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# Malaysia's Economic Structural Transformation: Whither The Agricultural Sector<sup>1</sup>

by

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## Abstract

Malaysia's agricultural sector was unintentionally neglected when the country embarked on its economic structural transformation policy to leap frog into an industrialised nation by 2020. It was a logical move as commodities prices fluctuated, more often downwards. Rubber and tin once a major foreign exchange earner lost its momentum as the major foreign exchange earner. The national policy focus shifted to industrialisation in mid 1970s, starting with import substitution policies, later to export oriented and heavy industries activities. The agricultural sector moved to the backseat of development. Veiled efforts to maintain the sector was unconvincing. The National Agricultural Policy (NAP) was only introduced in 1984, almost three decades after achieving independence in 1957, but in 1986, Malaysia introduced the Industrial Master Plan. Several economic downturns later, Malaysia realised that the agricultural sector needed the same attention as enjoyed by the other sectors. The 1997/1998 crisis unfolded the fragile economic fundamentals and a structure, which was earlier believed to be laid on a solid ground. It is perhaps for this reason that the agricultural sector was revived and the third NAP was announced soon after the crisis. In the Ninth Malaysia Plan (2006-2010) the agricultural sector was identified as the third engine of growth after the industrial and the services sectors and rebranded the *New Agriculture*. The Ministry of Agriculture was renamed the Ministry of Agriculture and Agro-Based Industry to reflect its wider scope of responsibilities. This paper seeks to better understand the scenario and to do the following: (1) to critically investigate why agriculture is back in the development agenda of the country, (2) to look at empirical evidences to support this move and (3) to analyse the effectiveness of the new policies introduced to meet the national agenda.

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## **Introduction**

Many factors led and contributed to the growth of the Malaysian economy since independence in 1957. The GDP grew, literacy improved, average lifespan extended and infant mortality decreased, to quote some of the usual indicators used by the many international organizations to measure growth and development of a nation. There were periods when the economy slumped. In 1975 the GDP dropped to 0.8 percent, compared to the previous year when it was 8.3 percent following the oil embargo. Again, in the early 1980s, when commodity prices plunged, Malaysia went through another rough time. The Asian Financial crisis of 1997/1998 also affected the nation's economy; but other nations in Southeast Asia probably suffered as well if not more. A legitimate government collapsed as was in the case of Indonesia as a result of the crisis, for example.

When Malaysia gained its independence in 1957, the economy was essentially agricultural based. Since then, economic structural transformation was planned and introduced for several justifiable reasons. Mainly, the agricultural sector could no longer support the growing economy especially the growing population. Commodity prices kept falling. Once, the main earner of the foreign exchange, commodities such as rubber and tin, cannot continue to support the economy. Nor can the agricultural sector absorb the growing population into the labour force. Malaysia introduced the industrial import substitution policies to transform the economy into the more resilient sector. From the import substitution sector, the economy developed into the export led sector, especially in the electrical and electronics sub-sector.

Thus, Malaysia's economy has now evolved from the agricultural-based to production-based and later the service-based economy. Now it is in the knowledge-based economy as a strategy for higher growth and development.

While the transformation took place, the agricultural sector was unintentionally neglected. With greater focus on the industrial sector, especially in the 1980s, Malaysia's agricultural sector dwindles. The fall of rubber price especially had a tremendous effect on once a viable agricultural sector. Palm oil suffered the same fate. While international rice price was considered reasonable, Malaysia's high labor cost and low rice productivity made rice farming unprofitable, without government support. Rice is Malaysia's staple and considered a security crop. Government thus subsidise the rice sector heavily to entice farmers to continue to grow rice, and mainly for security reasons.

### **The New Agriculture**

The agricultural sector was the nation's engine of growth with 50 percent share of GDP in 1957 and 80 percent of labour in 1960. At present, agriculture contributes less than 10 percent to GDP and 12 percent of labour. Agriculture contribution to the total nation export level also decreased from 60 percent in 1970 to 3 percent at present. Although relatively small to the other sectors now, it is still considered as an important sector after the industrial and the services sectors. When Abdullah Ahmad Badawi took office as the fifth Prime Minister of Malaysia in 2003, he declared the agricultural sector as the third important sector after the industrial and the services sectors. Moreover, since mid 1980s, interest in agriculture is resurging, largely fuelled by a new understanding that growth in agricultural sector plays a major role in overall growth and poverty reduction through linkages to manufacturing and services (Wong 2007).

