

IMPACTS OF NATIONAL AGROFOOD POLICY TOWARDS AGRICULTURE SECTOR IN MALAYSIA

Rozhan Abu Dardak
Director General Office, MARDI Head Quarters,
Persiaran MARDI-UPM 43400 Serdang.

E-mail: rozhan@mardi.gov.my

INTRODUCTION

Agricultural Policy is a set of laws and procedures established by a government to achieve specific goals. Malaysian government established a series of National Agricultural Policies since 1984. There are three agricultural policies established by the government, namely National Agricultural Policy 1, 2 and 3. The current one is the National Agrofood Policy (NAP) which was developed in 2010. This policy covers the period of 2011-2020. After this policy has been introduced and implemented for seven years, the government has reviewed its impacts toward the development of agricultural sector in Malaysia. This paper highlights some achievements and performance of agricultural sector for the period of 2011-2015, the first half of the NAP.

Agriculture Sector

Agricultural sector is strategically important as a provider of food and raw materials for the agro and resource-based industrial development. In 2015, this sector contributed more than RM89.5 billion (US\$22.658 billion) to the Gross Domestic Product (GDP), or about 8.1% of the total GDP. Oil palm was the major contributor to the GDP (43.1%), followed by other agriculture (19.5%), livestock (11.6%), fishing (11.5%), forestry and logging (7.2%) and rubber (7.1%). In the same year, the export and import of agricultural products stood at RM115.884 billion (US\$29.338 billion) and RM84.673 billion (US\$ 21.436.2 billion) respectively with the balance of trade at RM31.172 billion (US\$ 7.892 billion). The number of people involved in agriculture in 2015 was around 1.8 million, while foreign labourers was around 0.6 million people. Report by Statistic Department also showed that 76% of people involved in this sector were males.

Agriculture in Malaysia is divided into two sectors namely industrial crops and agro-food. About 86% of agricultural land is used for production of industrial commodities such as oil palm, rubber and cocoa. While the balance 14% is used for cultivating agro-food commodities such as paddy, fruits, vegetables and coconuts.

In general, the profile of agricultural sector in Malaysia does not change much as compared to the previous duration of agricultural policy. The profile of agriculture in Malaysia includes:

- Industry resources
 - Small and uneconomic land holdings. For example, more than 65% of paddy growers owned less than one hectare; and
 - Most of input materials such as fertilizers and seeds are imported. For example, 95% of vegetable seeds are imported, fruits (40%) and fish (25%)

- Private sector
 - Agriculture is perceived as a poor man's sector and its profile is not comparable with other sectors; and
 - Low productivity. The productivity of agriculture is estimated to be around 60% of the manufacturing sector
- Farmers
 - Aging farmers. More than 55% of farmers are more than 55 years old and more than 35% are more than 60 years old;
 - Under employment. Farmers spend less time on agriculture activities. As a result, the production is less because farmers give less attention to their crops. For example, paddy farmers spend around 27 days per season in their land, while farmers spend 16 days per month on coconut;
 - Young people have negative perception towards agriculture. Report shows that less than 15% youth are involved in the agriculture sector in 2015; and
 - Inadequate labour force. Currently, Malaysia uses more than 700,000 foreign workers in agricultural activities.

The implementation of the National Agricultural Policy 1, 2 and 3 since 1984 has enabled the agriculture sector to attain a consistent growth between 3% and 5% per annum. However, structural changes in the economy have brought new issues and challenges in the agricultural sector. The trends effecting landscape of agricultural sector in Malaysia are as follows:

- Consistently increase in food demand. The overall per capita consumption increases 5.46% between 2009 and 2014 due to increase in income;
- High reliance on imports. Highly reliance on beef, mutton and milk imports. For example, Malaysia imports about 93% of milk, 70% of beef and 85% of mutton required by local consumers;
- Rising food prices. About 30.2% of household expenditure is on food. The increase in price of food products generally reduces the purchasing power of people; and
- Competition for land between agro-food and industrial crops. Currently, more than 80% of agricultural land is allocated to commodity crops. At the same time, the agrofood sector also competes in using arable land with housing, manufacturing and services industries. For example, until 2015 more than 3% of agricultural land was converted into housing, industrial and business facilities.

