling technologies.

Agro-biotechnology and specialty natural products

The economic foundation for the development of agri-biotechnology and speciality natural products industries will be strengthened. Government support and commitment for a strong R&D and HRD programmes will be intensified to build a pool of world-class researchers and technical personnel. The National Biotechnology Policy which was launched in 2005 envisioned biotechnology as the new economic engine for Malaysia by 2020. The policy focuses on three areas, namely, agriculture, Healthcare and Industrial Biotechnology.

Research and Development

Agricultural research and development continue to be important. In Seventh Malaysia Plan (1996-2000), 27 percent of total research fund (USD183.76 mn) under the Intensification of Research in Priority Areas (IRPA) was allocated for agricultural research. Under 8MP (2001-2005), 26 percent of USD200 mn of IRPA funds was for agricultural research. Eleven percent of USD240 mn of IRPA fund was allocated for agricultural research in the 9MP. Whilst the percentages are decreasing, the absolute dollar is increasing as the cake is getting larger. It means that the agricultural sector is still an important sector even though the sectors such as manufacturing and services grow at a faster rate.

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PART 2 Overview of the Food and Agribusiness Sector

Introduction

The Malaysian agriculture is characterized by dualism between the two major sub-sectors in the industry, that is the export crop sector (palm oil, rubber, cocoa, and floriculture) and food sector (paddy and rice, fisheries, horticulture and others). The dualism also exists within each sub-sector between the highly commercialized and the smallholder sectors. In the case of the export sector, with the exception of the floriculture, the highly commercialized sector is synonymous with the estate sector which is largely owned by private firms. On the other hand, the smallholder sector comprises small farms that are either independently operated or managed by the government through land development agencies such as FELDA, RISDA, FELCRA and others. The same applies to the food sector albeit to less extent. In the case of horticulture (fruits and vegetables), there is a clear division between the commercialized and the smallholder sectors in terms of farm size and business orientation. Unlike the export crop sector, the farm size of the highly commercialized ones is not as large (ranging between 20 to 200 acres). The difference in the farm structure and unique characteristics of the demand for each of the said commodity defines the nature of “agribusiness” system of each sub-sector. Agribusiness is defined as the business application to the three major parts of the system: the agricultural input sector, the production sector and the processing-manufacturing sector (Davis and Goldberg, 1957, Heiman et al., 2002). The following paragraphs provide a general description of the agribusiness of the export and food crop sectors.

The Agribusiness of the Food and Export Crop Sectors

This section describes the agribusiness framework of the food and export crops in the country. The discussion covers the three major sectors; the input, the production and the processing-manufacturing sectors. The discussion on the input sector refers to the agriculture sector as a whole while the discussion on the production and the processing-manufacturing of the export and food sectors will be done separately. The development and implications of the new agri-food supply chain is discussed in the following paragraphs.

Input Sector

Malaysia depends on imports for fertilizer, pesticides and even seedlings and day-old chicks. In the case of fertilizer, mineral fertilizer account for 90% of fertilisers used by all types of farming systems in Malaysia. The average mineral fertilizer consumption for agriculture is around 250 kg/ha/yr (FAO 2002). Due to their large acreage, perennial tree crops account for the bulk of the fertilizer consumption. Generally they are fertilized with

low-cost straight fertilizers. The higher cost fertilizers are generally used for crops like vegetables.

Malaysia produces urea mainly for exports as prilled urea produced locally fetches a high price in the international market hence they are exported. There are two major plants that are producing urea totalling 1.25 million tonnes of granular urea and 420 thousand tonnes of prilled urea per annum (FAO, 2002). However, majority of the urea are meant for export. As at 1990, a total of about 184 thousand tonnes of fertilizers was exported of which 92.3% was urea (Table 2.1). By 2002, the percentage of urea out of the total fertilizer exports was reduced to 81.3%.

Table 2.1 Malaysia: Production, Imports and Exports of Fertilizer, 1990-2002 ('000, tonnes)

Year	Production	Imports	Exports		Consumption
			Total Exports	% of urea	
1990	266	882	185	99.3	910
1991	291	890	191	92.3	941
1992	348	921	233	99.2	965
1993	342	1,035	228	99.7	1,031
1994	284	1,181	220	98.4	1,157
1995	290	1,075	212	98.7	1,092
1996	290	1,070	209	99.5	1,131
1997	232	1,358	217	99.5	1,252
1998	317	1,402	235	76.3	1,406
1999	399	1,404	326	75.4	1,324
2000	587	1,371	468	81	1,188
2001	582	1,048	492	89.1	1,131
2002	585	1,361	493	86.6	1,230

Source: FAOSTAT, 2007

As shown in the table, the Malaysian requirement for fertilizers far exceeds the local production. The import of fertilizer has increased 54.2% between 1990 and 2002 while the production of urea and export of fertilizer have increased 119.8% and 50.7% respectively during the said period.

The marketing distribution of fertiliser is depicted in Figure 2.1. The largest institutional buyer is the National Farmers' Association which bought about 178 thousand tonnes of urea to be distributed to the members of the Farmers' Organisation or Farmers' Cooperative (FAO, 2002). The other institutional buyers include land development agencies such as FELDA, FELCRA and RISDA; and also statutory bodies such as National Tobacco Board. The small farmers obtain their supply of fertilisers from the retailers.

The market for fertiliser is competitive as there are over 80 companies that are involved in the branded fertilizer trade with over 350 brands of various forms of fertilizers (Agriquest, 2006).

Production Sector

Export Crops

In the case of palm oil production sector, there are three major types of oil palm producers: independent smallholders, producers in the land development schemes, and private estates. The farms of independent smallholders are generally small (less than 40.4 ha). Land development schemes are projects introduced by the government to

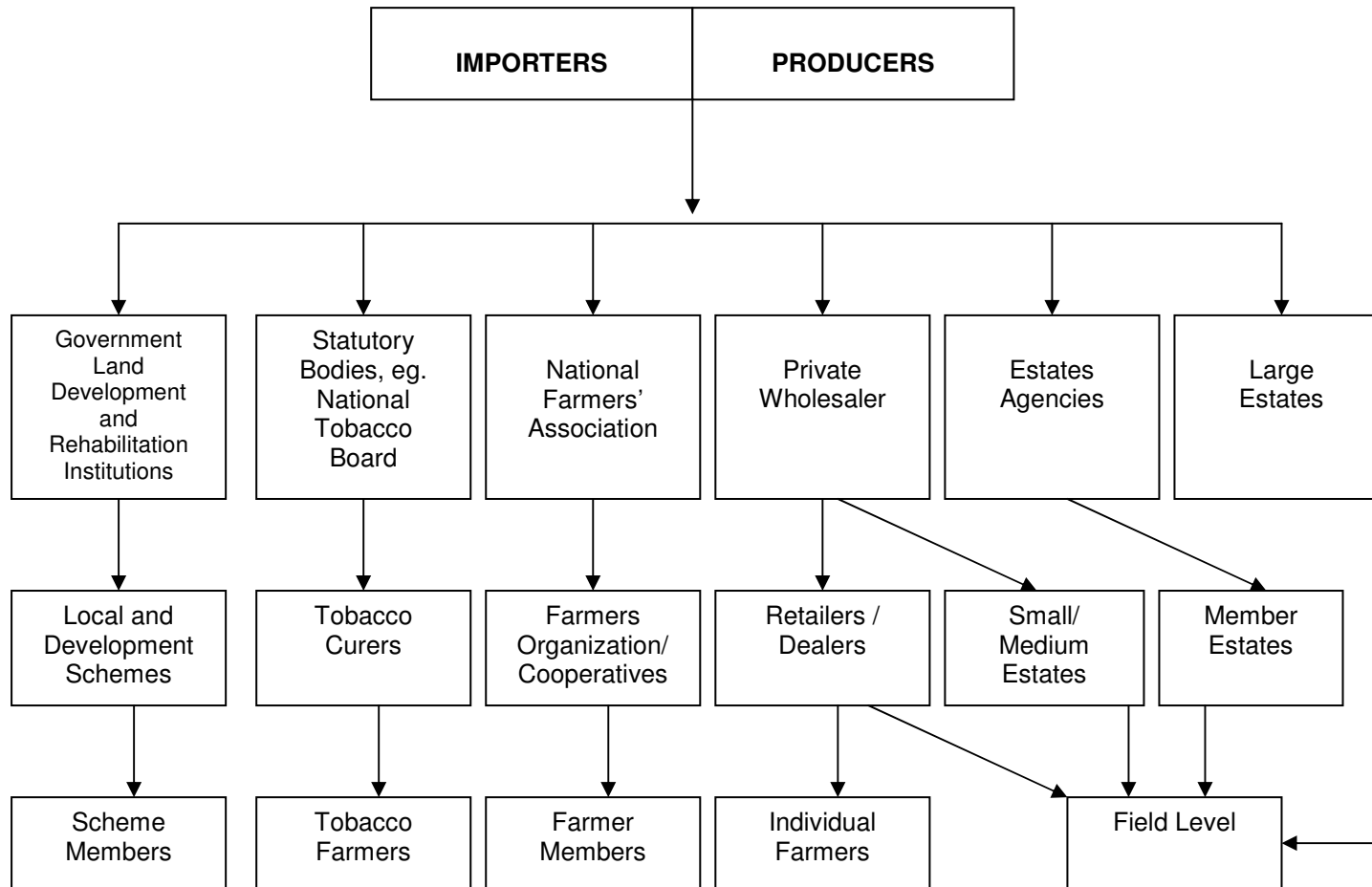


Figure 2.1 Malaysia: Marketing and Distribution Channels of Fertilizers in Malaysia.

Source: FAO (2002)

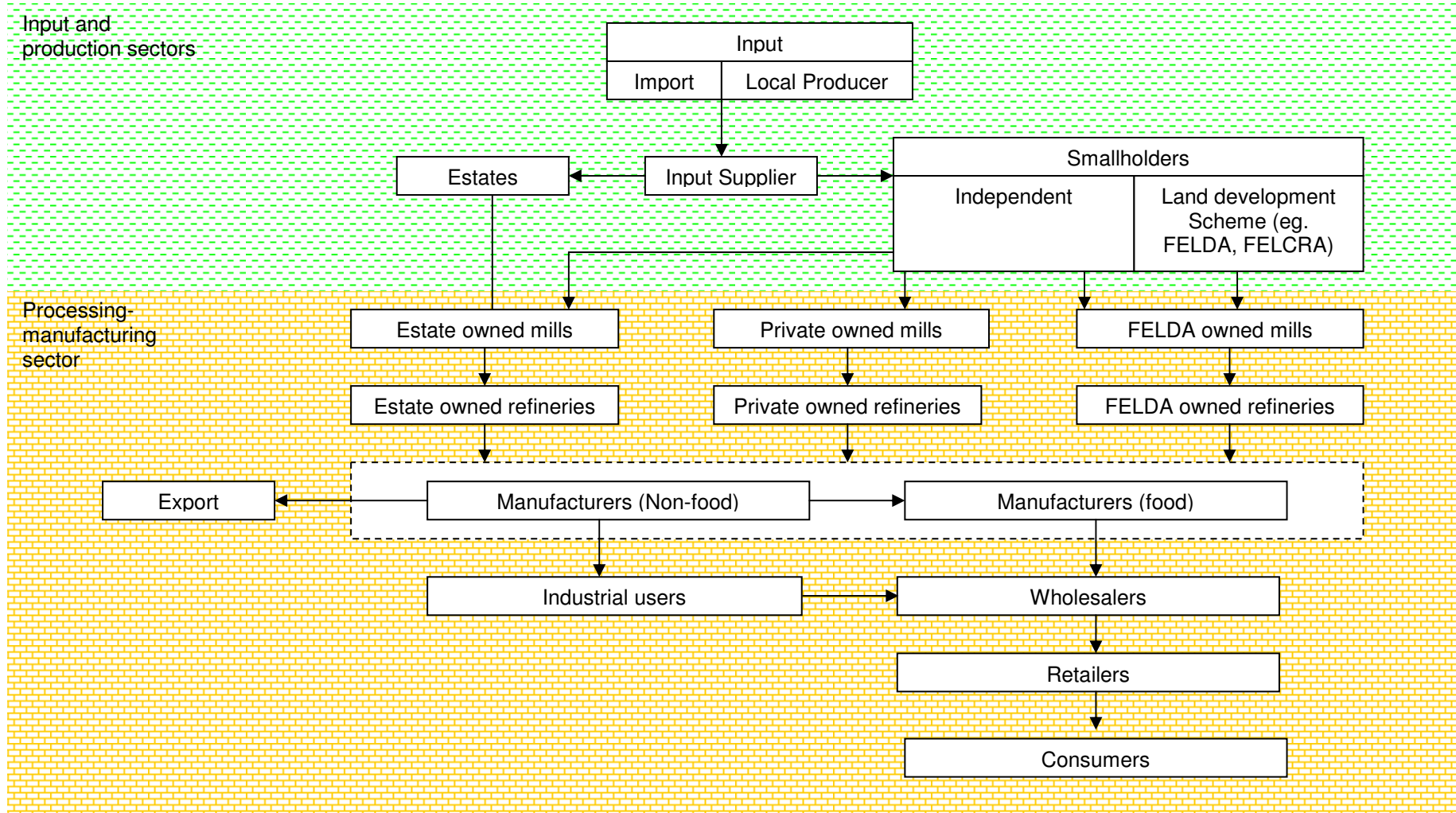


Figure 2.2 Malaysia: The Agribusiness Framework for Palm Oil Industry

resettle landless farmers on new land as producers of export crops such as palm oil or rubber. One main agency entrusted with this scheme is FELDA, which is also involved in the marketing of the produce. Other land development agencies are FELCRA and RISDA. Private estates are farms which are larger than 100 acres and operated by private firms. Currently, private estates, land settlement schemes and independent smallholders account for about 59.8%, 29.5% and 10.7%, respectively of the planted in oil palm, (MOPICO, 2006).

The agribusiness framework for palm oil industry in Malaysia is depicted in Figure 2.2. In the production sector, each group of producers exhibits different production and marketing characteristics. As well as small farms, the independent smallholders are characterized by low productivity (compared to the estates) and dependence on private middlemen for the sale of their produce (PORIM-UPM 1988). Smallholders in the land development schemes are each given 4 ha of land to farm. Marketing of produce is done through the marketing unit or mills owned by the parent institution. For instance, FELDA buys and sells fresh fruit bunches at the farm level, processes them into processed palm oil, and sells this to either local or foreign manufacturers.

The private estates have a highly organized marketing system. Generally, there exists a high degree of vertical integration. A plantation firm not only has its own production farms, but also milling and processing plants. Hence, raw materials are easily absorbed into their mills and refineries, before the processed products are sold to domestic industrial users or foreign manufacturers. With this structure, the large estates are able to internalize the problem of price instability besides enjoying the economies of scale.

The rubber industry in Malaysia is basically a smallholder crop as the interest of the private sector in this commodity has dwindled over the years due to the relative profitability of the palm oil industry. In fact the area under rubber plantation has generally declined from 1.8 mn ha to 1.2 mn ha between 1990 and 2005. As in the case of palm oil, there are three types of rubber producers, i.e., the estates, smallholders under the land development schemes and independent smallholders. The involvement of the private companies in the rubber estate plantation has significantly reduced from about 349 ha (or 18%) in 1990 to about 60 ha (or 4.8%) in 2005. The share of the smallholders in the rubber area has increased from 81% to 95.2% in the said period. A similar development has also occurred in the cocoa industry. The overall area under cocoa has declined significantly from 393 465 ha in 1990 to 33 thousand ha in 2005. The share of the estate plantation in the cocoa plantation has reduced from 49% to 24% in the said period.