Wong (2007) outlined three basic drivers of the renewed interest in agriculture. They are *Agro-Biotechnology Revolution, The Rise of Supermarkets and Reducing Poverty and Preserving the Environment*.

- a. *Agro-Biotechnology Revolution* – With development in genetics (both GMOs and non-GMOs), microbiology and diagnostics there are great expectations that agrobiotechnology can contribute greatly to innovations, cost reductions, productivity improvements, new processes, and new products.

- b. *The Rise of Supermarkets* – The supermarket revolution in Asia has transformed agri-food supply chains, especially food retail markets. Supermarkets increasingly connect farmers and other stakeholders more directly to meet the changing consumer preferences and demands.
- c. *Reducing Poverty and Preserving the Environment* – Agriculture is seen as the main vehicle at reducing poverty and preserving environment especially in the rural areas.

Incidentally, agriculture was finely tuned to be one of the revitalized sectors in the Malaysian economy under the Ninth Malaysia Plan (9MP), starting with rebranding of the Ministry of Agriculture (MOA) as the Ministry of Agriculture and Agro-based Industry (MOAAI) and the introduction of the term *New Agriculture*. *New Agriculture* involves large scale commercial farming, the wider application of modern technology, production of high quality and value-added products, unlocking the potential in biotechnology, increased convergence with information and communications technology (ICT), and the participation of entrepreneurial farmers and skilled workforce. The function of agricultural services will also be streamlined to enhance service delivery and efficiency (Malaysia 2006, p. 81).

As shown in Table 1 below, agriculture value added grew at 3.0 percent per annum over the Eight Malaysia Plan (8MP) period while agro-based industry grew at 4.5 percent per annum making the average annual growth rate over the 8MP for agriculture and agro-based industry to be 3.6 percent per annum. In the 9MP period agriculture is expected to grow at 5 per cent per annum while agro-based industry is expected to grow at 5.6 percent making the average annual growth rate for agriculture and agro-based industry under the 9MP to be 5.2 percent.

**Table 1: Value Added of Agriculture and Agro-Based Industry, 2000-2010**

Commodity	RM million (in 1987 prices)			% of Total			Average Annual Growth Rate (%)		
	2000	2005	2010	2000	2005	2010	8MP		9MP Target
							Target	Achieved	
<b>Agriculture</b>	<b>18,662</b>	<b>21,585</b>	<b>27,517</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>2.0</b>	<b>3.0</b>	<b>5.0</b>
<b>Industrial Commodities</b>	<b>11,033</b>	<b>13,278</b>	<b>15,521</b>	<b>59.1</b>	<b>60.6</b>	<b>56.4</b>	<b>0.7</b>	<b>3.8</b>	<b>3.2</b>
Oil Palm	5,860	7,915	10,068	31.4	36.7	36.6	3.4	6.2	4.9
Forestry and Logging	3,055	3,016	2,761	16.4	13.0	10.0	-5.6	-0.3	-1.7
Rubber	1,868	2,264	2,554	10.0	10.5	9.3	1.1	3.9	2.4
Cocoa	250	83	138	1.3	0.4	0.5	0.1	-19.8	10.8
<b>Food Commodities</b>	<b>7,629</b>	<b>8,308</b>	<b>11,996</b>	<b>40.9</b>	<b>39.4</b>	<b>43.6</b>	<b>4.0</b>	<b>1.7</b>	<b>7.6</b>
Fisheries	2,493	2,389	3,875	13.4	12.6	14.1	4.1	-0.9	10.2
Livestock	1,520	2,089	2,483	8.1	8.1	9.0	6.0	6.6	3.5
Padi	590	632	988	3.2	3.4	3.6	2.7	1.4	9.4
Other Agriculture <sup>1</sup>	3,026	3,198	4,650	16.2	15.2	16.9	3.2	1.1	7.8
<b>Agro-Based Industry</b>	<b>13,584</b>	<b>16,928</b>	<b>22,221</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>4.0</b>	<b>4.5</b>	<b>5.6</b>
Vegetable and Animal Oils & Fats	2,526	3,639	5,614	18.6	21.5	25.3	6.3	7.6	9.1
Other Food Processing, Beverages & Tobacco	4,010	4,790	6,333	29.5	28.3	28.5	2.0	3.6	5.7
Wood Products including Furniture	2,934	2,972	3,761	21.6	17.6	16.9	0.6	0.3	4.8
Paper & Paper Products, Printing & Publishing	2,293	2,640	3,275	16.9	15.6	14.7	3.4	2.9	4.4
Rubber Processing & Products	1,821	2,887	3,238	13.4	17.1	14.6	4.7	9.7	2.3
<b>Total Agriculture and Agro-Based Industry</b>	<b>32,246</b>	<b>38,513</b>	<b>49,738</b>				<b>2.7</b>	<b>3.6</b>	<b>5.2</b>
<b>Gross Domestic Product at Purchasers' Prices</b>	<b>210,558</b>	<b>262,029</b>	<b>351,297</b>					<b>4.5</b>	<b>6.0</b>

