

Assessment of Food Security Challenges in Malaysia

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INTRODUCTION

Food security is a priority agenda of every Government, and it involves all levels including household, national, and global players. There are several definitions of food security from different sources. The definition of the term “food security” which was coined by the Food and Agriculture Organization (FAO) has been adopted widely, where it refers to “a situation involving all levels which always obtain sufficient food supply, safe and nutritious food to meet the needs and requirements of an active and healthy lifestyle”. According to FAO (1996), there are four parameters that need to be identified in measuring a country’s food security level. These are: food supply readiness; the ability of the people to purchase the food; ease of market access; and supply of nutritious food.

Among the issues in the global food production are the failure to achieve food security, sustainable agriculture, meeting the demand for non-renewable resources, climate change, biodiversity losses and changes in diet (National Agro-Food Policy, 2011). Malaysia has formulated the National Agro-Food Policy (DAN) 2011-2020, which emphasizes on expanding food production to ensure food supplies are sufficient, of better quality, edible, safe and nutritious and at affordable prices. DAN aims to ensure that the core level of food supply is always ascertained .

A study was conducted to assess selected major food needs (rice, cooking oil, sugar and wheat flour) in Malaysia. Table 1 shows the issues of food security toward rice, cooking oil, sugar and wheat flour at the global and national levels.

Table 1. Issues of Food Security (rice, cooking oil, sugar and wheat flour) in Global and National level

	Global	Malaysia
Rice	<ul style="list-style-type: none">Transformation of wetlands to industrial areas (e.g., 3.5 million hectares of wetlands were converted into industrial areas in Africa and America)Postharvest losses - 10-37%.	<ul style="list-style-type: none">Low quality of seeds for certain varieties grown by farmers (unregistered seed)Postharvest losses in processing.Lack of enforcement in sustaining the quality of rice in the market.
Wheat Flour	<ul style="list-style-type: none">Unstable price in the market - RM433 / MT (2000) to RM983 / MT (2012) and unpredictability.Competition use of wheat for ethanol fuel.	<ul style="list-style-type: none">The price of wheat has increased around 34% in the last five years.Unsustainable quality of wheat grain.Industry players buy subsidized flour devoted to household consumers.
Cooking Oil	<ul style="list-style-type: none">Competition with bio-diesel where 7% of the global supply was used for biodiesel production.	<ul style="list-style-type: none">Constraints in the production area.Price of cooking oil in neighboring countries is high. Thus, increase in smuggling the commodity.
Sugar	<ul style="list-style-type: none">Use of cane for bio-ethanol was disturbing the sugar market.	<ul style="list-style-type: none">Malaysia was tapped for future trading. The contract price (USD430 / ton) is higher than the market price (USD370 / ton).Local production is totally uneconomical.

Sources: World Bank (2011); Roslina (2013); National Agro-Food Policy (2011)

Assessment of Food Demand

Rice

The local rice production in 2013 was 1,675,000 metric tons. However, the local production is insufficient to meet the local demand. Thus, 30% of the nation's rice supply is sourced through importation. Nearly 876,000 metric tons including specialty rice were imported in 2013. Consumption patterns of rice shows that 79.1% of households uses local white rice as their main food choices for their family. About 8.9% of households use imported white rice and 8.8% consumed imported fragrant rice. Only 2.1% of households uses basmati rice for daily consumption. Specialty rice was the least preferred commodity by consumers, for example a low utilization rate of brown rice (0.7%) among households as well as boiled rice (0.2%), herbs rice and other kinds of rice, 0.1% respectively. Household consumption of rice is 3.55kg per month. While average household spending on rice is RM52.22per month. The average purchase price of rice is RM3.34per kg.

Sugar

In order to meet local demand, Malaysia imports almost 1.6 million tons of raw sugar and 91,315 tons of refined sugar a year. Around 78.1% of Malaysian households uses sugar every day. Twenty five percent of households use refined sugar and 1.4% of households preferred brown sugar. The average sugar consumption is about 3.19kg/household/month, while the spending on sugar is around RM10.14per month. The average retail price for sugar is RM2.85per kg.