NATIONAL AGROFOOD POLICY (NAP) 2011-2020

The National Agrofood Policy (NAP) was developed in 2010 and approved for implementation on 28 September, 2011. The focus of this policy is to improve the efficiency of agro-food industry in Malaysia in terms of driving productivity and competitiveness across the industry value chain. This policy covers a ten-year period from 2011-2020. It has been put in place to address the issue of food supply in Malaysia. It is hoped that with the implementation of this policy, Malaysia will produce sufficient amount of food supply which would be safe for consumption. In line with the intention to be a developed nation by 2020, it is anticipated that the NAP will increase the revenue of farmers as well as entrepreneurs. This, in turn, will allow the agro food sector to develop into a steady and resilient industry. This policy also aims to make agro food industry a competitive and sustainable industry; and to increase agro-based entrepreneurs' level of income. The abundance of crop diversity in Malaysia provides opportunity for the development of an improved nutrient and better health food products, which in turn provides more choices for consumers especially towards the local products. The objectives of the NAP 2011-2020 are as follows:

- i. To ensure adequate food supply and food safety;
- ii. To develop the agro food industry into a competitive and sustainable industry; and
- iii. To increase the income level of agricultural entrepreneurs

In order to achieve these objectives, the NAP introduced seven strategic directions as follows:

- i. Ensure national food security;
- ii. Increase the contribution of the agro-food industry to GDP;
- iii. Complete the value chain;
- iv. Strengthen human capital;
- v. Strengthen R&D activities, innovation and technology use;
- vi. Create private sector led business; and
- vii. Strengthen the service delivery system

The emphasis of the NAP is on agricultural development that focuses on production of agricultural products based on market demand and potential, and consumer preferences. The focus is on 15 industries that include paddy and rice, capture fisheries, livestock, vegetables, fruits, coconut, edible birds nest, aquaculture, ornamental fish, seaweed, herbs and spices, floriculture, mushroom, agrobased food and agrotourism. The strategies provide specific action plans, programs and KPI that are monitored by the Ministry of Agriculture and Agro-based Industry.

IMPACTS OF NAP (2011-2020)

The implementation of the NAP has reached the third quarter of its period. The Ministry of Agriculture and Agro-based Industry has conducted a mid-term review to measure the impacts of this policy toward the development of the agricultural sector in Malaysia.

Key achievements

The implementation of the NAP covers two Malaysian five years development plan namely the Tenth Malaysian Development Plan (2011-2015) and Eleventh Malaysian Development Plan (2016-2020). During the tenth development plan, the agricultural sector achieved an overall improved performance in production, value and self-sufficiency ratio (SSR). The programs implemented during this period created better agronomic practices, quality inputs, modern farming technology, improved infrastructure and skill training programs. During this period, the agricultural sector recorded 2.4% growth and remains as the supplier of raw materials to agrobased industries. The performance of the agricultural sector as impacts of the NAP 2011-2020 is measured by analysing the achievement of the objectives.

Objective No 1: To ensure adequate food supply and food safety

- i. Production of food commodity
 - In general, production of food commodity in the period of 2011-2015 increased significantly. For example, the production of crops has increased from 6.3 million metric tons in 2011 to 7.3 million metric tons in 2015 (Table 1). The application of new technologies that include new variety of crops, advanced production system and post-harvest handling has contributed to a higher production of food commodity.

Table 1. Production of major agrofood commodities, 2011-2015

Commodity ('000 tons)	2011	2012	2013	2014	2015
Crops	6333	6442	6708	7011	7284
Paddy	2579	2599	2604	2849	3322
Fruits	1624	1595	1545	1622	1589
Vegetables	939	947	1375	1453	1373
Cash crops	170	273	238	214	227
Herbs and spices	41	47	61	70	70
Industrial crops	981	982	885	803	702
Flowers ('000 cutting/pots/plants)	417,066	419,990	484,434	498,967	510,290
Livestock ('000 tons)	2221	2293	2416	2576	2661
Beef	49	51	52	53	50
Mutton	3	4	5	5	4
Pork	214	218	217	218	216
Poultry meat	1334	1374	1458	1573	1614
Poultry egg	621	645	684	728	776
Milk (million litre)	71	72	74	75	76
Fishery	1905	2112	2019	1985	1998
Marine fisheries	1373	1472	1483	1458	1486
Aquaculture	526	634	530	521	506
Inland fisheries	6	5	6	7	6

Source: Ministry of Finance, Malaysia

ii. Self-sufficiency of food commodity

- In general, 17 out of 32 commodities recorded self-sufficiency ratio (SSR) of more than 100 %. Seven of the twelve selected fruits recorded SSR of more than 100 %, such as papaya (165.4%), watermelon (158.8%) and starfruit (151.5%). Six selected vegetables recorded more than 100% SSR, such as tomato (131.8%), spinach (111%), long bean (105.4%) and lady's finger (103.2%). At the same time, chicken/duck eggs achieved 112.3%, shrimp (100.1%) and cuttlefish (105.6%) (Table 2)

Table 2. Self-sufficiency Ratio (SSR) of selected agricultural commodities (2015)