Source: Department of Statistics and Economic Planning Unit

Notes: 1 Includes coconut, vegetables, fruits, tobacco and pepper.

As shown in Table 2, agriculture and agro-based manufactured export is also expected to increase from 14 percent of total exports in the year 2000 to 14.5 percent in the year 2010. Nevertheless, the average annual growth rate of the agriculture and agro-based manufacture export is expected to shrink from 9.5 percent over the period of 8MP to 9.1 percent under the 9MP. This is due to the expected drop in the agriculture exports.

**Table 2: Agriculture and Agro-Based Manufactured Export, 2000-2010**

Commodity	RM million			% of Total			Average Annual Growth Rate (%)	
	2000	2005	2010	2000	2005	2010	SMP Achieved	9MP Target
<b>Agriculture Exports</b>	<b>22,892</b>	<b>37,421</b>	<b>54,992</b>	<b>48.1</b>	<b>50.0</b>	<b>47.5</b>	<b>10.3</b>	<b>8.0</b>
% to Total Exports	6.1	7.0	6.8					
Industrial Commodities	18,428	31,509	37,244	38.7	42.1	32.2	11.3	3.4
Palm Oil	9,948	19,036	26,735	20.9	25.4	23.1	13.9	7.0
Rubber	2,571	5,787	5,156	5.4	7.7	4.5	17.6	-2.3
Sawlogs	2,489	2,465	2,100	5.2	3.3	1.8	-0.2	-3.2
Sawntimber	3,020	4,051	2,995	6.3	5.4	2.6	6.0	-5.9
Cocoa	33	50	128	0.1	0.1	0.1	8.8	20.5
Pepper	367	120	130	0.8	0.2	0.1	-20.0	1.6
Food Commodities	4,464	5,913	17,748	9.4	7.9	15.3	5.8	24.6
<b>Agro-Based Manufactured Exports</b>	<b>24,686</b>	<b>37,442</b>	<b>60,660</b>	<b>51.9</b>	<b>50.0</b>	<b>52.5</b>	<b>8.7</b>	<b>10.1</b>
% to Total Exports	6.6	7.0	7.6					
Food	4,509	8,627	15,803	9.5	11.5	13.7	13.9	12.9
Beverages and Tobacco	1,207	1,755	2,446	2.5	2.3	2.1	7.8	6.9
Wood Product	6,801	9,665	13,909	14.3	12.9	12.0	7.3	7.6
Furniture and Parts	6,077	8,454	14,335	12.8	11.3	12.4	6.8	11.1
Paper and Paper Product	1,397	2,018	2,799	2.9	2.7	2.4	7.6	6.8
Rubber Product	4,695	6,923	11,368	9.9	9.3	9.8	8.1	10.4
<b>Total Agriculture and Agro-Based Exports</b>	<b>47,578</b>	<b>74,863</b>	<b>115,652</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>9.5</b>	<b>9.1</b>
% of Total Exports	12.7	14.0	14.4					
<b>Total Exports</b>	<b>373,270</b>	<b>533,790</b>	<b>803,163</b>				<b>7.4</b>	<b>8.5</b>

Source: Department of Statistics and Economic Planning Unit

While it is expected that agriculture employment shows a decreasing pattern, a projected negative growth rate under the 9MP, the agro-based employment is expected to show a positive average annual growth rate of 2.5 percent as can be seen in Table 3. Hence, it is targeted that the total employment in agriculture and agro-based industry of 0.4 percent. Agro-based employment is targeted to the young population through the MOAAI tagline: *Agriculture is Business*.