Food Sector

Malaysia is a net importer of food despite being a net exporter of agricultural products. The agricultural trade balance is positive due to the large exports of palm oil, rubber and cocoa products. However, in terms of food balance of trade, Malaysia has consistently been in the red registering a net deficit of RM7 bn in 2005. Malaysia depends on imports for its supply of rice, beef and mutton, dairy products, selected vegetables, fruits, processed food and food and beverages. Generally, Malaysia has a lower comparative advantage in the production of food items as compared to the neighbouring countries such as Thailand and Vietnam and recently China. This is because of the pull of resources (land, labour and capital) from the manufacturing sectors which offer better return. Besides, the wage level has increased due to rapid industrialization. Under the 9MP, a policy of achieving a positive net balance of trade

of RM1.2 bn was set out to reverse the current trend (Government of Malaysia, 2006).

The food production sector in Malaysia is characterised by small farm size with minimal involvement of the private or corporate sectors. Most of the farms are either privately owned or rented. In the case of paddy, average operation size for most farmers is about 1.06 ha (Fatimah, 2005). There are two types of farmers: owner operators and tenant operators. Besides these small farms, there are a few paddy estates run by FELCRA totalling 4000 ha. The farm operation is centrally managed and the farmers (who are the shareholders in the estate) are provided with employment in the estate. The infrastructure development is provided by the government as well as the estate management.

Rice is of strategic importance to the economy as it is the staple food of the majority of the population; hence it is a major item for food security concern of the country. Besides, the incidence of poverty in this sector is the highest in the country and the share of rice in the food expenditure of the poor is relatively high. Although the per capita rice consumption in Malaysia has declined from 110 kg per capita in 1980 to 88 kg per capita in 2004, rice is still a major food item in the consumers' expenditure. With these premises, this sector received a special intervention from the government to ensure "a sufficient level of rice to the country while ensuring high price to producers and stable price and high quality rice to consumers" (Fatimah, 1994). With these multi-pronged and yet contradicting objectives, the government has embarked on a massive protectionist policy to insulate the industry from the vagaries of the world rice market. Despite the success of Green Revolution in the 1960s in the Asian region, the international paddy and rice market continues to be volatile. The instruments of intervention include production subsidies, cheaper water irrigation rates, cash subsidies, government's owned milling activities, price control (from farm to retail) and monopoly of rice imports.

Under the country's National Agricultural Policy III (1998 – 2010) (Government of Malaysia, 1999), Malaysia has reduced the expected level of self sufficiency in rice from 85% (in the 1970s) to 65%, taking into account the improvement in the world market and the availability of cheaper supplies. Attempts are being made to slowly liberalise the sector from the government's intervention; starting with the floatation of the consumer prices in 1992 and the corporatisation of the National Paddy and Rice Authority with the setting up BERNAS corporation to manage the importation and supply chain of rice in the country. With these structural and institutional characteristics, the supply chain of paddy and rice is unique as depicted in Figure 2.3.

Compared to the other ASEAN countries the vegetables sector in Malaysia is less developed in terms of productivity and quality. The sector is characterized by small farm size with an average of 1.01 ha and generally the level of technology used is still very low and traditional in nature (Fatimah Mohamed Arshad, 2005). There are commercialized farms that are relatively larger in size (more than 10 ha) which are located in the highlands as well as selected lowlands in the country. There are more than 50 types of commercial varieties of vegetables, including highland and lowland types. A similar characteristic is observed in the case of fruits sector in Malaysia. There were 270 thousand growers working on 257 thousand ha of land planted with fruits in 1998 (Fatimah Mohamed Arshad et al., 2005). Out of this total hectareage, only 86 thousand ha or 33.4% are considered commercial farms of 0.67 ha average size and fruit farming is largely done on a part time basis. The vegetables and fruits produced are generally inconsistent in quality and quantity. With the exception of

small percentage of commercialised farms, the majority of small farmers are dependent on the wholesalers for financial loans and agricultural inputs to sustain their livelihood, which lead to a strong unidirectional symbiotic relationship between the producers and the buyers. The producers are physically and informationally distant from the consumer market due to the poor flow of information across the marketing channels as well as the poor infrastructures.

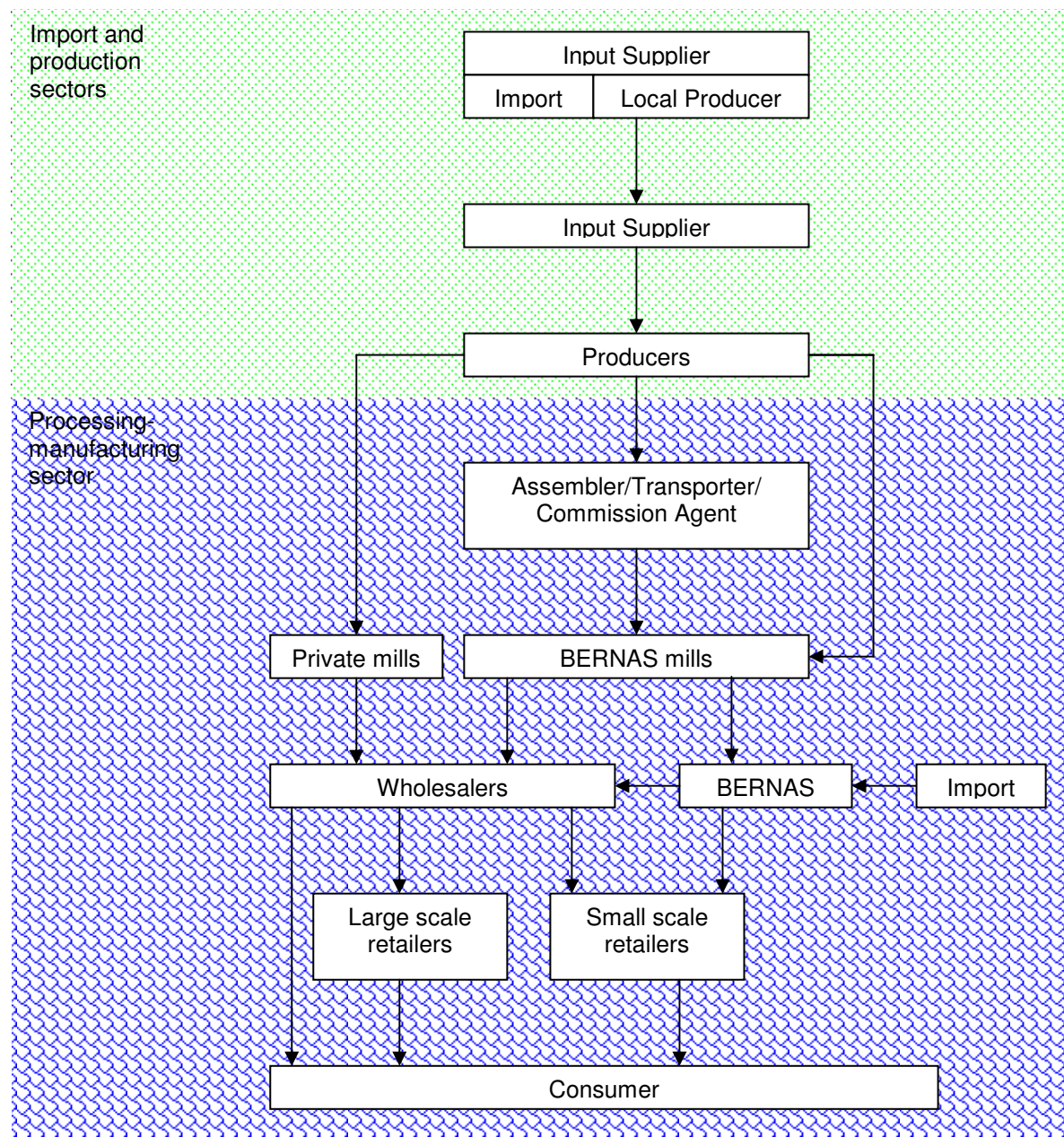


Figure 2.3 Malaysia: Agribusiness Framework for Paddy and Rice Industry

With the exception of beef, mutton and dairy products, Malaysia is self-sufficient in the production of poultry meat, pork and fisheries products. The latter industries are relatively efficient both in the production and marketing sectors that enable them to export the surpluses. Environmental concerns are still unresolved issues for both

poultry and pork industries. In the case of fisheries sector, the over fishing of the Malacca Straits and South China Sea has forced Malaysia to go inshore particularly the aquaculture industry. Malaysia relies heavily on imports for the supply of mutton, beef and dairy products. Various attempts to develop these industries were hampered with technological constraints and the inability to compete with efficient producers such as Australia and New Zealand. The 9MP has designed a number of strategies to jump start these industries through a large scale feedlot system (called National Feedlot Centre) capable of supplying 34% of the local requirement valued at RM680 mn (Ministry of Agriculture and Agro-based Industries, 2006).

Processing-Manufacturing Sector

Export crop sector

The export crop sector, in particular the palm oil sector, contributes a larger share in terms of gross output and value added to the economy of Malaysia. This is because these commodities – palm oil, rubber and cocoa serve as the raw materials for agro-based industries which manufacture exportable products such as processed palm oil, tyres, rubber and cocoa-based products. Hence, the processing-manufacturing sector for these crops is relatively established compared to the agri-food sector in the country. For instance, palm oil is being used to produce processed palm oil which became an intermediate material for industrial uses, oleochemicals and consumer products. In terms of gross output and value added, palm oil products accounted more than 63% and 82.4% of the “Production, processing & preservation of meat, fish, fruits, vegetables oils and fats” category in the country in 2003 (Appendix 2.1). The gross output has nearly tripled and the value added has doubled during the said period. The number of crude palm oil mills has increased from 119 to 336 while the number of palm oil refineries has increased from 39 to 48. The gross output which stood at RM32 bn in 2003 was the highest in the food and agro-based manufacturing sector category (10% of the total food and agro-based industries), overtaking the rubber-based sector which had been the leading agro-based in the country during the 1960s and the 1980s. The palm oil is about to enter into another cycle of boom with the growing prospect for higher demand for biodiesel as the world is hungry for eco-friendly fuel to contain “global warming” and the continuous instability of the fossil-based fuel supplies.

Despite the decline in importance, the rubber sector still remains a significant agro-based sector in the country producing tyres and tubes, latex and other rubber based products particularly gloves and foot wear. As shown in Table 2.2, the number of establishments for rubber based industries has increased from 379 to 435 during the said period. Malaysia is, now, the world largest producer of rubber gloves. In 2004, there were 84 firms that were involved in the production of this product valued at USD1.07 mn.

Despite the growth of the food and agro-based industries, its share in the country’s manufacturing sector has somewhat declined. Tables 2.2 and 2.3, compare statistics in 2004 with corresponding figures in 1993. As shown in the tables, the share of food and agro-based industries from the country’s total number of establishment has declined from 22.7% to 18.2%, its share in total gross output dropped from 17.8% to 14.8% and that in value added, from 14% to 11.4% . The share of the number of workers has declined marginally from 13.7% to 13.4% indicating the high labour intensity of these industries in general. These data imply the rapid growth of the other manufacturing sectors such as electrical and electronics, services and construction.

Table 2.2 Malaysia: Food and Agro-based Manufacturing Industries (Number of Establishment and Gross Value of Output) (1993 and 2004)

Category	No. of establishment				Gross value of output (USDmn)			
	1993	%	2004	%	1993	%	2004	%
Production, processing & preservation of meat, fish, fruits, vegetables, oils & fats	339	17.5	674	19.3	4,643	42.8	13,762	58.7
Manufacture of dairy products	35	1.8	41	1.2	523	4.8	600	2.6
Manufacture grain mill products, starches & starch prods & prepared animal feeds	226	11.7	387	11.1	1,065	9.8	1,851	7.9
Manufacture of other foods	906	46.7	1,950	55.9	1,972	18.2	2,603	11.1
Manufacture of beverages	53	2.7	122	3.5	353	3.3	606	2.6
Manufacture of rubber products	379	19.6	435	12.5	2,302	21.2	4,011	17.1
Total food & agro-based ^a	1,938	100.0	3,487	100.0	10,857	100.0	23,434	100.0
Grand Total	8,306	22.7 ^b	19,141	18.2	61,101	17.8	158,368	14.8

Source: Department of Statistics Malaysia (1995 and 2005)

Note: a – Does not include wood based industries

b – Percentage of total food and agro-based from total

Table 2.3 Malaysia: Food and Agro-based Manufacturing Industries (Value Added and Number of Workers) (1993 and 2004)

Category	Value added (USD mn)				No. of workers (000)			
	1993	%	2004	%	1993	%	2004	%
Production, processing & preservation of meat, fish, fruits, vegetables, oils & fats	588	25.7	1,442	39.4	33	20.3	59	28.6
Manufacture of dairy products	104	4.6	160	4.4	4	2.5	4	2.0
Manufacture grain mill products, starches & starch prods & prepared animal feeds	151	6.6	226	6.2	10	6.4	11	5.3
Manufacture of other foods	629	27.5	749	20.5	44	27.5	53	25.9
Manufacture of beverages	136	5.9	169	4.6	4	2.7	6	3.0
Manufacture of rubber products	677	29.6	911	24.9	69	43.3	73	35.3
Total food & agro-based ^a	2,285	100.0	3,657	100.0	160	100.0	206	100.0
Grand Total	15,788	14.5 ^b	36,282	10.1	1,267	13.7	1,543	13.4

Source: Department of Malaysia (1995 and 2005)

Note: a – Does not include wood based industries.

b – Percentage of total food and agro-based from total.

Food Sector

The food sector performance in terms of gross output, valued added and overall competitiveness is still very much below those of the export crop sectors. This is largely due to the structural problem (uneconomic size of farms), the low level of technology and hence, overall productivity. The stiff competition from the low-cost producing countries such as Thailand, Indonesia and Vietnam makes imports cheaper and a logical option. This has somewhat retarded the growth of this sector. The setbacks in the production sector are being transferred into the marketing system which resulted in overall inefficiency and poor performance.

The typical marketing system of fresh produce such as vegetables and fruits is presented in Figure 2.4. Most of these produce go through multi-layered middlemen

before they reach the consumers. For instance, in the case of vegetables, the produce has to go through assemblers or transporters who normally work for wholesalers in the local market. The wholesalers, in turn, transport the produce to wholesalers in the terminal market. At the terminal market, produce is sold to either retailers or small time wholesaler. In other words, the produce is handled by four or more middlemen before it reaches the consumers.

The farmers normally sell their produce to the local assemblers or wholesalers' agent on a consignment basis. The farmers are paid after the produce has been sold which may take more than a week. Produce are generally not graded and post harvest handling is still the weakest link in the system. Prices are not transparent at the farm level, in fact they are discovered through a "whispering system" between buyer and seller. Producers are normally in a weaker bargaining position relative to the buyers or wholesalers who are well equipped with market information and networking.