Commodity	SSR (%)	Commodity	SSR (%)
Livestock		Fruits	
Poultry meat	98.5	Starfruits	151.5
Pork	93.7	Papaya	165.4
Mutton	11.4	Jackfruit	104.3
Beef	24	Durian	102.4
Chicken/duck egg	112.3	Guava	94.5
Fisheries		Coconut	87.8
Shrimp	100.1	Mango	36
Tuna	98.2	Mangoes teen	82.3
Cuttlefish	105.6	Pineapple	104.6
Mackerel	86.4	Banana	100
Crab	75.2	Rambutan	96.7
		Watermelon	158.8
Rice	72.3	Vegetables	
		Spinach	111
		Lady's finger	103.2
		Chilli	51.04
		Long bean	105.4
		Round cabbage	83.3
		Mustard	97.8
		Brinjal	102.8
		Cucumber	101.7
		Tomato	131.8

Source: Department of Statistics, Malaysia

Malaysia is still unable to produce sufficient supply for mutton, beef and rice. As a result, Malaysia imports these commodities from neighbouring countries. The main sources of meat are New Zealand, Australia and India. While the main sources of rice are Thailand, Viet Nam, Pakistan and India. Malaysia imported about RM45.319 billion of food stuff in 2015.

Objective No 2: To develop the agro food industry into a competitive and sustainable industry

In general, the agricultural sector has developed continuously since Malaysia received its independence from the British in 1957. More than 11,628 establishments were operated in the agricultural sector in 2015 with an annual growth of 5.7 %. Gross output was RM73.85 billion in 2015, which increased around 6.7% compared to RM53.45 billion in 2010.

The contribution of agricultural sector to GDP also increased from RM89.4 billion in 2012 to RM94.2 billion in 2015. However, the value of agricultural sector increases

marginally (1.8%) as compared to manufacturing (3.4-5.4%), construction (4.6-18.1%) and services (6.7-7.0%) (Table 3).

Table 3. GDP by the kind of economic activity, 2012-2015 (RM Million constant 2010 prices)

Kind of economic activity	2012	2013	2014	2015 ^e
Agriculture	89,406	91,181	93,048	94,249
Rubber	8,614	7,759	6,288	6,797
Oil palm	41,402	42,521	43,539	44,119
Livestock	8,315	9,086	9,806	10,039
Poultry	4,964	5,477	6,029	6,231
Cattle	890	975	996	912
Other livestock	2,461	2,635	2,781	2,896
Other agriculture	13,879	15,031	16,247	16,628
Paddy	2,002	2,073	2,158	2,136
Vegetables	5,159	5,707	6,152	6,377
Fruits	3,323	3,636	3,958	4,140
Food crops	2,747	2,956	3,242	3,240
Others	648	659	738	735

Source: Statistic Department Malaysia

Agricultural produce and agrofood products from Malaysia are well received by global markets. It is indicated by the quantity and value of products exported to international markets. The export of agricultural sector products increased at an average of 9% from RM20.5 billion (US\$ 5.19 b) in 2011 to RM25.6 billion (US\$ 6.48 b) in 2014. However, food import also grew at an average of 9% per annum from RM34.5 billion (US\$8.73 b) to RM42.6 billion (US\$ 12.17 b). Malaysia imports mostly commodities that are not suitable to be grown in tropical conditions and that include temperate fruits and vegetables. Food trade balance continue to increase at the average rate of 8.9% from 2011-2014 (Fig. 1).