**Table 3: Employment and Value Added Per Worker in Agriculture and Agro-Based Industry, 2000-2010**

	2000	2005	2010	Average Annual Growth Rate (%)		
				8MP		9MP Target
				Target	Achieved	
<b>Agriculture Employment</b>						
Number ('000)	1,423.0	1,405.7	1,323.8	-1.4	-0.2	-1.2
% of Total Employment	15.3	13.3	10.9			
Value Added Per Worker (RM in 1987 prices)	13,115	15,752	21,299	4.5	3.7	6.2
<b>Agro-Based Employment</b>						
Number ('000)	844.0	981.9	1,110.2		3.1	2.5
% of Total Employment	9.1	9.3	9.1			
Value Added Per Worker (RM in 1987 prices)	16,107	17,002	19,688		1.1	3.0
<b>Total Employment in Agriculture and Agro-Based Industry</b>	<b>2,267.0</b>	<b>2,387.6</b>	<b>2,434.0</b>		<b>1.0</b>	<b>0.4</b>
% of Total Employment	24.4	21.9	20.3			

Source: Department of Statistics and Economic Planning Unit

### National Agricultural Policy (NAP)

Although the agricultural sector was considered important in the nation in the early years, it was only in 1984, 27 years after independence, that the first National Agriculture Policy (NAP I) was introduced. The NAP provided a comprehensive and coordinated long-term policy for an effective development of the agricultural sector (Malaysia 1984). In addition, NAP serves as means for agricultural-industrial linkages through agro-based industries, which include processing, storage and handling of agricultural commodities to increase their value-added before export (Zulkifly 1988). NAP I was a 21-page document with emphasis was on raising efficiency of the agricultural sector, in particular the small holders. Indirectly, this is also a strategy to increase income of the rural poor, thus addressing the issue of poverty in the rural areas.



Subsequently, NAP II (1992-1998) was introduced less than a decade after NAP I with similar objectives to NAPI but with emphasis of overcoming its shortcomings. The main strategies outlined under NAP II include the optimum use of resources, development of integrated agro based industries, intensification of research and development (R&D), greater role of the private sector, marketing reform and diversification of food production for domestic use and export. With little progress and impact, the NAP II was reviewed six years later to be in line with the industrialization policy of the nation.

The National Agriculture Policy III (NAP III) (1998-2010) was only launched in 1998 at the time when the nation was facing the Asian Financial Crisis. The earlier launching date was delayed to take into account the volatility of the financial markets and its implications to the agricultural sector. The main objective of NAP 3 was to maximize income from agriculture and forestry through efficient use of its resources. Other specific objectives include, increasing food security through quality food production, enhancing agricultural linkages with other economic sectors, increase productivity and competitiveness in agriculture, sustaining the use of natural resources, and create new source of growth for agriculture. Two approaches were adopted under the NAP III: the agro-forestry approach and the product-based approach. Agro-forestry approach combines the agriculture and forestry activities to be compatible and complementing each other to face with the problems of shortage of labour, agricultural land and water supply. Product-based approach is to increase the contribution and income of agricultural sector in Malaysia. It takes into account demand, consumer needs and market to strategise agricultural production to be competitive with other economic sectors.

The term of the NAPIII ended in 2010. It is now ten months into 2011 and there have been no mention on the next NAP. So much uncertainties therefore lies ahead of Malaysia's agricultural sector.

## **Agricultural Commodities**

As can be seen from Table 4, Malaysian main industrial commodities are rubber and palm oil and main food commodity is paddy. It can be inferred from the Table that while production of agricultural activities are expected to increase in 2010, but their average annual growth rate is expected to decrease under the 9MP period as compared over the 8MP period, with saw logs, rubber and coconut reporting the least average annual growth rate.