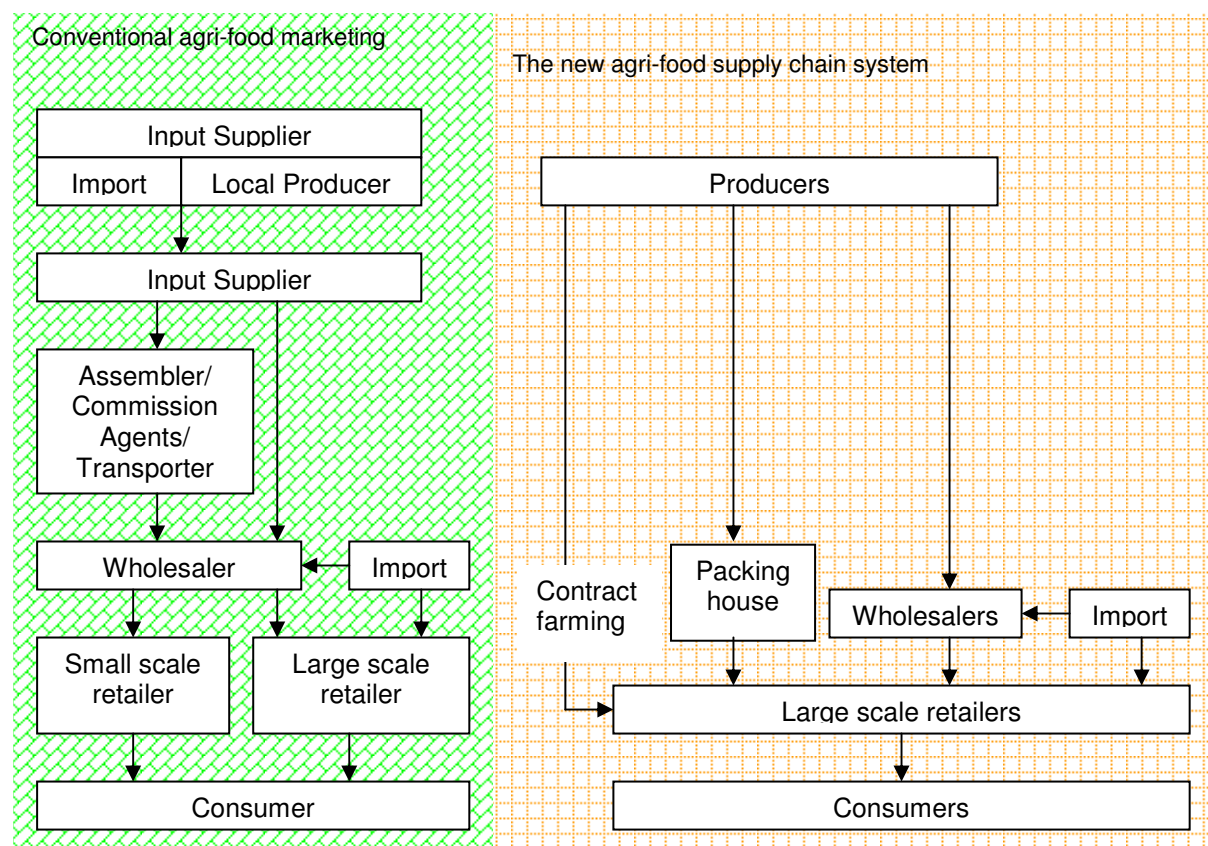


Figure 2.4 Malaysia: Comparison between Conventional Agri-food Marketing and the New Supply Chain

Under such a marketing landscape, there are minimal incentives for the industry to grade and standardize or even to innovate to create value added. Products are sold in bulk and undifferentiated which make market prices meaningless at times as they do not reflect the quality and specifications. Post harvest losses are in the range of 10% to 40% due to poor handling and most importantly little incentives or no premiums provided by the market for high quality produce. With minimal marketing strategies employed (particularly product development and promotion), the focus of the traditional system is on the distributive function across the chains.

The New Supply Chain for Agri-food

The above conventional agri-food marketing system is undergoing a transformation toward the “new supply chain” pushed by external and domestic “drivers”. The external driver is basically the rapid development large retail chains originated in the developed economies which are encroaching into the developing economies for market expansion made possible by globalization and free flow of capital across borders. These large retail chains integrate the wholesale function into their own company to become self-distributing chains (Figure 2.4). Operating in a big scale these retail chains were able to introduce cost-saving innovations such as centralization of procurement, use of preferred supplier registries, formal contracts with suppliers and the promulgation of private quality standards. The saturation of consumer markets in the EU has driven some of these retail chains to rapid-growth-developing-economies like Malaysia and other ASEAN countries.

The domestic drivers are consumers’ income and changing consumption pattern and lifestyles. Malaysia is classified as an upper-middle income country, and considered as one of the most developed of the developing countries. A little less than two-thirds of Malaysia’s population live in the urban areas. The industrial-urban expansion has created new consumers who relatively, have more purchasing power and health consciousness who began to dictate their strong influences on the agro-food system. Those consumers demand high quality produce which are based on international standards. They prefer processed/ easily prepared home-meal replacements on one hand, and healthy, safe and fresh agro-food on the other. Besides, they demand year-round supply of same quality agro-food regardless of the seasonal and location-specific nature of agricultural production. The change has prompted the growth of food processing industries particularly food and beverages. As shown in Table 2.2, the number of establishments in the manufacture of food has more than doubled from 906 in 1993 to 1,950 in 2003. The number of firms involved in beverages has increased from 53 to 122 during the said period.

The proportion of middle income households, defined as those earning between USD315 and USD920 per month, has increased from 47.7% in 1999 to 47.9% in 2002 (Pricewaterhouse, 2006). Mean monthly gross income per household increased from USD650 in 1999 to USD792 in 2002, denoting average growth of 6.8% per annum. On average, households living in urban areas spent 1.5 times more than households living in rural areas. Average consumer spending stands at USD 511 per month in the urban areas and USD334 per month in the rural areas. Malaysian households spend an average 24% of their household income on retail purchase of foods. The eating-away from home accounted for 18% of food expenditure (Alias Radam et al., 2005). Purchase of foods from the retail outlets is estimated at USD2.6 bn in 2005. USDA (2006) estimated that traditional markets account for 54.0% of the total retail food sales, followed by the supermarkets and hypermarkets (33.9%) and convenience stores (2.4%).

Like in other parts of the world, these two major drivers have dramatically changed the landscape of agri-food marketing system in the country. The major structural change that takes place in the food marketing system is the transformation of the retail sector with the emergence of large retail chains owned by either multi national companies or local firms. Under the traditional marketing set up, the wholesalers are the focal agents whereas under the new supply chain, this role has been taken over by the “new global retailers.” The new large chain retailers¹⁴ can be categorized as (i)

¹⁴ *The categories and hence the definition of each categories may differ somewhat.*

Supercentres/hypermarkets/warehouse stores/wholesale clubs; (ii) cash and carry warehouse; (iii) department stores/supermarkets/groceries and (iv) convenience stores/Gas marts/kiosks (Manalili et al., 2005).

The rapid change in the retail sector is reflected in its growing economic importance. The retail trade in the country accounted for 13% of the country's GDP and provided employment to 730 000 workers or 7% of the workforce in 2003. Retail sales value increased from USD10.5 bn in 1999 to USD13.5 bn in 2004 indicating an increase of 28.5% with annual growth of 5.6%. Hypermarket sales accounted for 10% of the retail sales. The predominance of the large retail chains in the last few years is depicted in Table 2.4. As shown in the table, the number of grocery stores or provision shops has been reduced by 19.5% from 55, 869 in 1993 to 44 990 in 2001. The large retail chains are growing in strength, indicating a change of 69.5% between the stated periods from 2,123 to 4,946. Almost all the new types of retail chains (supermarkets, department stores, convenience store etc) are experiencing significant growth.

The provision or grocery shops accounted for 90.1% of the total stores in the country, in 2001. However, in terms of revenue, they only accounted for 34.3% compared to the large retail chains which accounted for almost two-thirds of the revenue. Among the retail chains, the supermarkets (including hypermarkets) which accounted for less than 1% of the retail stores, accounted for almost one-third of the revenue. In 2005, there were 81 hypermarkets in Malaysia where 83% of them are foreign owned and the rest are locally owned (Government of Malaysia, 2006). Among the foreign owned hypermarkets include Giants (Hong Kong), Jaya Jusco (Aeon Group, Japan), Carrefour (France) and Makro (Holland). Local retail chains include The Store (The Store Corporation), Parkson (Lion Group), Ngiu Kee Corporation (TKN Entreprise), Ocean Capital and Mydin.

Table 2.4: Distribution of Retail Stores by Types and Revenues, 2001

Type	1993 No.	2001 No.	Change 1993- 2001 (%)	Share as at 2001 (%)	Revenue as at 2001 (USD mn)	%
Provision/grocery stores	55869	44990	-19.5	90.1	1822.6	34.3
Large retail chains	2123	4946	68.5	9.9	3495.5	65.7
<i>Supermarket</i>	349	588	685	1.2	867.6	16.3
<i>Mini-market</i>	1535	3632	136.6	7.3	477.9	9.0
<i>Convenience stores</i>	116	219	88.8	0.4	52.9	1.0
<i>Department stores</i>	43	302	602.3	0.6	467.9	8.8
<i>Supermarket inc. hypermarket</i>	80	205	156.3	0.4	1628.9	30.6
Total	57992	49936	-13.9	100.0	5318.2	100.0

Source: Department of Statistics Malaysia 1995 and 2005

The growing strength of hypermarkets in the large retail chains category is evident in their share of the total net sales. Table 2.5 outlines the net sales of selected major retail chains in Malaysia, 2004. Among the hypermarkets, Giant recorded the highest net sales valued at RM2.5 bn followed by (RM1.5 bn) and The Store Corporation (RM11.26 bn). In terms of net sales per store, Careefour and Makro recorded the highest. The four major retail chains (Giant, Jayajusco, The Store and Carrefour) accounted for 75.5% of the total sales. The share of Giant's sales accounted for almost one-third of the total sales. This oligopolistic structure results in a highly intense price competition among the retail chains. Competition among the retailers, especially hypermarkets, is intense with large international retailers like Carrefour, Tesco and Giant frequently engaging in price wars to establish their presence as

major players in the market. Carrefour has successfully launched the price cuts strategy for about 1,200 products in their stores. Meanwhile, Giant, the largest hypermarket operator in Malaysia, is reported to sacrifice profits in order to maintain the low-price leader status. Pressure is mounting for local retailers such as The Store to maintain competitive prices and carry a good variety of products in order to keep up with the international players.

However, in the hypermarket category, Tesco and Carrefour accounted for 46% of the total sales denoting their strong position in the retail sector. Shepherd (2004) estimated that the supermarket and hypermarkets handled about 60% of the fruits and 25% of the vegetables in Malaysia.

Table 2.5: Major Large Retail Chains in Malaysia, 2004

Group's Name	Ownership	Type of Business	Brand	No.	Net Sales (USD mn)	%	Sales per store (USD mn)
<i>Dairy Farm Giant Retail</i>	<i>Dairy Farm International Hong Kong*</i>	<i>Hypermarkets (15), supermarkets (46), pharmacies (161)</i>	<i>Giant, Cold Storage, Guardian</i>	222	647.0	30.2	2.9
<i>Jaya Jusco</i>	<i>Jaya Jusco Stores Bhd, Aeon Group, Japan</i>	<i>Superstore chain and shopping center operation</i>	<i>Jusco Selection</i>	11	401.0	18.7	36.5
<i>The Store Corporation</i>	<i>The Store Corp.</i>	<i>Department stores cum supermarkets (37), hypermarkets (4)</i>	<i>The Store</i>	38	306.0	14.3	8.1
<i>Carrefour</i>	<i>Magnificent Diagraph, Carrefour, France</i>	<i>Hypermarket</i>	<i>Carrefour</i>	8	263.0	12.3	32.9
<i>Tesco</i>	<i>70:30 Joint venture between Tesco, UK and Sime Darby Bhd, Malaysia</i>	<i>Hypermarket</i>	<i>Tesco</i>	6	151.0	7.0	25.2
<i>Makro Cash & Carry Distribution</i>	<i>SHV, The Netherlands</i>	<i>Hypermarkets</i>	<i>Aro,Q-Biz</i>	8	204.0	9.5	25.5
<i>Parkson Retail Group</i>	<i>Parkson Corporation, retailing arm of Lion Group, Malaysia Diversified</i>	<i>Department store (26), hypermarket (5)</i>	<i>Parkson, Xtra</i>	31	109.0	5.1	3.5
<i>Ngiu Kee Corporation</i>	<i>TKN Enterprise</i>	<i>Supermarket & department store</i>	<i>Pure Joy Laura, Sabrina, Mikoko</i>	5	41.0	1.9	8.2
<i>Ocean Capital</i>	<i>Ocean Capital Malaysia</i>	<i>Department store, supermarket</i>	<i>tm</i>	17	21.0	1.0	1.2
Jumlah				346	8,143.4	100.0	

Pricewaterhouse Coopers, 2006.

The above development emulates a similar phenomenon in the developed economy where a few large retail chains are securing a larger share of the consumer markets. The global chains' share of the retail sales in the developed economy has grown from strength to strength. For instance, in 1998, the top five chains in USA (Wal-Mart, Kroger, Costco, Albertsons and Safeway) have 50% of the supermarket sales (Kinsey, 1998). In EU, the top five grocery and daily goods retailing accounted for about 49% of the total sales in 1999 (Dobson, 2003). The same phenomenon is not observed here in Malaysia, but the trend is showing. The share of the top five retail chains accounted for about 25% of the share in the food market in 2003 (Hu Dinghuan, 2005). The share of supermarkets and hypermarkets in the national food retail has increased from 27% in 1999 to 31% in 2001 (Azizi Meor Ngah, 2006). The two major global retail chains i.e., Tesco and Carrefour accounted for 46% of the hypermarket retail market (Euromonitor, 2005). The hypermarkets have also been able to secure consumers' demand with 31% of urban Malaysian shoppers perceived that these two outlets as their main shopping destination.

Conclusion

The food and agribusiness sector in Malaysia is in the midst of transition towards the new supply chain system process albeit with many setbacks and constraints. The transformation towards a shorter, more efficient and consumer-centric marketing system is hampered with structural inefficiencies at the farm level and low level of production and post-harvest technologies. Despite the strong demand for high quality agri-food in the domestic market, the production sector is not able to keep up due to the high cost of production, low level of productivity and much cheaper imports. Input costs are generally high as Malaysia depends totally on imported seeds, animal feeds and the labour charges are on the rise. As for the export markets, Malaysia has made some inroads in the selected produce such as guava, papaya and pineapples. However, the international market for these produce is thin and highly competitive. Under such an environment, price as a basis to compete may not be sustainable as the consumers' switching costs to other alternatives are low. Hence the non-price factors such as quality, variety and customized produce are equally important. However, this is the very area where the vegetables and fruits industries in Malaysia is still lagging far behind the export crops sectors as well as her neighbouring countries. Malaysia also faces an uphill task in adhering to the strict export quality standards in terms of food safety set by the advanced importing countries; making market access as the significant constraint to overcome both in the short and long run to improve the competitiveness of the food industries.