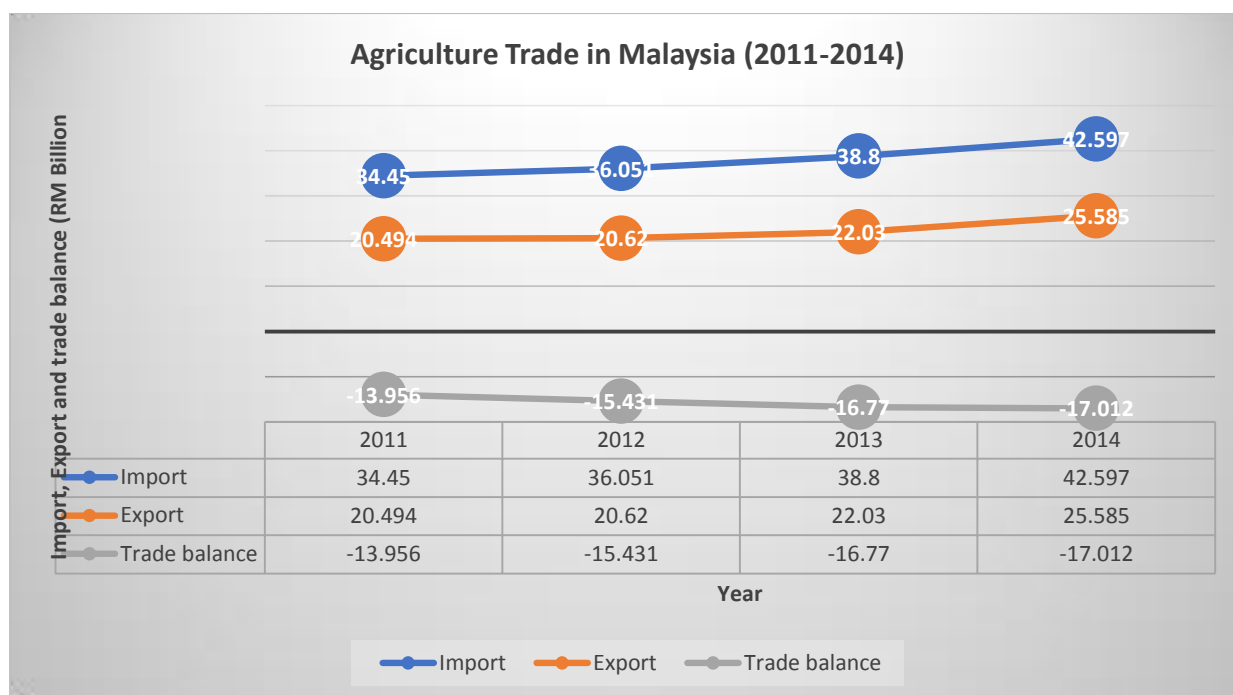


Fig. 1. Agriculture trade in Malaysia (2011-2014)

The main contributors of trade deficit are animal feed (34.4%), sugar, sugar preparation and honey (17.1%), meat and meat products (14.7%) and vegetables (13.8%). Malaysia needs to import animal feed, mostly grain corn and soya beans because these commodities are not suitable to be cultivated in Malaysia.

Objective 3: To increase the income level of agricultural entrepreneurs

The agricultural sector provides job opportunities to more than 444,500 people in 2015, which increased from 390,708 in 2010. The majority of people engaged in crops activities (82.8%), followed by livestock (7.83%), forestry and logging (5.8%) and fisheries (3.5%). Income received by the agricultural sector workers has also increased significantly from RM4.89 billion (US\$1.2 billion) in 2010 to RM7.904 billion (US\$2.0 billion) in 2015 (Table 4).

Table 4. Salaries and wages of agricultural workers (RM million)

Sub-sector	2010	2015	CAGR (%)
Crops	3857.3	6125.8	9.7
Forestry and Logging	553.8	737.3	5.9
Fisheries	163.9	315	14
Livestock	315.1	726.2	18.2
TOTAL	4890	7904.3	10.1

Source: Statistics Department, Malaysia

The Income of agricultural entrepreneurs can also be measured by looking at the gross output and value added of the agricultural products. The report by the Statistic Department

shows that the gross output of agricultural products has increased from RM53.45 billion (US\$13.53 b) in 2010 to 73.853 billion (US\$18.7 b) in 2015, an increased around 6.7%. At the same time, the value added contributed by agricultural sector indicated a positive trend, from RM31.1 billion (US\$7.87 b) in 2010 to RM41.473 billion (US\$10.63b) in 2015 with the cumulative average growth rate of 5.9% per annum.

WAY FORWARD

The Ministry of agriculture and Agro-based Industry aim to improve the achievement of the agricultural sector and set new strategies as to ensure the development of agricultural sector through following the directions set out by the NAP. The new strategies focus on improving the agricultural sector products in terms of quality, value and safety to enable them to penetrate global markets. Some of the new strategies are as follows:

- i. Explore the potential of high value agricultural commodity products.
 - Identify durian, coconut and pineapple as new sources of wealth. Intensify the production of these commodities for export markets;

- ii. Increase productivity through intensive use of agricultural factors
 - Encourage large scale farming model and adoption of technologies
 - Develop programs focused on increasing water productivity
 - Improve agronomic management
 - Provide training and assistance for industry players through skill extension agents
 - Select large scale commercial players as facilitators/mentors to small scale farmers; and

- iii. Expand the agro-based industry
 - Further strengthen Malaysia's position as a processing hub for exports or re-export purposes
 - Identify targeted products based on market demand
 - Strengthen export performance by improving the export ecosystem, managing trade with new potential markets, moving up the value chain and enhancing downstream activities and transforming approaches for export promotion

CONCLUSION

The implementation of the National Agrofood Policy (2011-2020) has created great impacts toward the development of the agricultural sector in Malaysia. The agricultural sector remains an important economy driver and contributes toward a developed nation by 2020. However, there are some issues and challenges that this sector is facing, especially from the external environment, including moderate global growth, declining commodity prices and volatility in financial markets. It is hoped that realignment of strategies will help the government to achieve the targets set by the NAP 2011-2020.

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