### **Rubber**

Malaysia used to be a major exporter of rubber. While the ASEAN countries produce about 80 per cent of world rubber, Malaysia now lagged behind Thailand (30%) and Indonesia (25%) producing only about 20 per cent of the world's output. Malaysia's rubber production decline started after nation's industrialization policy, although many other factors contributed as well. Thailand and Indonesia expanded their output by opening up more land areas, which they have plenty compared to Malaysia. Shortage of cheap labour is another factor. With industrialization, rural-urban migration left the plantation with fewer workers. Small farms which usually depended on the family labour also suffered the same fate.

Declining price due to competition from synthetic rubber also contributed to the decline of rubber in Malaysia. This has led to continuous decline in the agricultural land use for the production of rubber from 1,781,000 hectares in 1993, 1,723,000 hectares in 1995, 1,663,400 hectares in 1997, 1,431,000 hectares in 2000 and projected to further decrease to 1,179,000 hectares in 2010 as shown in Table 5.

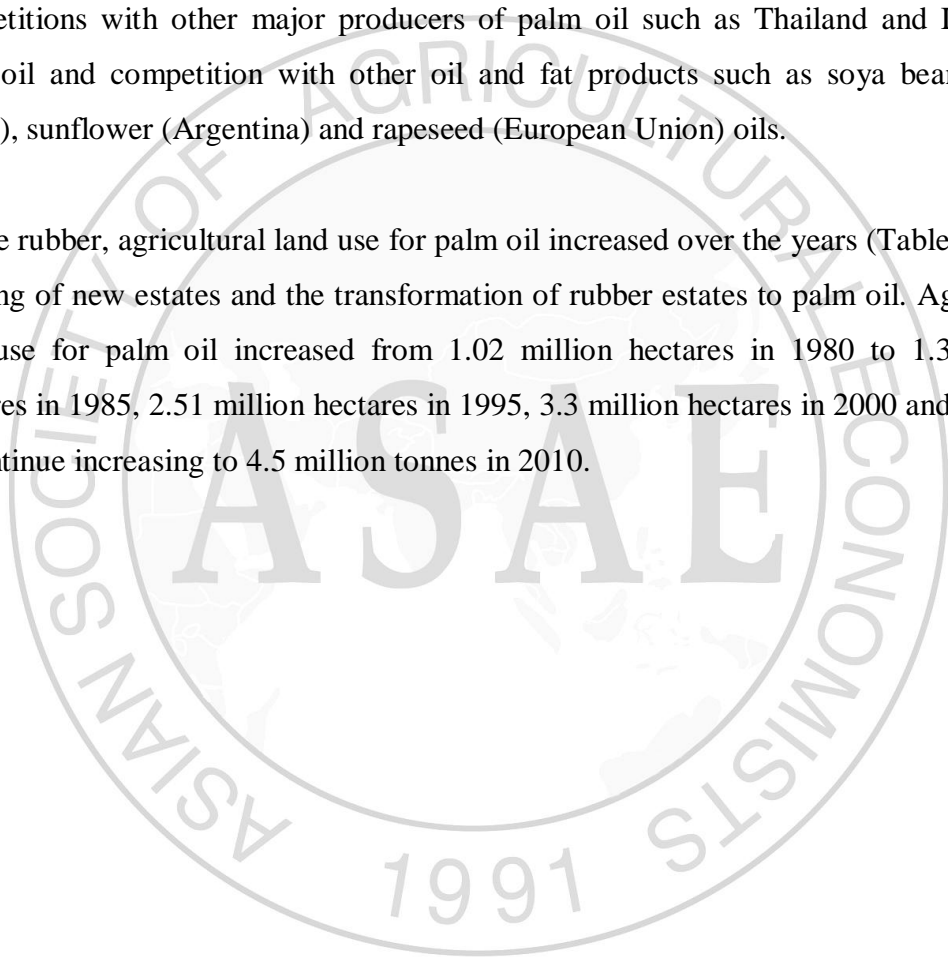
### **Palm Oil**

Palm oil took over the role of rubber as the main agricultural export especially when many rubber estates switched to palm oil when rubber prices dropped. Malaysian palm oil amounts to approximately 60 percent of total production. As can be seen from Table 4

and 5, production and exports of palm oil increased over the past years. Its production increase from 2.6 million metric tonnes in 1980 to 7.82 million metric tonnes in 1995 and increased to 14.9 million metric tonnes in 2000 and expected to further increase to 19.6 million metric tonnes in year 2010.