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Appendix 1 Malaysia: Food and Agro-based Manufacturing Industries, 1993 and 2004

Category	No. of Establishment		Gross Output (USD)		Value added (USD)		No. of workers	
	1993	2004	1993	2004	1993	2004	1993	2004
Production, processing & preservation of meat, fish, fruits, vegetables, oils & fats	339	662	4,643,100	14,133,583	609,989	1,480,676	32,582	58,888
Processing & preserving of poultry & poultry products	na	14	na	302,341	na	45,078	na	3,911
Slaughtering, preparing and preservation of meat	19	36	123,825	168,077	31,379	20,295	2,752	3,431
Canning, preserving & processing of fish, crustacea & similar food	54	141	223,040	498,799	54,604	103,068	6,797	10,201
Pineapple canning	4	3	27,395	14,834	5,376	3,680	1,025	454
Other canning & preserving of fruits & vegetables	89	41	105,022	46,356	29,073	12,908	3,363	1,351
Manufacture of coconut oil	16	13	10,304	15,160	1,103	1,580	251	226
Manufacture of crude palm oil	119	315	3,398,616	8,434,322	407,647	946,537	15,721	32,531
Manufacture of refined palm oil	na	21	na	3,358,403	na	219,654	0	3,511
Manufacture of palm kernel oil	26	34	440,652	742,170	40,589	68,645	1,533	1,471
Other vegetable & animal oils & fats	12	44	314,247	553,121	40,217	59,232	1,140	1,771
Manufacture of dairy products	35	43	523,325	616,709	108,124	164,785	3,960	4,101
Ice cream	23	32	35,530	36,137	14,586	11,192	1,029	954
Condensed, powdered & evaporated milk	12	11	487,795	580,572	93,538	153,593	2,931	3,151
Manufacture grain mill products, starches & starch prods & prepared animal feeds	226	374	1,064,520	1,901,507	156,302	232,497	10,191	10,951
Rice mills	119	253	213,902	359,710	21,708	47,190	4,289	3,771
Flour mills	9	21	266,611	513,606	53,239	81,473	1,432	2,351
Other grain milling	4	7	10,901	25,857	2,628	7,615	170	431
Sago & tapioca factories	28	23	19,757	17,292	4,324	4,031	952	633
Prepared animal feeds (for pets)	66	70	553,350	985,042	74,403	92,188	3,348	3,751
Manufacture of other foods	800	1,688	1,265,357	2,673,715	370,924	768,965	48,409	53,321
Biscuits factories	78	93	199,244	181,142	67,740	49,423	9,358	5,571
Bakeries	289	678	110,757	377,278	42,735	136,147	7,243	16,221
Sugar factories & refineries	7	7	348,653	467,338	88,167	126,571	2,785	1,931
Manufacture of cocoa products	42	17	242,077	383,185	55,391	40,434	4,659	1,231
Manufacture of cocoa, chocolate and sugar confectionary	na	40	na	169,967	na	61,997	na	3,971
Meehon, noodles & related products	152	226	123,067	167,976	30,031	45,139	4,699	4,711

Appendix 1: Contd.

Category	No. of Establishment		Gross Output (USD)		Value added (USD)		No. of workers	
	1993	2004	1993	2004	1993	2004	1993	2004
Ice factories	64	84	17,624	46,622	8,797	28,136	1,017	3,65
Coffee factories	81	119	34,912	71,975	9,875	21,882	1,352	2,14
Tea factories off estate	11	7	17,680	11,181	8,051	2,285	736	272
Spices & curry powder	51	91	30,569	95,135	9,921	25,753	1,161	1,98
Nut & nut products	na	14	na	23,181	na	5,502	na	450
Sauces inc flavouring extract eg monosodium glutamate	na	5	na	80,006	na	31,049	na	677
Snacks, cracker/chips	na	88	na	136,759	na	45,914	na	3,58
Other food products	25	219	140,773	461,971	50,216	148,733	2,655	6,89
Manufacture of beverages	53	117	353,161	622,318	140,657	173,271	4,248	6,14
Distilling,rectifying,blending spirits & malt liquour & malt	14	26	114,464	162,338	63,627	77,160	1,363	1,11
Soft drinks & carbonated water	39	68	238,697	410,116	77,030	78,528	2,885	3,74
Mineral water	na	23	na	49,863	na	17,582	na	1,28
Manufacture of rubber products	374	438	2,282,852	4,119,423	700,475	935,718	69,171	72,75
Tyre & tube industries	58	27	352,174	425,491	145,259	123,407	7,119	7,15
Retreading & rebuilding of rubber tyres	na	48	na	54,474	na	14,921	na	1,43
Rubber remilling & rubber latex processing	80	74	829,625	1,599,492	90,731	148,473	8,198	6,35
Rubber gloves	na	77	na	1,235,365	na	379,608	na	33,68
Rubber footwear	16	na	78,945	na	31,735	na	6,378	0
Rubber products nec	220	212	1,022,107	804,601	432,750	269,308	47,476	24,12

Note: na – Not Available.

Source: Malaysia (1995 and 2006b).

PART 3 Domestic Food Consumption Habits and Trends

Introduction

Malaysia's diverse religious and cultural practice influences food consumption habits and patterns of its 26 mn population. The Malays, who account for 60 percent of the population, are mostly Muslims that do not consume pork meat. A total of 30 percent of the Chinese populations are either Buddhists or Christians. The remaining 10 percent of the population are largely Indians whose faith is Hinduism. Beef is not consumed by many Buddhists and Hindus. Globalisation has seen western food gaining popularity amongst Malaysians who are adventurous in trying out new delicacies within the boundary of religious teachings and cultural norms.

This section presents socio-economic and demographic characteristics of Malaysians and their food consumption trends. Published data and systematic work on the food consumption pattern are extremely scarce. Hence, data from secondary sources has been used for deliberations.

Population and Socio-economics Characteristics

The Malaysian economy has undergone a relatively high rate of growth in the last three decades as a result of the industrialisation drives in the 1980s. Coupled with population growth, the resulting increase in income and urbanisation has led to change in lifestyle and hence consumption patterns and habits. Besides, globalisation brings in "global diet" of fast food to the young consumers as well as the professionals.

From 1970 to 2005, the Malaysian population has more than doubled from 10.85 mn to 26.1 mn and the life expectancy has increased for both males and females. The life expectancy for males has increased from 59.9 years in 1970 to 63.2 years in 2004, while it has increased from 71.2 years to 75.8 years for female under the said period. The population growth has declined from 2.5% in 1970 to 1.85% in 2004 (Table 3.1).

The GDP per capita rose from USD837 in 1970 to USD2, 631 in 2004. The growth rate of GDP per capita increased from 3.3% in 1970 to 5.2% in 2004 with an average of 3.5% growth per annum during the said period. However, during the mid 1980s, it was negative due to economic recession as well as low commodity prices world wide. However, by 1990, it has picked up again reaching its peak in 1995 at 7% and after the 1997 financial crisis, the rate has somewhat declined albeit at a lower rate. By 2004, the growth rate of Malaysia's GDP per capita stood at 5.2% (Table 3.1). The GDP growth rate showed a similar pattern. The growth rate was negative during the world commodity crisis in the 1980s and later improved throughout the 1990s. There was a temporary setback to the economy as a result of the 1997's financial crisis. Since then, the economy has recovered. In 2004, the country's GDP growth rate was recorded at 7.1%.

Table 3.1 Malaysia: Socio-demographic Statistics, 1970-2004

Item	Year							
	1970	1975	1980	1985	1990	1995	2000	2004
Population (mn)	10.85	12.25	13.76	15.67	17.84	20.36	22.99	24.89
Population growth (%)	2.53	2.34	2.41	2.62	2.62	2.60	2.24	1.85
Life expectancy								
Male	63.22	na	68.8	70.96	72.47	73.94	75.08	75.85
Female	59.96	na	65.01	66.90	68.22	69.22	70.30	71.24
Urban population (% of total)	33.45	37.65	42.04	45.91	49.82	55.61	61.79	64.41
Urban population growth (%)	4.65	4.60	4.50	4.33	4.19	4.71	4.27	2.86
Rural population (% of total)	66.55	62.34	57.95	54.09	50.18	44.38	38.20	35.59
Rural population growth (%)	1.48	1.01	0.92	1.19	1.07	0.02	-0.94	0.04
GDP per capita (USD)	837.5	1244.6	1958.2	2021.3	2283.8	3273.2	2409.2	2631.6
Growth rate of GDP per capita (%)	3.33	-1.53	4.87	-3.68	6.18	7.00	6.43	5.17
Annual GDP growth rate (%)	5.98	0.80	7.44	-1.12	9.00	9.82	8.85	7.14

Note: na-not available

Source: World Bank (2007).

Increase in household income is positively correlated to the increase in expenditure on food items. This relationship is true for the low and medium income earners and may not be applicable for the higher income group. Malaysian government introduced a minimum wage rate for the labourers in rural areas to ensure fair and reasonable earnings. Besides, the official poverty line is set at USD121 per month (Malaysia, 2006a). However, workers in the rural areas particularly the in palm oil and rubber plantations are still paid below the minimum wage level and incidence of poverty among these groups is still high. Thus, generally, the income of rural households remains low resulting little expenditure on food items.

The rate of urbanisation has increased from 33.5% in 1970 to 64.4% in 2004 and is expected to increase in future. However, the urban population growth decreased from 4.56% in 1970 to 2.89% in 2004. The rural population growth is much lower than that of the urban's due to out migration.

The bulk of the population live in Peninsular Malaysia particularly in the major urban centres such as Kuala Lumpur, Johor Bharu and Penang. Kuala Lumpur is the capital city and a major financial centre for Asia. Johor Bharu, which is located in the south, is a manufacturing base for neighbouring Singapore. Penang Island which is located in the North West is an IT manufacturing centre. Sarawak and Sabah states which are located in the east of Malaysia are less developed compared to Peninsular Malaysia as they are still agriculture-based economies. The two major urban centres in these states are; Kuching and Kota Kinabalu, respectively.

Kuala Lumpur is the biggest urban population centre that includes high population sub-urban satellite towns such as Petaling Jaya, Subang Jaya and Shah Alam. Kuala Lumpur is undergoing an intense period of development with urbanization stretching out into the Klang Valley and the new administrative centre of Putrajaya including the hi-technology new township of Cyberjaya and Port Klang.

There is a rapid growth of large retail chains in the major urban centres in Malaysia. These chains which are owned by the multi national companies are one of the major suppliers of food as well as other consumer goods besides the conventional channels such as the wet markets and small retailers. Some of these large scale retailers include Carrefour, Tesco, Makro, Giant and Jaya Jusco. The other types of retail format are also on the rise; such as convenience stores, gas marts and kiosk. The growth of these kinds of retail formats indicates a growing urbanised lifestyle.

Employment and Labour Force

The Malaysian labour force has witnessed a positive development parallel to the growth of the nation's population. The share of female labour force in the employment sector has increased from 5.02 mn in 1980 to 10.72 mn in 2004 (Table 3.2). However, in terms of percentage, it has been hovering around 35% during the said period. The increase in the female labour force is attributed to; firstly, improvements in education which produce a significant number of skilled and highly trained female workers and professionals. Secondly, an increase in the employment of unskilled female labourers from Indonesia, Philippines, Bangladesh and Burma in the manufacturing and services sectors. The annual growth of female labour force has slightly decreased from 35.2% in 1980 to 34.2% in 1995. This is possibly due to the slowdown in the service industries as a consequence of economic recession that resulted in lower employment opportunities.

The proportion of female employment in the national work force recorded the highest in the service sector as compared to the agricultural and manufacturing sectors. A total of 43.8% of the female workers were employed in the agricultural sector in 1980. However, by 2000, it has been reduced to 14% (Table 3.2). The share of female workers in the industrial sectors such as manufacturing has increased from 20% to 28.9% during the said period. There is a significant increase in female workers in the services sector where the share of female workers increased from about 36% to almost 69%. The service sectors that are popular among the female workers include wholesale, retailing and other services such as hospitality and tourism.

Table 3.2 Malaysia: Labour Force and Female Participation in Work Force (1980 – 2004)

Item	Year					
	1980	1985	1990	1995	2000	2004
Total labour force (mn)	5.02	5.77	7.12	8.22	9.69	10.72
Female labour force (% of total)	35.16	35.15	34.76	34.51	35.33	35.61
Female employment (%)	100	100	100	100	100	100
Female employees in agriculture sector (%)	43.79	33.79	25.29	16.9	14.0	na
Female employees in industry sector (%)	20	20.5	28	31.4	28.9	na
Female employees in services sector (%)	36.29	45.70	46.79	51.79	57	na

Note: na – not available

Source: World Bank (2007)

Food Consumption Pattern

Malaysia is a multiracial society consisting of three major races; Malays, Chinese and Indian. The various ethnic communities have different styles and traditions of meals which contribute to a variety of food tastes and preferences as well as food demand in Malaysia. In general, the traditional meals consist mainly of rice with meat or fish and vegetable dishes. Religious beliefs affect food consumption. Muslims do not eat pork and only eat meat products that have been certified “*halal*”. On the other hand, some of the Buddhists and Hindus do not eat beef.

Growths in income and population, coupled with modern lifestyle have increased food demand and induced changes in food habits and consumption patterns. As living standards have risen in Malaysia, more people have chosen to eat quality meat, chicken and fish products regularly rather than traditional meals which are rice-rich diet. Table 3.3 provides information on per capita consumption of major food commodities in Malaysia based on the food balance sheets from 1970 to 2003 (FAO, 2007).

Table 3.3 Malaysia: Per Capita Food Consumption, 1970 – 2003 (kg per year)

Item	Year							
	1970	1975	1980	1985	1990	1995	2000	2003
Crops								
Rice	121.2	121.8	109.1	83.4	84.8	86.8	86.0	70.8
Vegetable	28.2	22.1	25.0	23.9	23.4	32.7	35.0	34.4
Fruits	60.0	54.2	57.6	54.2	53.7	55.1	55.0	54.7
Livestock								
Meat	15.7	20.8	23.3	29.3	37.9	52.8	45.5	48.5
Egg	6.2	7.9	9.3	10.1	13.3	13.5	12.1	10.8
Fish, seafood	24.2	30.5	42.8	44.4	47.9	57.8	60.3	55.9

Source: FOASTAT (2007).

Malaysia’s total food import bill has increased from USD1.45 bn in 1985 to USD1.97 bn in 2005 and is expected to increase in the next decade (Malaysia, 2006a). The increase in food import bills suggest an increase in food demand relative to supply which has to be met through imports. The increase in food demand has resulted in food price increase as reflected in the country’s consumer price index (CPI). The CPI has increased from 29.0 in 1970 to 109.1 in 2005 (2000=100) (Department of Statistics, Malaysia, 2006). Major staple food items such as rice, chicken, eggs and milk are generally stable as they are price controlled items.

As shown in Table 3.3, the consumption of meat, eggs and fish and seafood products is showing an increasing trend, which is a normal characteristic of high income society. For instance, meat consumption per capita was 15.7kg in 1970 compared to 48.5 kg in 2003. Egg consumption per capita has increased from 6.2 kg to 10.8kg in the said period. Fish consumption per capita has increased more than doubled from 24.2kg in 1970 to 55.9 kg in 2004. The per capita vegetable consumption increased from 28.2kg in 1970 to 34.4kg in 2003 and is expected to increase in future. The consumption of rice decreased from

1970 to 2003, from 121.2 kg to 70.8 kg. These data show that the Malaysian consumers' dietary preferences are changing as income and standard of living rise. The consumers are eating more protein and fresh produce and less carbohydrate with higher disposable income and greater awareness of food nutrients and quality.

Disaggregated meat consumption pattern between 1970 and 2003 is illustrated in Table 3.4. The consumption of pig meat increased from 1970 to 1995 parallel to the increase in Chinese population in the country. A decrease in pig meat consumption was witnessed in year 2003 mainly due to the spread of *Japanese encephalitis* (JE) virus carried by the pigs. As a result, the goat and mutton consumption increased as substitutes to pig meat during that period.