Like rubber, Malaysia's position as world's largest palm oil producer received competitions with other major producers of palm oil such as Thailand and Indonesia, palm oil and competition with other oil and fat products such as soya bean (United States), sunflower (Argentina) and rapeseed (European Union) oils.

Unlike rubber, agricultural land use for palm oil increased over the years (Table 5) due to opening of new estates and the transformation of rubber estates to palm oil. Agricultural land use for palm oil increased from 1.02 million hectares in 1980 to 1.35 million hectares in 1985, 2.51 million hectares in 1995, 3.3 million hectares in 2000 and expected to continue increasing to 4.5 million tonnes in 2010.



**Table 4: Production of Agricultural Commodities, 2000 – 2010**

Commodity	Metric Tonnes ('000)			Average Annual Growth Rate (%)		
	2000	2005	2010	SMP Target	SMP Achieved	9MP Target
<b>Industrial Commodities</b>						
Rubber	928	1,124	1,293	4.0	3.9	2.8
Crude Palm Oil	10,842	14,961	19,561	6.1	6.7	5.5
Palm Kernel Oil	1,384	1,868	2,570	5.0	6.2	6.6
Sawlogs <sup>1</sup>	23,074	21,334	19,475	-5.3	-1.6	-1.8
Cocoa	70	28	57	-5.7	-16.7	15.5
<b>Food Commodities</b>						
Padi	2,141	2,400	3,202	0.2	2.3	5.9
Fisheries	1,454	1,575	2,071	7.2	1.6	5.6
Marine	1,286	1,325	1,409	5.9	0.6	1.2
Aquaculture	168	250	662	18.3	8.3	21.5
Livestock						
Beef	17.5	28.5	45.0	18.0	10.2	9.6
Mutton	0.9	1.5	2.3	11.0	10.8	8.9
Pork	159.8	209.0	241.0	6.6	5.5	2.9
Poultry	714.3	980.1	1,295.0	4.7	6.5	5.7
Eggs	399.0	443.0	600.0	4.0	2.1	6.3
Milk <sup>2</sup>	29.5	41.1	68.4	8.9	6.9	10.7
<b>Miscellaneous</b>						
Pepper	24.0	19.1	30.0	5.9	-4.5	9.5
Pineapple	265.7	407.6	1,106.0	2.0	8.9	22.1
Tobacco	7.4	14.0	12.0	13.6	13.6	-3.0
Flowers <sup>3</sup>	120.4	126.4	147.3	3.3	1.0	3.1
Fruits	993.0	1,586.9	2,555.7	3.1	9.8	10.0
Vegetables	404.0	771.3	1,133.3	0.6	13.8	8.0
Coconut	475.7	602.0	660.0	0.6	4.8	1.9

Source: Ministry of Agriculture and Agro-Based Industry and Ministry of Plantation Industries and Commodities

Notes: 1 Measured in thousand cubic metres.

2 Measured in million litres.

3 Measured in million stalks.

**Table 5: Agricultural Land Use, 2000-2010**

Crop	Hectares ('000)			Average Annual Growth Rate (%)		
				SMP		9MP Target
	2000	2005	2010	Target	Achieved	
Oil Palm	3,377	4,049	4,555	3.2	3.7	2.4
Rubber	1,431	1,250	1,179	-2.7	-2.7	-1.2
Padi <sup>1</sup>	478	452	450	-0.5	-1.1	-0.1
Fruits	304	330	375	5.1	1.7	2.6
Coconut	159	180	180	-0.6	2.5	0.0
Cocoa	76	33	45	-2.4	-15.2	6.2
Vegetables	40	64	86	4.2	9.9	6.1
Tobacco	15	11	7	2.5	-6.0	-7.4
Pepper	13	13	14	2.1	0.0	0.6
<b>Total<sup>2</sup></b>	<b>5,893</b>	<b>6,383</b>	<b>6,891</b>	<b>1.5</b>	<b>1.6</b>	<b>1.5</b>

Source: Ministry of Agriculture and Agro-Based Industry and Ministry of Plantation Industries and Commodities

Notes: 1 Based on paddy parcel.

2 Excludes areas for other crops like tea, coffee and herbs as well as aquaculture.

### **Rice (Paddy)**

Rice is Malaysia's security food crop. The social, economic and particularly the political stability of the nation depend very much on this crop. Rice is also Malaysia's staple food along with more than three billion Asians, who eat rice every day. The top ten rice producer countries are also the top ten consumer countries of rice. Nine of these countries are in Asia (China, India, Indonesia, Bangladesh, Vietnam, Thailand, Myanmar, the Philippines and Japan) with Brazil in the ninth position. But, the top exporters of rice are Thailand, India, Vietnam, China, United States, Myanmar, Pakistan, Uruguay, Australia and Egypt.

Malaysia is a net importer of rice, mainly from neighbouring country Thailand, being only 65 to 70 percent self sufficient. With the international price of rice lower than the domestic production cost, government has to support the rice sector.

### **Other Crops and Food Self Sufficiency**

Other crops and food self sufficiency in Malaysia include cocoa, fruits and vegetables, dairy products and meat products. Introduced in 1970 and started with additional plantation in the estates, cocoa is Malaysia's third important agricultural export. Nevertheless, with the falling of cocoa prices in 1990, the production of cocoa decreased and received less attention.

Food production has been seen as a source to revitalise the economy, improve the balance of trade and enhancing the food security. Hence, as seen in Table 6, the self-sufficiency levels in food commodities have increased from 2000 to 2005 and expect to continue to increase in 2010. Nevertheless, the imbalance in the balance of trade for food continue to increase at the rate of 10.7 percent from RM7.8 billion in 1995 to RM13 billion in 2000 due to the depreciation of ringgit and change of consumer taste (Malaysia 2001).

After rice (paddy), fruits are the second important food commodities in Malaysia. The positive demand for fruits has led to the commercialisation of food production for the domestic and international market.

The production of fisheries shows an increase (Table 4) particularly the marine production. Commercial fisheries with the involvement of the private sector have helped to increase its productions.

**Table 6: Self-Sufficiency Levels in Food Commodities, 2000-2010 (%)**

Commodity	2000	2005	2010
Rice	70	72	90
Fruits	94	117	138
Vegetables	95	74	108
Fisheries	86	91	104
Beef	15	23	28
Mutton	6	8	10
Poultry	113	121	122
Eggs	116	113	115
Pork	100	107	132
Milk	3	5	5

Source: Ministry of Agriculture and Agro-Based Industry

### **Challenges to the Agricultural Sector**

The challenges to the agriculture sector in Malaysia include lack of land and land fragmentation, labour shortage and insufficient research and development (R&D). This leads to inefficiencies of the sector resulting to low productivity and quality of agriculture output.

Agricultural land is decreasing over the years due to urbanisation, conversion of agricultural land for other profitable use such as commercial, industrial and residential. Ubiquitously, return to agriculture land has always been given low priority.

As discussed, agricultural sector is facing shortage of labour with exception to agro-based industry that is expected to have a positive average growth rate. With youngsters leaving the village and not interested in pursuing agricultural activities, abandon farms become a common feature and the agricultural lands are left to the elderly who have no more energy to continue farming. While this problem could be solved with migrant labour, its dependence could pose other unforeseen problems. Hence, Malaysia needs to accelerate

the adoption of labour saving techniques, mechanisation and automation to avoid and reduce dependency on foreign labours.

The nation's dependence on agricultural food needs to be reduced, in particular rice, the staple of Malaysians. Its productivity needs to be improved and production cost reduced. R&D needs to be intensified, especially in downstream activities to enhance agricultural based industries and to produce more end products.

### **The Way Forward**

With food import bill exceeding RM 10 billion per year, the agricultural sector needs to be more productive and creative to save the nation's foreign exchange. Among the issues to be considered are genetic engineering, new and appropriate technologies and better extension services to farmers.