Table 3.4 Malaysia: Per Capita Meat Consumption, 1970-2003 (kg per year)

Items	Year							
	1970	1975	1980	1985	1990	1995	2000	2003
Poultry Meat	6.90	9.30	10.13	15.50	20.67	33.14	32.02	33.82
Pig meat	6.57	9.31	9.92	9.87	13.19	14.25	7.22	8.39
Bovine Meat	1.70	1.68	2.33	3.01	3.63	4.85	5.67	5.77
Mutton & Goat Meat	0.39	0.30	0.49	0.41	0.43	0.57	0.62	0.53
Meat, others	0.22	0.24	0.49	0.57	0.01	0.01	0.01	0.01

Source: FAOSTAT (2007)

Food Consumption Trends

An analysis of food availability in Malaysia in the past three decades has indicated that food consumption patterns of the population have changed markedly. Table 3.5 gives some data extracted from food balance sheet data for Malaysia, taken from reports of the Food and Agriculture Organization (FAO) (FAOSTAT, 2007). These data are useful in indicating the quantities of food available for consumption. Over the last three decades or so, the per capita availability of food in Malaysia has shown an increasing trend.

Table 3.5 Malaysia: Consumption of Food Items, 1970-2003 (kg per capita per year)

Items	Year							
	1970	1975	1980	1985	1990	1995	2000	2003
Cereal	36.98	33.00	39.64	39.53	39.15	39.42	66.02	85.37
Starchy roots	19.54	21.62	23.13	29.67	29.26	25.73	21.70	21.88
Sugar crops	3.50	3.51	3.49	3.51	3.50	3.59	3.57	3.40
Sugar & sweeteners	37.29	30.85	38.85	37.61	37.96	47.54	42.72	41.79
Pulses	2.98	2.18	3.17	2.73	3.09	2.88	2.62	2.62
Tree nuts	0.67	1.16	0.54	0.60	0.85	1.09	1.06	1.38
Oil crops	16.56	17.05	16.91	16.58	16.74	16.90	16.35	10.98
Vegetable oils	8.59	10.58	14.22	19.57	21.23	13.98	15.14	15.23
Stimulants	1.19	1.46	1.70	1.80	1.75	2.21	0.80	1.07
Spices	2.14	1.65	1.73	2.53	1.99	1.36	2.79	3.32
Offals, edible	1.26	1.59	1.71	2.15	3.00	4.14	3.11	3.29
Animal fats	2.07	1.65	1.85	1.54	1.44	1.75	1.11	1.14

Source: FAOSTAT (2007).

The major sources of food of higher income group among urban population in Malaysia tend to be more diversified including meat, fish and seafood besides cereals, cooking oil and sugar. The amount of cereals intake has increased more than double from 36.98 kg per capita in 1970 to 85.37 kg per capita in 2003. The consumption of sugar and sweeteners increased from 37.29 to 41.79 kg per capita in the said period.

Calorie Intake

Table 3.6 provides data on the characteristics of dietary intake of the Malaysian population from 1970-2003. The calories intake increased from 2,603 kcal per person per day in 1970 to 2,867 kcal per capita per day in 2003. The share of vegetable products as a source of calories have remained about the same level in terms of quantity (around 2300 g per capita per person per day) while in terms of percentage it has reduced from 88.6% in 1970 to 82% in 2003. The share of animal products as a source of calories has increased from 11.3% to 17.9%. The protein intake increased from 51.42 to 74.93 g per capita per day, while fat intake increased from 55.87 to 84.32g per capita per person per day in the stated period.

In the case of protein, the proportion from animal products increased from 16.73 g to 40 g per capita per person per day between 1970 and 2003. However, protein from vegetable sources has remained about the same level of around 30-35 g per capita per person per day.

Overall, the consumption of fat has shown an increasing trend from 55.8 g to 84.3g per capita per person per day in the last 33 years. The source of fat from vegetable products has been shown to increase from 36.2 g to 53.6 g per capita per person per day (an increase of 47%), while the source from animal products has increased from 19.6 g to 30.7 g per capita per person per day (an increase of 56%).

Table 3.6 Malaysia: Characteristics of dietary intake of the population (1970-2003)

Item	Year							
	1970	1975	1980	1985	1990	1995	2000	2003
Proteins (per capita/day)								
Vegetable products (g)	34.69	33.42	33.28	28.80	29.34	30.40	34.30	35.15
Animal products	16.73	21.63	25.23	29.53	34.35	44.45	41.20	39.78
Total (g)	51.42	55.04	58.51	58.33	63.69	74.85	75.50	74.93
Fat (per capita per day)								
Vegetable products (g)	36.21	42.08	51.41	65.46	70.24	51.17	54.90	53.59
Animal products (g)	19.66	22.90	26.15	27.01	31.48	38.11	29.37	30.74
Total (g)	55.87	64.98	77.57	92.47	101.72	89.28	84.27	84.32
Calories (Per capita per day)								
Vegetable products (g)	2308	2262	2369	2253	2311	2256	2382	2352
Animal products (g)	295	346	406	430	489	609	502	514
TOTAL	2603	2609	2775	2683	2801	2865	2884	2867

Source: Source: FAOSTAT (2007)

These data suggest that the availability of food in terms of protein, fat and calories have increased parallel to the increase in the population's income. With high income and busy life style, there is a strong tendency among consumers to consume meals that are either

convenient to prepare or ready to eat. Besides, the demand for foreign cuisines is also on the rise as a result of an increase of tourism in the country both inbound and outbound.

The western fast food sector is gaining popularity in Malaysia. Table 3.7 shows the number of fast food outlets in Malaysia in 2001. Malaysian firms (private or public sectors) are demanding more working hours from their employees to spend more time in their working premises. This trend has encouraged workers to eat in fast food restaurants such as KFC, Mc Donalds, and Pizza Hut to save time.

Table 3.7 Malaysia: Selected Fast Food Company in Malaysia, 2001

Brand (origin)	Year established	Number of outlets	Market Share (%)	Sales (USD mn)
KFC (USA)	1973	249	45	152.3
McDonald's (USA)	1982	141	30	92.0
Pizza Hut (USA)	1984	85	8	31.6
A&W (USA)	1961	44	4	19.1
Marry Brown (local)	1981	88	4	NA
Sugar Bun (local)	1981	45		9.5
Kenny Rogers (USA)	1994	25	9	9.5
Domino Pizza (USA)	1997	17		na

Source: The EDGE (2001).

Note: na - Not available

Increased in personal income and high standard of living among urban population also contributes to family eating away from home in fast food restaurants as well as other types of food outlets. Table 3.8 indicates the amount of consumers' expenditure on selected food items. As shown in the table, the expenditure on food has doubled from USD5,012 mn in 1990 to USD10,564 mn in 2005. The expenditure on health goods and medical services has increased almost 240% during the said period

Table 3.8 Malaysia: Consumers' Expenditure on Selected Items (USD mn)

Item	1990	1995	2000	2005
Food	5012.3	9477.6	8676.6	10564.5
Alcoholic drinks	118.2	245.7	214.5	268.9
Tobacco	401.1	813.0	772.1	1541.6
Health goods and medical services	308.6	893.7	855.5	1048.2

Source: Euromonitor (2007).

Table 3.9 shows the proportion and composition of household expenditure in Malaysia in 1993/4, 1998/9 and 2004/5. The statistics suggest the followings. Firstly; the proportion of food and tobacco in the household expenditure has generally declined during the period between 1993/94 to 2004/5. For instance, the proportion spent on food and non-alcoholic beverages has declined by 3.7%. Secondly, the expenditure on energy has remained around 22% while the transportation expenditure has increased by 1.6%. Thirdly, the expenditure on communication has increased significantly from 2.1% in 1993/4 to 5.3% in 2004/5.

Table 3.9 Malaysia: Proportion of Household Expenditure (%)

Items	1993/94	1998/99	2004/5
Food and non-alcoholic beverages	23.8	22.6	20.1
Alcoholic beverages and tobacco	2.2	1.9	1.8
Clothing and footwear	3.6	3.4	3.0
Housing, water, electricity and other fuels	21.1	22.2	22.0
Furnishings and household maintenance	5.6	5.1	4.3
Health	1.8	1.8	1.4
Transport	14.5	13.9	16.1
Communication	2.1	3.6	5.3
Recreation services and culture	4.6	4.3	4.7
Education	1.5	1.9	2.0
Restaurants and hotels	12.5	12.8	10.9
Miscellaneous goods and services	6.7	6.5	8.5

Source: Department of Statistics, Malaysia, (various years)

Health and Nutrition Status

The World Health Organisation (WHO) estimates that currently 1 bn people are overweight and out of this, 300 mn people are considered as obese. The Body Mass Index (BMI) has been used to measure “overweight” and “obesity”. A person is considered overweight if his/her BMI is in the range of 25 to 29.9 and “obese” if BMI is more than 30. In the case of Malaysia, a study on the Malaysian National Health and Morbidity Survey in 1996 (Malaysia, 1996) indicated that about 26.2% of the samples were overweight and 5.5% were obese. The incidences of overweight and obesity are higher among the females as compared to the males. As shown in Table 3.10, a total of 28.6% of females were reported to be overweight compared to 23.9% among the males; while 7.2% of females were categorised as “obese” compared to 3.8% among the males.

Table 3.10 Malaysia: Overweight and obesity by Gender (%)

Study year	Sex	Age Range (years)	Rates of overweight and obesity (%)		
			Overweight (BMI ≥ 25)	Pre-obese (BMI 25 – 30)	Obesity (BMI ≥ 30)
1996 (N=28,737)	Male	≥ 20	23.9	20.1	3.8
	Female	≥ 20	28.6	21.4	7.2
	Both sexes		26.2	20.7	5.5

Source: Malaysia (1996).

Table 3.11 shows the compilation of the various studies of overweight and obesity in Malaysia. Although the sample sizes of these studies are small, these findings do indicate some cause for concern regarding food habits. These studies suggest a number of observations. Firstly, the percentage of overweight and obese population is higher in the rural areas as well as among the lower income group in the urban areas. The incidence of overweight and obese is alarming in the later category. For instance, 45% of the male samples in the lower income group in the urban areas were reported to be in the overweight and obese categories. More than half of the females are reported to fall into this category too. Secondly, overweight and obese among females in the urban areas are generally higher than the males.

Table 3.11 Malaysia: Findings of Selected Studies of Overweight and Obesity

Characteristics	Urban adults ¹ N=4747		Urban Lower Income ² N= 244		Rural Villages ³ N= 1854	
	Male	Female	Male	Female	Male	Female
Overweight	24.0	18.1	28.0	33.0	na	na
Obesity	4.7	7.9	17.0	20.0	na	na
Overweight and Obesity	28.7	26.0	45.0	53.0	24	39.1

Sources: ¹ Ismail et al.,(1995), ²IMR (1995) and ³ Khor and Tee (1997)

Halal Products

Halal means 'lawful or permitted' under the Islamic law. Muslims only eat halal and avoid "haram" (or forbidden): food that contains alcohol, pork and animals that are not slaughtered according to the Islamic procedures. Traditionally, the concept of halal has been applied to food; however, it has expanded to other goods such as cosmetics, clothing's and pharmaceuticals (Malaysia, 2006).

With a population of 26.1 mn and closed to 60% of the populations are Muslims (Table 3.10), the market for *halal* products is big in quantity and value. The demand for *halal* food is estimated at USD5,867 mn in 2005 while the global *halal* food demand is estimated at USD 560 bn annually (Malaysia, 2006).

Currently, *halal* I certification is imposed on meat products such as beef, mutton and chicken. The government is extending the regulation of *halal* certification to non-meat products such as snacks, confectionary, dairy and bakery. *Halal* food has been recognised as a new benchmark for quality, hygiene and safety. Food products and ingredients that have *halal* certificates gain additional marketing value. Hence, most of the local retailers, food service operators and food manufacturers are inclined to obtain *halal* certificates as a mark of quality, hygiene and safety for their products. The *halal* certificates are produced by the Department of Islamic Development Malaysia (or JAKIM). The number of food service operators that have registered for *halal* certificates for their products have increased from 690 in 2001 to 930 in 2004 where a total of 2, 818 certificates have been produced.

The increase in demand for *halal* food is also attributed to the growth in the tourism sector in Malaysia and worldwide. Between 1996 and 2006, the tourist's receipts in Malaysia have increased from USD4.6 bn in 1996 to USD9.5 bn in 2006 (indicating an increase of 106%). The average annual growth of total tourists' revenue in the said period was recorded at 7.2%.The food and beverages accounted for about 16.4% of the tourists' receipts. A larger portion of the tourists that come to Malaysia are Muslims from various countries such as Brunei, Middle Eastern countries, Indonesia and Singapore (Table 3.13). The Muslim tourists normally demand for *halal* products. The government is currently promoting Malaysia as a tourist destination to the world. It is estimated that tourist arrivals are expected to reach 20.1 mn in 2007 and 24 mn by 2010.

Table 3.12 Estimated Market for *Halal* Foods

Country	Total Population (mil)	Muslim Population (%)	Food Expenditure USD per capita	Market Size USD mn
Malaysia	26.1	59.0	381	5,867
Indonesia	221.9	88.0	347	67,769
Thailand	65.0	9.1	371	2,189
West Asia	213.9	91.3	572	111,712

Source: Malaysia (2006b).

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PART 4 International Trade Related to the Malaysian Agri-food Sector

Introduction

Malaysia is a small but an open economy. Its economic growth is largely dependent on international trade. Between 2001 and 2005, its import and export of goods averaged 86% and 110% of GDP. Being a trading nation, Malaysia actively pursues and strongly supports trade liberalization through multilateral, regional and bilateral trade agreements. Accordingly, the Malaysian trade and investment policies are being shaped by these trade agreements.

The purpose of this section is to provide an account of the various trade agreements negotiated and reached by Malaysia with its trading partners. Specifically, this section will focus on the relationship between these trade agreements and the Malaysian agriculture and food sector.

Imports and Exports of Agricultural and Food Products

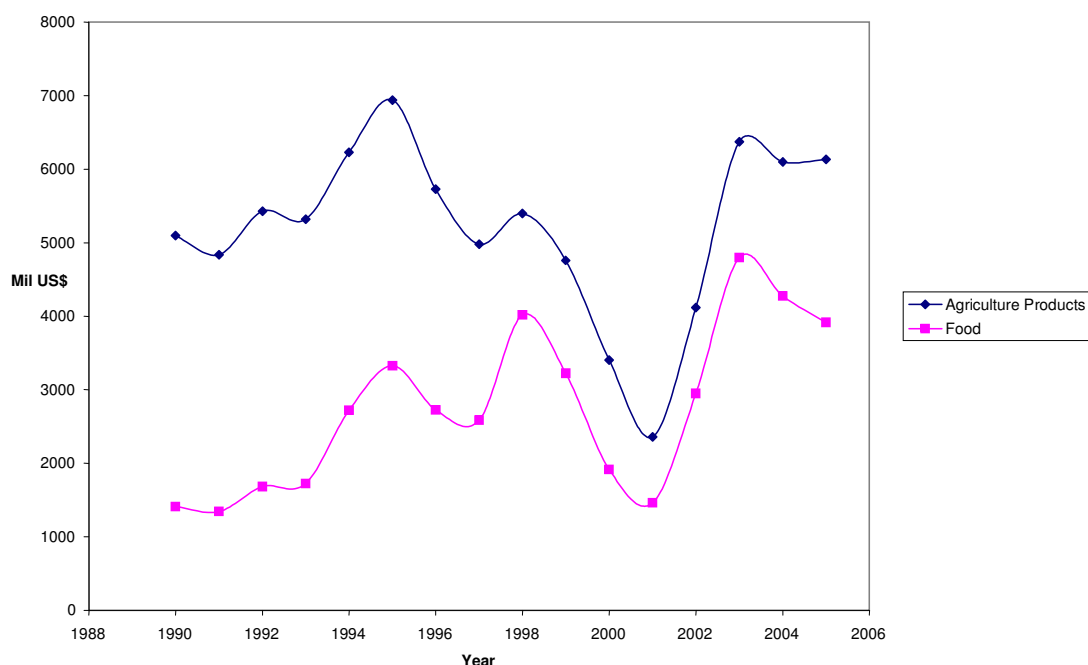
The total merchandize exports and imports for Malaysia in 2005 amounted to USD 141 bn (f.o.b) and USD115 bn (c.i.f.) respectively (WTO trade statistics). However, these represent merely less than 2 percent share in the world's export and import trade in 2005. The top five destination countries for Malaysian merchandize exports in 2005 were the United States of America, Singapore, European Union, Japan, and China while Malaysian merchandize imports in 2005 were originated mainly from Japan, the United States of America, Singapore, European Union and China.