Modern agricultural technology plays an efficient role to increase productivity and income. Genetic engineering is the way forward to increase output without significant increase in land. In addition to the adoption of a more innovative and creative way of farming such as aeroponics, hydroponics and multi-tier farming to increase production, development of new agricultural production should be encouraged.

### **Conclusions**

Agriculture, once an important economic sector was sidelined due to industrialisation, change of consumer demand and transformation of the economy. Nevertheless, realising that agriculture is an important sector contributing to the nation's output in addition to reducing poverty through distribution of income, agriculture has once again, gain its place in the nation development agenda.

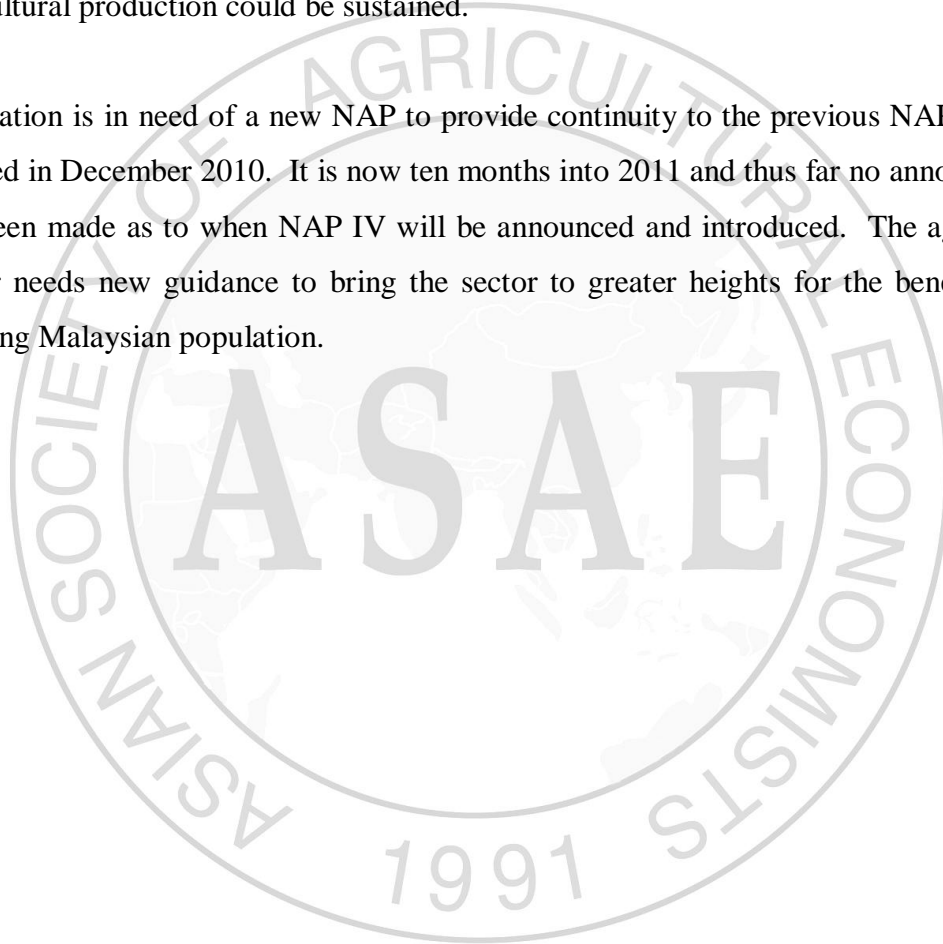
Agriculture was rebranded *New Agriculture* embracing modern agriculture farming to increase production. Rebranding started with the changing of the name of Ministry of



Agriculture to Ministry of Agriculture and Agro-Based Industry. This has proven to enhance and increase the production of agriculture.

Undoubtedly, some agricultural production has decreased in size due to limited land availability, falling of commodity prices, shortage of labour and change of consumer taste. Yet, with enhancement in science and technology with new farming techniques, agricultural production could be sustained.

The nation is in need of a new NAP to provide continuity to the previous NAP III which expired in December 2010. It is now ten months into 2011 and thus far no announcement has been made as to when NAP IV will be announced and introduced. The agricultural sector needs new guidance to bring the sector to greater heights for the benefit of the growing Malaysian population.



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