Even though the shares of agriculture products in the total merchandize exports and imports are rather small in 2005 (9.5% for exports and 6.3% for imports), the balance of trade (BOT) for agriculture and food products between 1990 and 2005 was nevertheless, positive. As shown in Figure 4.1, the BOT for agriculture and food products¹⁵ increased gradually from 1990 to 1995. However, there was a sharp decline in the BOT starting from 1997, the year when the Asian financial crisis struck, to 2001. The BOT increased sharply after 2001 to their pre-financial crisis level.

The Malaysian exports and imports of agricultural and food products between 1990 and 2005 are presented in Table 4.1. The exports and imports of both the agricultural and food products showed increasing trends during this period. The food export and the imports of both agricultural and food products registered more than double increments between 1990 and 2005.

In terms of values of the selected agricultural and food products, palm oil and rubber dominated the export between 1990 and 2005 as shown in Table 4.2. Corn, soybeans, sugarcane and rice were main imported agricultural and food items for Malaysia during the period between 1990 and 2005 (Table 4.3).

¹⁵ The food items include palm oil products.



Source: Computed from WTO Trade Statistics, online data at <http://stat.wto.org>

Figure 4.1: Malaysia's Balance of Trade in Agriculture Products and Food, 1990-2005

Malaysian exports of agricultural and food products were destined to 152 countries in 2004. As shown in Table 4.4, the main destination countries for food exports were Southeast Asia, Northeast Asia, Western Europe, and North America. Palm oil was mainly exported to Northeast Asia, South Asia, Western Europe and West Asia while the main destination countries for rubber exports were Northeast Asia, Western Europe and North America.

Malaysia imported food products from 130 countries in 2004. The main countries of origin for Malaysian food imports were Oceania, Southeast Asia, Northeast Asia, and South Asia (Table 4.5).

Table 4.1: Exports and Imports of the Malaysian Agricultural and Food Products, 1990 – 2005 (USD mn. at current prices)

Year	Exports (f.o.b)		Imports (c.i.f)	
	Agricultural Commodity	Food	Agricultural Commodity	Food
1990	7500	3434	2404	2021
1991	7542	3668	2706	2325
1992	8450	4277	3021	2592
1993	8567	4445	3247	2722
1994	10025	5814	3794	3091
1995	11571	7009	4631	3682
1996	10897	6817	5169	4090
1997	10229	6803	5247	4216
1998	9539	7301	4141	3283
1999	9213	6748	4455	3525
2000	8015	5440	4610	3526
2001	7190	5329	4830	3865
2002	9134	7037	5017	4088
2003	11511	8998	5139	4201
2004	13127	10060	7027	5783
2005	13377	9800	7245	5884

Source: WTO Trade Statistics, online data at <http://stat.wto.org>.

Notes: Agricultural products included (SITC sections 0, 1, 2, 4 minus 27 and 28):

- *Food* and live animals; beverages and tobacco; animal and vegetable oils, fats and waxes; oilseeds and oleaginous fruit (SITC sections 0, 1, 4 and division 22), of which:

-- *Fish* (SITC division 03); and

-- *Other food products and live animals; beverages and tobacco; animal and vegetable oils, fats and waxes; oilseeds and oleaginous fruit* (SITC sections 0, 1, 4 and division 22 less division 03).

- *Raw materials*: hides, skins and fur skins, raw; crude rubber (including synthetic and reclaimed); cork and wood; pulp and waste paper; textile fibres and their wastes; crude animal and vegetable materials, n.e.s. (SITC divisions 21, 23, 24, 25, 26, 29).

Table 4.2: Malaysian Exports of Selected Agri-food Products 1990-2004 (USD'000)

Year	Chicken	Pork	Sugar cane	Palm Oil	Soybeans	Rubber
1990	47,145	83,500	84,111	1,626,551	n.a	1,118,977
1991	51,117	84,227	67,012	1,822,799	n.a	978,183
1992	58,585	110,526	72,639	2,125,756	n.a	925,728
1993	64,225	111,571	50,652	2,243,026	n.a	828,230
1994	70,717	113,848	60,658	3,279,042	36,588	1,116,102
1995	71,698	120,574	41,567	4,190,029	76,558	1,610,057
1995	74,615	140,501	43,352	3,766,725	76,884	1,394,719
1997	60,000	112,000	55,000	3,838,650	86,000	1,165,000
1998	58,200	94,213	43,463	4,492,705	122,809	721,595
1999	66,432	n.a	50,285	3,738,325	94,879	616,669
2000	65,810	n.a	64,440	2,558,723	81,028	676,674
2001	67,221	n.a	76,165	2,534,879	73,966	496,424
2002	76,058	n.a	99,252	3,824,429	67,745	655,759
2003	76,513	n.a	96,427	5,218,941	61,818	942,490
2004	n.a	n.a	87,879	5,451,084	86,901	1,367,758

Note: na= not available.

Source: FAO, 2007

Table 4.3: Malaysian Imports of Selected Agri-food Products 1990-2004 (US\$ 000)

Year	Corn	Rice	Sugar cane	Palm Oil	Soybeans	Rubber
1990	208,858	96,248	222,640	n.a.	122,045	79,932
1991	198,689	126,312	224,592	83,271	141,310	52,263
1992	243,635	135,890	215,641	59,018	131,183	57,024
1993	256,382	108,073	215,344	88,708	130,908	75,404
1994	258,491	112,307	253,203	97,351	133,603	130,316
1995	381,326	141,973	307,745	n.a.	132,134	229,163
1995	422,945	211,198	310,432	n.a.	129,746	275,898
1997	414,973	236,000	354,000	n.a.	150,000	176,000
1998	225,867	232,161	268,140	n.a.	131,843	302,037
1999	259,903	181,224	255,846	92,398	145,429	242,129
2000	255,056	175,823	253,629	n.a.	132,186	332,292
2001	218,431	134,756	286,118	n.a.	150,897	280,957
2002	262,862	124,701	257,462	137,124	167,374	189,356
2003	275,182	94,557	236,789	157,984	170,405	339,611
2004	330,943	135,146	250,185	375,585	237,690	379,567

Note: n.a. – not available.

Table 4.4: Main Destination Countries for Malaysian Exports of Selected Agri-food Products, 2004 (Percentage Share)

Countries	Food	Palm Oil	Rubber
North Africa	0.70	0.88	1.00
Other Africa	2.01	4.31	2.12
Central and South America	0.25	0.00	5.32
North America	11.26	2.55	8.94
West Asia	7.01	11.41	5.25
South Asia	2.53	19.85	2.85
South East Asia	40.02	8.31	2.00
North East Asia	15.36	35.22	35.21
Western Europe	14.40	16.16	32.02
Central and Eastern Europe	0.56	0.00	4.70
Commonwealth of Independent States	1.89	0.43	0.00
Oceania	4.01	0.88	0.59
Total (152 countries)	100	100.00	100.00

Source: Department of Statistics Malaysia , 2005.

Table 4.5: Main Countries of Origin for Malaysian Imports of Selected Agri-food Products, 2004 (Percentage Share)

Countries	Food
North Africa	0.12
Other Africa	2.70
Central and South America	7.05
North America	6.70
West Asia	0.33
South Asia	10.31
South East Asia	32.82
North East Asia	11.57
Western Europe	7.79
Central and Eastern Europe	0.14
Commonwealth of Independent States	0.03
Oceania	20.45
Total (130 countries)	100.00

Source: Department of Statistics Malaysia, 2005

International Trade Policies

The overall trade-related policy of Malaysia is aimed at promoting and safeguarding Malaysian interests in the international trade arena, at spurring the development of industrial activities, and at enhancing further Malaysian economic growth towards realizing Vision 2020. It is thought that WTO, AFTA and other regional arrangements will further liberalize trade, intensifying competition both in the domestic as well as international markets. Initiatives to promote exports include enhancing the competitiveness of exports, creating a niche in selected products including education, tourism, health, transport, and professional services, creating global brand names and venturing more assertively into non-traditional markets. Efforts are being undertaken to increase intra-regional trade using the AFTA and other bilateral mechanisms.

Trade Agreements and Arrangements

The role of WTO Agreements is pivotal in laying the formulation of Malaysia's trade and trade-related policies. In order to ensure markets remain open, Malaysia is committed to the trade liberalization process and negotiations through the rules-based multilateral trading system under the WTO.

Malaysia is also seeking closer economic relations at both a regional and bilateral level to enhance economic growth and complement its push for greater market access (WTO, 2006). Malaysia participates in the ASEAN Free Trade Area (AFTA) and ASEAN is engaged in trade negotiations with Japan, India, Korea, China, Australia, and New Zealand. Malaysia is also pursuing bilateral FTA negotiations with Japan, India, Korea, New Zealand, and Australia and recently signed a trade and investment framework agreement with the United States. Malaysia continues to accord at least Most Favoured Nation (MFN) treatment to all its trading partners.

World Trade Organization

Malaysia is an original member of the WTO and the Ministerial Declaration on Trade in Information Technology Products under which it is implementing its tariff elimination commitments. The Ministry of International Trade and Industries (MITI) takes the lead role for the implementation of many WTO agreements and is being supported by several ministries and agencies such as the Ministry of Finance, Agriculture, Plantation Industries and Commodities, Health, SIRIM, Department of Standards, Royal Customs and Excise Department and the Attorney General's Chambers.

Malaysia has participated actively in all WTO negotiations to ensure that the global trading environment remains open, transparent, and predictable. Malaysia views WTO negotiations as an opportunity to seek greater market access for its goods and services in both developed and developing markets. Active participation in international trade has helped transform Malaysia from an agri-based to a manufacturing-based economy exporting to global markets.

With respect to the Doha Development Agenda (DDA) negotiations, Malaysia notes that overall, the issues of concern and interest were adequately addressed in the 2004 "July

Package". As a member of the Cairns group, Malaysia's participation in the agriculture negotiations is guided by the need to substantially reduce all market distortions in the global market that pose unfair competition to Malaysia's exports; it seeks commitments to eliminate agricultural subsidies and substantial reductions in high tariffs. Malaysia seeks flexibility to use policy measures, including government support, to pursue developmental goals, such as poverty reduction and rural employment.

On Non-Agricultural Market Access (NAMA), Malaysia, as a major exporter of manufactured goods, is keen to address high tariffs and tariff escalation. In services, Malaysia's initial offer tabled in December 2004 contains improvements to offers made in the Uruguay Round as well as new commitments. Malaysia has called for a balance between progress in market access and in rule-making, in particular on the emergency safeguard mechanism. The Government is of the view that the domestic service industries should take advantage of the opportunities that can come from liberalization, but that appropriate safeguard mechanisms must be put in place to ensure fair and rules-based trade in services.

Regional Agreements

Malaysia has also pursued trade liberalization at the regional and bilateral level in order to maximize all opportunities for enhancing the country's economic growth. Malaysia is seeking arrangements that provide mutual benefits among signatories, are consistent with WTO rules, and allow sufficient flexibility to address specific sectoral and development concerns (Table 4.6).

Asia Pacific Economic Co-operation (APEC)

Malaysia participates in the APEC forum and aims to implement free trade and investment by 2020 along with other developing country members, as agreed at Bogor in 1994. Members have continued to implement the APEC Trade Facilitation Action Plan, which aims to cut transaction costs in the region by 5% by 2006. APEC members have agreed on transparency standards – designed to foster greater transparency in laws, procedures and administrative rulings of APEC members – in eight areas: services, investment, competition policy and deregulation, intellectual property, customs procedures, business mobility, market access and standards. Rule making and liberalization through WTO negotiations are central to their work toward free and open trade and investment, as is the pursuit of WTO-consistent bilateral and regional free-trade agreements.

Under its 2004 Individual Action Plan (IAP) to liberalize the economy, Malaysia indicated, *inter alia*, the reduction/elimination of import duties on 145 items, the lifting of an import prohibition on certain agricultural products such as cocoa pods, rambutan, pulasan, longan and namnam fruit produced in the Philippines and Indonesia, alignment of 50% of Malaysian standards with international standards, improvement of several investment guidelines, and the introduction of measures to enforce intellectual property laws. Each APEC member economy has had a voluntary review of its IAPs: Malaysia's review, in 2004, concluded that openness to international trade and investment continue to make a major contribution to Malaysia's progress towards its goal of developed country status by 2020, even though there are still high levels of import protection in certain sectors (APEC; 2004, 2005).

Table 4.6: Malaysia's Involvement in Regional Trading Initiatives with Non-ASEAN Partners, June 2005

Partner	Title	Scope	Status
Japan	ASEAN-Japan Comprehensive Economic Partnership	Goods, services, investment liberalization by 2012; facilitation; economic and technical cooperation	Negotiations commenced April 2005; commitment to conclude within two years
Australia	ASEAN-Australia and NZ FTA	Comprehensive for goods, services and investment within ten years	Agreement in November 2004 to establish an FTA by 2007
New Zealand	See above	See above	See above
India	ASEAN-India CECA	Goods expected to be completed by end of 2005; services and investment; DS mechanism	Framework Agreement signed in October 2003; Negotiations to finalize FTA on goods by end 2005; services and investment by 2007; to establish DS mechanism by end 2005
Korea	ASEAN-Korea FTA	To expand two-way trade and investment by liberalizing and integrating markets; at least 80% of goods at zero tariff by 2009	Negotiations commenced early 2005; scheduled to be completed by end 2006
China	ASEAN-China CECA Framework	FTA on goods by 2010 for ASEAN-6; FTA for services trade and investment to be implemented within mutually agreed timeframes Early Harvest programme for tariff elimination on selected products; cooperation in other areas	Framework agreement entered into force on 1 July 2003

Source: Ministry of International Trade and Industries, various years.

Table 4.7: Malaysia's Involvement in Bilateral Trading Initiatives with Non-ASEAN Partners, June 2005

Partner	Title	Scope	Status
Japan	Japan-Malaysia Economic Partnership Agreement	FTA: trade in goods, agriculture, services, and investment with flexibility for sensitive sectors; economic cooperation in several sectors	Negotiations started 2003; agreement in principle in May 2005; expected to be signed in December 2005
United States	Malaysia-US TIFA ^a	Trade and investment; possibility of FTA	Signed in May 2004
Australia	Malaysia-Australia FTA	Comprehensive	FTA negotiations began in April 2005, to conclude mid-2006
New Zealand	Malaysia-NZ FTA	FTA: to address high tariffs, NTMs, MRAs, facilitation of investment flows in agriculture and agri-based industries	Agreement in March 2005 to conclude negotiations by end 2005
India	Malaysia-India CECA ^b	To enhance exports of goods and services and expand cooperation in advanced sectors (biotechnology, software development, science and education)	Decision in December 2004 to develop joint study report by mid-2006
Korea	Malaysia-Korea FTA	Trade in goods and services, investment promotion, economic and technical cooperation	Negotiations to start after taking into account ASEAN-Korea FTA talks, which started early 2005
Pakistan	Malaysia-Pakistan FTA	Liberalization of trade in goods, services, investment, and economic cooperation	Negotiations commenced in April 2005; Negotiations for trade in goods and investment to be finalized by end 2005; services to be initiated end 2005

a Trade and Investment Framework Agreement.

b Comprehensive Economic Cooperation Agreement.

Source: Malaysia Ministry of International Trade and Industries, various years.

Association of Southeast Asian Nations (ASEAN)

Malaysia is a founding member of ASEAN which, as a group, continues to be Malaysia's largest trading partner and, as a market of 530 mn people, is believed to provide significant economic benefits. The Framework Agreement on enhancing economic cooperation, signed in 1992, established the Common Effective Preferential Tariff (CEPT) Scheme, which aimed to achieve an ASEAN Free Trade Area (AFTA). Under the CEPT it was agreed that tariffs on goods subject to tariff reductions would be reduced to 0-5% by 2002 for the original founding members plus Brunei (ASEAN-6), by 2006 for Viet Nam, by 2008 for Laos and Myanmar, and by 2010 for Cambodia. Tariff reduction/elimination under the AFTA is granted on a reciprocal basis and products with at least 40% of local content (both single and cumulative content) originate from any ASEAN member states are eligible for a tariff concession. The process of reducing tariffs, which began in 1993, has almost been completed. The ASEAN-6 members have fully complied, by including 98.9% of the products into the CEPT Scheme of which 99.6% are at tariff rate between 0-5% (MITI 2001, 2002, 2003, 2004; ASEAN online information)

ASEAN is also working to remove non-tariff barriers to intra-ASEAN trade; harmonize customs nomenclature, valuation and procedures; harmonize product standards and regulatory requirements; and improve rules of origin under the CEPT.

The ASEAN Framework Agreement on Services, signed in 1995, guides services liberalization over and above WTO commitments, and promotes cooperation among service suppliers in ASEAN. ASEAN countries are currently working on expanding negotiations to cover all sectors and all modes of supply.

The ASEAN Investment Area Agreement, signed in 1998, aims at facilitating the free flow of direct investment, technology, and skilled professionals. The agreement covers manufacturing, agriculture, fisheries, forestry and mining as well as services activities related to these sectors. Certain sensitive sectors in Malaysia such as pineapple canning, palm oil industry, milling and refinery, sugar refinery, sawn timber, veneer and plywood, petroleum refinery, batik, timber extraction, fisheries, cement, and oleochemicals are subject to exclusion. The ASEAN Investment Area Agreement aims to increase intra-ASEAN investment and FDI, to promote the economic integration of ASEAN, and to jointly promote ASEAN as an attractive region for FDI. Malaysian companies are among the most active investors in the region.

ASEAN is also looking to enhance regional economic integration through the establishment of the ASEAN Economic Community (AEC) – a single market providing for the free flow of goods, services, skilled labour and capital – by 2020. Member countries have identified 11 priority sectors: agri-based products, air travel, automotive products, electronics, fisheries, healthcare, rubber-based products, information/communications technology sector (products and services) related to e-commerce, textiles and apparel, tourism, and wood-based products. In 2004, they signed a Framework Agreement for the Integration of Priority Sectors to accelerate their integration across members. In 2003, the priority sectors accounted for more than 50% of intra-ASEAN trade.

ASEAN Regional-plus FTAs

ASEAN is seeking FTAs with other partners such as China, Japan, Korea, Australia, New Zealand, and India. At the ASEAN summit in 2002, ASEAN members and China signed a framework agreement to begin negotiations in 2003 to create the world's largest FTA with a combined market of 1.7 bn people. The ASEAN–China FTA is expected to be implemented over ten years through progressive elimination of tariffs and non-tariff barriers and progressive liberalization of trade in services and investment. The Agreement in Goods was signed in November 2004. The first package of tariff reductions, covering 40% of the tariff lines, was implemented on 1 July 2005; products covered by the "early harvest package", implemented on 1 January 2004, include live animals, meat, fish, dairy produce, other animal products, live trees, vegetables, fruit, and nuts. Talks are on-going for the agreement on trade in services and investment.

ASEAN also cooperates with Australia and New Zealand under the AFTA–CER Closer Economic Partnership, including on e-commerce, legal infrastructure, mutual recognition of skills, quality assurance systems for fruit and vegetables, and quality assurance and safety of fish and fishery products, processing and packaging. Negotiations to establish an ASEAN–CER FTA commenced in April 2005 to be completed by two years. Cooperation with the EU is taking place on trade facilitation, industrial standards, food products and investment promotion under the Trans-EU ASEAN Regional Trade Initiative (TREATI). ASEAN and EU are currently undertaking a joint feasibility study on a possible FTA. ASEAN is also working with the United States towards a U.S.–ASEAN Trade and Investment Framework Agreement (TIFA) under the Enterprise for ASEAN initiative (EAI) announced by the United States in 2002.

Negotiations began in 2004 to establish an ASEAN-India FTA by 2011 for ASEAN-5 and the Philippines, and the other ASEAN members by 2016. Negotiations also commenced between ASEAN and Japan to establish an ASEAN–Japan Comprehensive Economic Partnership covering a regional free-trade area in goods and services by 2012 for the ASEAN-6 and by 2017 for newer ASEAN members. ASEAN and Korea commenced negotiations in April 2005 to establish an FTA; the two sides have agreed to eliminate tariffs on at least 80% of goods by 1 January 2009.

Bilateral Agreements

Like many other countries in Asia, Malaysia has been negotiating bilateral FTAs, which are separate from negotiations through ASEAN. Malaysia is currently negotiating with Japan, India, Korea, Australia, New Zealand, and Pakistan. Malaysia has also signed a Trade and Investment Framework Agreement with the United States (Table 4.7).

A working group on Japan-Malaysia Economic Partnership was established in May 2003 and meetings were convened in late 2003 to study a broad range of issues including liberalization and facilitation of trade in goods and services, investment, and cooperation in education, HRD, ICT, R&D and science and technology. Formal negotiations were held six times between January and November 2004. According to press reports, Japan and Malaysia reached an agreement in principle in May 2005 that abolishes most tariffs between the two countries by 2015. It is the first bilateral FTA for Malaysia.

In December 2004, Malaysia and India agreed to conclude a Comprehensive Economic Co-operation Agreement, which includes the possibility of an FTA. A joint study group

was set up, *inter alia*, to see how the two countries can upgrade their economic cooperation beyond traditional agricultural trade, and in particular to: develop a policy framework for enhancing trade in goods and services and investment including the feasibility of an FTA in goods; further economic cooperation in areas of mutual interest such as ICT, biotechnology, pharmaceuticals, healthcare, education and tourism; and encourage investment flows across borders.

A Trade and Investment Framework Agreement between Malaysia and the United States, signed in May 2004, represents an important milestone in the U.S.–Malaysian economic partnership. The United States buys more from Malaysia than it does from any other ASEAN country. U.S. investment in Malaysia is US\$8.5 bn. The authorities believe that the agreement represents a step towards improving competitiveness and sustaining growth and development by diversifying growth engines. Malaysia is keen both to position itself as a springboard to the growing ASEAN and Chinese markets and to retain American companies as top foreign investors. The inclusion of biotechnology in the framework reflects the Government's high priority on this sector and on the importance of dialogue on intellectual property rights, and the inclusion of trade in services is consistent with Malaysia's interest in strengthening its services sectors. The exclusion of government procurement reflects Malaysia's position in the WTO that this area should not be included in international trade agreements.

Trade Policies Related to Agriculture Sector

The modernization of agriculture is one of the main policy goals of the Malaysian Government. It intends to develop the unused potential in fruit, aquaculture, and livestock output and through various incentives, subsidies, and training schemes is promoting labour-saving techniques, greater commercial orientation, adoption of new technologies and modern farm management systems, and greater participation by the private sector.

Foreign investment in agriculture has considerable potential to contribute to modernization in areas such as downstream processing industries, which could benefit supply-chain management and productivity in agriculture more generally. There are, however, limitations on foreign ownership in agriculture, including on ownership of rural land. Most land designated for agricultural use is under state jurisdiction or is reserved for Malays.

The Ninth Economic Development Plan of Malaysia focused on revitalizing the agriculture sector and making it a third engine of economic growth after manufacturing and services. The aim is to make Malaysia a competitive global producer of high quality and safe agricultural products that meet international standards. Policy emphasis is on: (1) adopting modern agricultural methods through R&D including biotechnology (Malaysia has established three laboratories in molecular biology, agricultural biotechnology, and nutraceutical and pharmaceutical biotechnology); (2) developing Malaysia as a centre of processing, packaging, and marketing of agricultural products; (3) encouraging the private sector, and especially GLCs, to act as a catalyst in the commercialization of the agriculture sector; and (4) developing the country into a competitive food exporter in selected areas such as aquaculture, deep-sea fishing, ornamental fish breeding, as well as *halal* products.

Trade Regimes

Import Tariffs and Tariff Rate Quotas

Malaysia's agricultural trade regime is relatively open. Many commodities carry zero or low applied tariffs, including zero for wool, meat, cereals, oilseeds, and animal feed, although some horticulture and processed food products face applied tariffs of up to 30%. Many bound tariffs are considerably higher than the rates currently applied: the products involved include pork (applied rate zero, bound rate nearly 140%), preserved meat (applied zero, bound 168%), milk and cream (applied zero, bound 54%) (Table 4.8). Specific rate tariffs apply to some tropical fruit and alcoholic beverages, notably wine. Imports of commodity-type fisheries products are generally duty free but the more value-added products generally face duties of up to 20%. There is marked tariff escalation in forestry products.

Table 4.8: Tariffs Affecting Imports of Selected Agriculture Products into Malaysia

Item	Maximum applied tariff (%) unless specified)	Max.WTO bound rate (ad valorem)	Max.WTO bound rate (specific, (RM/unit))
Meat			
Bovine meat, fresh or chilled	0	15	
Bovine meat, frozen	0	15	
Pork	0	138.6 ^a	
Sheep or goat meat, fresh, chilled or frozen	0	15	
Offal of beef, pork, sheep, goats	0	15	
Poultry	0	85 ^a	
Preserved meat	0	167.87 ^a	
Milk and cream	0	54.4 (liquid) ^a	RM 8.82/100 kg. ^b
Milk powder/other solid form	5	5	41.89/100 kg. (condensed)
Yoghurt (flavoured)	25	10	
Butter and butter fats	2	5	
Cheese	5-10	10	
Honey			
Natural honey	2	5	0.55/kg.
Vegetables			
Frozen vegetables	8 (sweet corn)	5	
Preserved vegetables	7	20	
Dried vegetables	5	15	9.84/kg.
Cassava and sweet potatoes	5	5	31/kg.
Fruit			
Pineapples	827/tonne		608/tonne
Avocados	5	16	
Mangoes	5+220.45/t	5	224.70/t
Citrus	5-10	20	various
Grapes	5	20	
Melons and pawpaws	5+661.40/t	5	661.40/t
Table 4.8 (Cont'd)			
Apples and pears	5	20	
Apricots, cherries, peaches and plums	10	20	661.40/t

Item	Maximum applied tariff (%) unless specified)	Max.WTO bound rate (ad valorem)	Max.WTO bound rate (specific, (RM/unit))
Berries and other fruit	5-30	20	661.40/t
Dried fruit, mixed nuts or fruit	20	20	1,322.77/t
Processed animal/vegetable fats/oils	5	20	88.18/t
Margarine	20	30 (almond) (liquid)	198.92/t (groundnut)
Sausages and similar products	15	15	
Other prepared meat	15	15	
Cane or beet sugar	0	15	385.45/t
Other sugars and sugar syrups	15	20	369.3/kg.
Sugar confectionery	15	30	
Chocolate and cocoa preparations	15	15	2/kg.
Cereal and dairy preparations	7	31	44.85/kg.
Pasta	8	20	
Bread, pastry, cakes and biscuits	6	15	
Veg./fruit/nuts preserved by vinegar	8	20	
Tomatoes prepared/preserved	8	20	14.96/kg.
Frozen/preserved vegetables	20	20	14.96/kg.
Other prepared vegetables, not frozen	20	20	14.96/kg.
Fruit or nuts otherwise prepared	20	20	744/kg. (pineapples)
Fruit juices	30	20	
Sauces and condiments	20	20	
Soups	20	20	
Ice cream and other edible ice	5	5	
Other food preparations	20	20	
Waters	20	20	
Sweetened or flavoured drinks	20	15	
Beer	5/litre		150/decalitre
Wine	23/litre		1,200/decalitre

Source: WTO Uruguay Round Schedule XXXIX; Malaysian Government Budget Papers 2004.

a Tariff quota applies. b SSG – special safeguard applies.

Note: Items in brackets (e.g. liquid) refer to the specific product within a class that attracts the maximum rate. Maximum tariff rate for each item is shown. If both *ad valorem* (%) and specific (RM) tariffs, rate may be whichever is the higher, both %+RM, or refer to different tariff lines within an item. WTO bound tariffs are final rates by 2004, applied tariffs as at September 2004. Where maximum applied rate is higher than bound rate further investigation is required.

Malaysia retains the right under its WTO commitments to apply tariff rate quotas on poultry products, pork products, fresh milk, cabbage, coffee, flour, and sugar. The over-quota tariffs on these products are currently at zero so the quota restrictions do not apply. Malaysia has reserved, but has not used, the right to apply the special safeguard provisions under the WTO Agreement on Agriculture.

Import Licenses

A number of agricultural products remain subject to import licensing requirements, including rice and rice products, sugar, un-manufactured tobacco, milk, cabbage, coffee,

and cereal flours. BERNAS, a government corporation, is the sole authorized importer of rice, and import licences for white sugar are reportedly available only to certain Malaysian sugar refiners, which effectively shuts the market to white sugar imports. Livestock imports are subject to licensing in addition to veterinary certification. This implies that market access is potentially subject to limitations. Malaysia's food standards and labelling regime, in particular the *halal* trade regime, has also caused concern among foreign exporters. One issue seems to be the accreditation of foreign abattoirs in cases where the Malaysian Department of Islamic Affairs (JAKIM) does not recognize another country's *halal* approval and accreditation programme for meat; this creates uncertainty for foreign exporters of some processed foods.

Export and Domestic Subsidies

Malaysia has no export subsidy programmes that are subject to WTO reduction commitments. The Government provides support and protection to the rice and tobacco sub-sectors. Production subsidies on fertilizer apply only for rice production. The situation regarding domestic support appears to be the same as in 2001. With a view to maintaining food security and eradicating poverty, the Government provides support and accords protection to two main sub-sectors in agriculture, i.e. rice (for food security and poverty reasons) and tobacco (for poverty reasons). The largest outlay in connection with domestic support involves the financing of a minimum price for rice; this amounted to RM 476.6 mn in 2004. The Government maintains a guaranteed minimum price and a paddy price subsidy for paddy farmers. Under the guaranteed minimum price scheme, BERNAS undertakes to buy paddy from farmers at not less than the guaranteed minimum price, which is currently RM 55.00 per 100 kg for both long and medium grains. Under the paddy price subsidy programme, the Government makes fixed payments (currently RM 24.81 per 100 kg) to farmers for the paddy sold by them to any commercial rice mill. This subsidy is in addition to the price received by the farmers for the paddy, and constitutes the largest domestic support outlay for agricultural production.

Export taxes, charges, and levies

Export duties are imposed on Malaysia's main agricultural commodities, such as palm oil. The purpose of Malaysia's export duties is to discourage the export of raw materials and to encourage downstream activities in the country. For example, a 5% export duty is levied on cockles (molluscs), live cattle, buffaloes, goats, and wild animals and birds. In this area, Malaysia's level of self-sufficiency is considered to be low and the export of wildlife is discouraged for conservation purposes.

Export duties are also imposed to fund research and development and promotion activities for commodities in downstream and upstream industries and to maintain an adequate supply of certain goods in the domestic market. Currently, export duties are 15% on logs and range from 10% to 30% for crude palm oil, based on tonnage. The Government imposes an export levy on selected species of sawn timber to ensure an adequate supply for timber-based industries and for research and development. Rubber wood was subject to an export quota and, in June 2005, the Government imposed an export ban; this indirect support to domestic users is to assist the development of downstream industries, the domestic furniture makers, which provide value-added content.

Halal Certification

Malaysia has played a leading role in the development of *halal* certification, reflecting the Government's objective of developing the country as a hub for *halal* food products. All meat, processed meat products, poultry, eggs, and egg products must receive *halal* certification from the Department of Islamic Development Malaysia (JAKIM). Malaysian standards in this area were further strengthened in July 2004 through new guidelines issued by the DSM (first revision of MS 1500:2004). It involves adopting procedures for slaughtering, processing, and other related operations as prescribed by Islamic rules. It certifies raw materials, ingredients, and products based on quality, sanitary, and safety considerations. Each individual product, rather than the production plant, must receive *halal* certification. The certificate is issued on the joint recommendation of the Malaysian Department of Veterinary Services and JAKIM following an on-site inspection. The UN's Codex Alimentarius Commission has cited Malaysia as the best global example for *halal* food. In addition to meeting *halal* requirements, food producers are encouraged to adopt and maintain standards that meet global benchmarks such as ISO 9000, Codex Alimentarius, the Quality Assurance Programme, Hazard Analysis and Critical Control Point (HACCP), Good Hygienic Practice (GHP), and Sanitation Standard Operating procedures (SOPs).

Sanitary and Phytosanitary Regulations

The WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) recognizes the international standards, guidelines and recommendations, *inter alia*, of the World Organisation for Animal Health (OIE), the International Plant Protection Convention (IPPC), and the Codex Alimentarius Commission. As a member and active participant in these and various other international organizations, Malaysia maintains SPS measures in compliance with those international standards. The country has established three SPS enquiry points: the Strategic Planning and International Division of the Ministry of Agriculture and Agro-based Industry, responsible for matters relating to plants, livestock, and fisheries (and Malaysia's sole national notification authority for SPS regulations adopted or proposed); the Food Quality Control Division of the Ministry of Health, responsible for food safety matters; and the Department of Veterinary Services, enquiry point for matters relating to animal and animal products.

Malaysia applies sanitary and phytosanitary (SPS) measures to trade in plants, forest products, food and animal and seafood products. Malaysia's policy for sanitary and phytosanitary measures remain essentially unchanged since 2001. The regulatory framework under which SPS measures are implemented include the Plant Quarantine Act 1976 and the Rules of Plant Quarantine 1981, based on the Codex Alimentarius Commission and the International Plant Protection Convention (IPPC), aimed at protecting Malaysia's agriculture from foreign plant diseases and pests and ensuring that Malaysian plant product exports are free from infection. The Animal Ordinance 1953 aims primarily to prevent animal diseases and pests from infecting Malaysian livestock; it regulates activities with regard to control and eradication of disease, animal conservation and welfare, export/import control and enforcement. The Fisheries Act 1953 covers the distribution and marketing of live fish and related organisms, and the Food Act 1983 and Food Regulations 1985 cover the preparation, sale, and use of food.

Under Malaysian food standards and regulations domestic and imported food products must be processed, stored and handled in a sanitary manner. The authorities have

worked to harmonize food standards with those applied internationally; Malaysia has contributed to the development of Codex standards for certain products such as palm oil and anchovies. There are nutritional labelling requirements for certain food products, including cereals, breads, milk, various canned foods and fruit juices, soft drinks, and salad dressings.

Malaysia implements SPS measures in conformity with SPS standards endorsed by the relevant international organizations for plant and animal health. Between 2001 and 2004 there were 56 cases where Malaysia, in accordance with OIE guidelines, restricted imports of livestock products due to diseases reported in the respective exporting countries.

In order to meet SPS requirements in importing countries, Malaysia has also implemented accreditation schemes for the crop, livestock, and fisheries sectors. These include the Farm Accreditation Scheme of Malaysia (SALM), Livestock Farms Certification Scheme (SALT), and Malaysian Aquafarm Certification Scheme (SPLAM). The schemes are aimed at encouraging the practice of good farm, husbandry, and aquaculture practice.

Nutritional Labelling

Malaysia requires labelling with nutritional information on certain processed, packaged food products sold in Malaysia. The products include cereals, breads, milk, canned meat, canned fish, canned fruit and vegetables, fruit juices, soft drinks, and salad dressings. Nutrition labelling regulations issued in March 2003 outline the type and format of the nutritional information required. The regulations limit the kinds of nutritional claims, such as "reduced sodium", "low cholesterol", or "high fibre", that can appear on food packaging. Enforcement of the regulation began on 1 March 2004.

Research on genetically modified organisms (GMOs) is currently conducted on a small scale, mainly in government-funded research institutions and universities. Malaysia has established a Genetic Modification Advisory Committee (GMAC), under the Ministry of Science, Technology and the Environment. The role of the GMAC will include identification and safety management of risks associated with the use of GMOs and related products; it has drafted a guideline for the release of GMOs into the environment. The proposed policy will cover safety issues in agriculture, public health, the environment, and trans-boundary issues pertaining to the release of GMOs and products containing or consisting of GMOs.

Summary

Malaysia economic growth is largely dependent on international trade. Being a trading nation, it actively pursue and strongly support trade liberalization through multilateral, regional and bilateral trade agreements.

The balance of trade (BOT) for agriculture and food products between 1990 and 2005 are positive. The exports and imports of the agricultural and food products showed increasing trends during this period. The food export and the imports of both agricultural and food products registered more than double increments between 1990 and 2005.

Malaysia is committed to the trade liberalization process and negotiations through the rules-based multilateral trading system under the WTO. In order to enhance economic growth and complement its push for greater market access, Malaysia is also seeking closer economic relations at both regional and bilateral levels by participating in the ASEAN Free Trade Area (AFTA) and ASEAN-regional plus FTAs with other countries. Malaysia is also pursuing bilateral FTA negotiations with Japan, India, Korea, New Zealand, Australia and the United States.

The Ninth Economic Development Plan of Malaysia aimed at making Malaysia a competitive global producer of high quality and safe agricultural products that meet international standards. Malaysia has implemented a number of agricultural trade regimes to achieve the above. They include zero or low applied import tariffs for many agricultural commodities; imposing import licensing requirements for a number of agricultural products; providing production subsidies and protection for rice and tobacco for food security and poverty reasons; imposing export duties on main agricultural commodities, such as palm oil to discourage the export of raw materials and to encourage downstream activities in the country; developing *halal* certification and encouraging food processors to adopt and maintain standards that meet global benchmarks such as ISO 9000, Codex Alimentarius, the Quality Assurance Programme, Hazard Analysis and Critical Control Point (HACCP), Good Hygienic Practice (GHP), and Sanitation Standard Operating procedures (SOPs); requiring labelling with nutritional information on certain processed, packaged food products sold in Malaysia; and establishing a Genetic Modification Advisory Committee (GMAC) to identify and manage risks associated with the use of GMOs and related products.

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PART 5 Conclusions, Opportunities for Cooperation and Policy Recommendations

Unlike other developing economies, the Malaysian agriculture is characterised by a significant bi-modal development between the estate sector and the smallholder side by side, the legacy brought about by the former colonials in the late 1890s until 1950s. As a result of their policy to extract as much profit as possible from the local resources, efforts were channelled towards the development of agricultural raw materials, particularly rubber, to fulfil the demand from the automotive industries at home. This explicit policy of developing the “cash or export crop” has implicitly marginalised and retarded the growth of the food sector and other smallholder crops sector. Hence the dualism is not only between the estates and the smallholder sector, but also between the cash/export crops and the food sector. Besides, within a sub-sector itself, there exists a clear demarcation between the highly commercialised and not-so-commercialised farms. They differ in sizes, productivity, extent of market orientation and return to factors. This distinct characteristic of the Malaysian agriculture has a compounding effect on its performance both in the domestic and international fronts.

Over the years the Malaysian agriculture policy has evolved in accordance to the demands of the era of its formulation. In the 1960s, the addressal of rampant poverty in the agricultural and rural areas became the main development agenda to ensure equitable growth between region and ethnic groups in the country. “Growth with equity” has been the national agenda ever since; till to date. A number of strategies have been introduced. The major ones being the agrarian reform in the form of relocating landless and poor farmers to new land areas to work on rubber and palm oil under the management of land development institutions such as FELDA and RISDA. This strategy has succeeded in diluting the stronghold of the private estates in the rubber and palm oil sectors while addressing the poverty problem and increasing the production of the two commodities. Other strategies include infrastructures (particularly irrigation, public utilities and communication) and institutional supports.

The country further embarked on a diversification program to reduce dependency on a number of export crops; i.e., rubber and palm oil. This was done by developing the downstream sector as well as the food sector. For instance, a number of fiscal policy measures were introduced to encourage the development of palm oil refining activities in the country by taxing the exports of crude palm oil. Research cess was imposed on rubber and palm oil to provide funds for R&D for these commodities. Other market incentives were introduced to increase investment into these industries particularly through encouraging FDIs into the sector. Malaysia has also improved her competitiveness in these two commodities through export promotion and a number of institutional supports. Palm oil industry has turned out to be a big success as currently Malaysia commands the largest share in the world production and exports of palm oil and its product. The success of Malaysian palm oil is being emulated by the neighbouring countries such as Indonesia and Thailand.

However, the strategies to develop the food sector has somewhat failed as the focus was more on the food security issues rather than growth of the sector as a whole. The overly concern of the food security issue can be deduced from the depth of the government intervention on the industry concerned, i.e., paddy and rice (which is the staple food of the majority of the population). In the 1970s, the world market for rice was extremely unstable due to thin exportable surpluses from the exporting countries and the production of rice was unstable and susceptible to diseases and natural calamities. To insulate the industry from the market vagaries, the government has resorted to interventionist policy of supporting the industry from the production until marketing (including import) of rice. The whole set of intervention package was experimented which include input subsidies, cheaper irrigation rates, cash subsidies, price supports (at farm level), ceiling prices (retail level), government involvement in the milling activities and import monopoly. The policy objectives of the rice industry is multi pronged; i.e., to achieve self-sufficiency in rice while maintaining a high level of price to consumers and stable and high quality rice to consumers. The supported domestic price, in most cases was higher than the border price. Despite the heavy intervention, the industry has not progressed as much compared to the neighbouring countries in terms of productivity and efficiency. The current policy has shifted towards liberalising the industry from protectionist policy in stages to improve its competitiveness.

The rapid industrialisation, the emphasis on export crops and over-emphasis on the rice security concern has left the other food sectors unattended. These sectors include vegetables, fruits, fisheries and floriculture. However, the recent change in the marketing system and consumer lifestyle has made these industries more important than ever in terms of demand and product specification. Under the new supply chain, the retailing of consumer goods (including the agri-food) is done on a large scale by large multi-national retail chains. The marketing channels of agriculture produce have been shortened to enable “just in time delivery” and produce are subjected to rigid quality specification to ensure consumers’ loyalty. The increase in consumers’ income leads to change in consumption pattern and habits toward processed, pre-packed and high quality produce. The “consumer-centric” marketing signal is being transmitted into the various sectors in the agriculture. The response has been mixed as only the highly commercialised farms are able to adjust resources to the market requirement. The influx of cheaper food from the neighbouring countries and China has caused a concern to the government on the untapped potentials of the food sector in Malaysia. Under the 9MP, these sectors received a new emphasis in the form of higher allocation on biotechnological research to improve productivity and innovations. However, the trade issues on these produce remain the most challenging of all.

On the export front, Malaysia has done relatively well with palm oil and its products. However, it faces stiff competition from close substitutes such as soybean as well as other palm oil producers such as Indonesia and Thailand. The increase in fossil fuel prices and environmental concern may open up a new source of growth for the palm oil sector for the production of palm-oil based diesel.

The increase in petrol prices have revived the importance of the rubber sector in the country as the prices of synthetic rubber increased accordingly. Malaysia has secured a large market share for rubber gloves products in the world market. However, as for food exports, the situation is the reverse. In other words, Malaysia is not able to command significant share in the world food market. It has made some inroads for selected fruits such as guava, papaya and musk melon. The challenges faced by these industries are

both domestic and international. Malaysia does not have a clear competitive advantage in the production of fruits and vegetables due to limited progress in production technology and high cost of inputs (fertiliser and wages). The most formidable task at hand is to overcome market access barriers at the international market particularly in the developed countries or the north group of the world.

The South-south trade has been shown to provide potentials for efficiency gains to the developing country. In this context Malaysia has taken initiatives to promote South-south trade through intra-regional trade using the AFTA and other bilateral mechanisms. Malaysia participates in the ASEAN Free Trade Area (AFTA) and ASEAN is engaged in trade negotiations with both selected North and South countries. Malaysia is also pursuing bilateral FTA negotiation with selected North and South countries. Malaysia participates in the APEC forum and aims to implement free trade and investment by 2020 along with other developing country members. Malaysia is also a member of Organisation of Islamic Countries (OIC) and Non-Aligned Movement (NAM). Some of the commodity agreements in which Malaysia is a member include International Cocoa Agreement. In the case of International Natural Rubber Agreement (INRA), Malaysia has withdrawn after being the most active member since its inception. Malaysia was also the founding member of the defunct International Tin Agreement.

Unlike its partner in the north (in particular the OECD countries), the South lacks technical and intellectual supports for consultation (Anwarul Hoda, 2000). Collaborative research and networking between research agencies in the region is still weak. Hence, coordinated research among South-south countries (for example between Latin American and Asia) could be one of the most important forms of south-south cooperation. In the case of Malaysia, besides collaborative research with other southern countries, it is in dire need of comprehensive research on its own agricultural trade from all perspectives. Research in this area is very lacking indeed despite the importance of agricultural trade to the country. The whole spectrum of agricultural trade has to be studied which include the pattern of agricultural trade, the feasibility of regional trade agreement (or RTA), and implications of RTAs and various types of trade barriers and non-tariff barriers to the country. Specific topics may include issues on the extent of the special and differential treatment provisions respond to the needs of the developing countries; implications of subsidies withdrawal or dumping on the affected sectors, implications of NTBs, protection of traditional knowledge and folklores and others relevant issues.