Cooking oil

Malaysia's palm oil production in 2013 was around 18.14 million tons of which almost 2.1 million tons was crude palm oil. Around 89.5% of households in Malaysia use palm oil, sunflower oil (2.7%), vegetable oil (2.1%), peanut oil, coconut and corn oil, for each of which was 1.6%, while the consumption for olive oil and soybean oil were 0.7% and 0.2%, respectively. The average consumption of cooking oil is 4.84kg per household/month, while the monthly expenses is around RM17.00 with an average retail price of RM3.88per kg.

Wheat flour

Malaysia imports around 1.14 million tons of wheat and almost 233,230 tons of flour in order to meet the local demand. With the population of around 29 million, Malaysians consume around 1.45 million tons of wheat flour yearly. Nearly 91.5% of the consumers use multi-purpose wheat flour. While 5.9% uses enriched wheat flour, and 2.6% of households use fiber wheat flour. The average consumption is about 2.31kg per household per month. Household expenditure for purchasing of wheat flour is RM6.72per month with an average retail price of RM2.64per kilogram.

Challenges of Food Supply

Rice

Generally, the sources of rice come from domestic production and imports from neighboring countries such as Thailand, Vietnam and Pakistan. The imported rice includes specialty rice

such as basmati, fragrant and glutinous. Rice supply is determined by consumers. Generally, Malaysia produced standard quality rice and the Government sets a standard price of RM1.70 per kg for rice that contains 15% broken rice, and RM2.50 per kg for rice with 5% and 10% broken rice. Rice millers get the supply of paddy directly from farmers or agents. Competition to get supplies from farmers resulted with price competition among millers, and it benefits farmers. Millers offer different prices to farmers ranging between RM1,050/ton and RM1,150/ton. Millers do not stock up too much paddy as it will affect the quality of rice and increase the operating costs. The main challenge in achieving the rice security is the low quality of paddy produced by farmers which in return affects the quality and price of rice in the market. National productivity and quality of rice is still low due to poor technological practices among majority of the farmers, although some farmers practice the recommended technology. Wholesalers and retailers compete for consumers by using marketing strategies such as branding, pricing and promotion. Rice supply is guaranteed and it is expected to increase in line with increasing demand.

Sugar

Malaysia is a net importer of sugar. The supply of white sugar depends on imports from several countries such as Brazil, Australia and Thailand. In general, millers import crude sugar. They process this locally and sell them to local consumers and are re-exported to foreign markets. The price of sugar in the world market depends on the supply and demand from importing countries. The price of sugar was volatile caused by the control of sugar distribution in the market. However, the price of sugar in Malaysia is controlled by the Government. The country's inability to produce sugar locally results in the dependence on imported sugar as a whole. The local sugar production is uneconomic. Therefore, it is a challenge for Malaysia to find alternative products that can replace sugar as sweetener.

Cooking oil

The higher prices for the industrial and export markets could affect the oil supply in the domestic market as millers prefer to sell oil to industries and exports. The Government formulates a ceiling price for cooking oil at RM2.50 per kg to ensure the millers produce sufficient supply for domestic consumption. The lower price sets by the Government resulted in short of supply when the industry players purchased the subsidized cooking oil for their consumption. The ability to monitor distribution and market of subsidized oil to target consumers was also an additional factor that can affect the cooking oil security. This is to ensure that the stock is sustainable and controlled at stable prices for the consumers.

Wheat Flour

In general, the supply of wheat flour can be divided into two categories such as 'for general-purpose wheat flour' (GP) and 'functional wheat flour' (NGP). The GP wheat flour receives government subsidies, which is devoted for household consumers. The NGP wheat flour on the other hand, does not receive government subsidies and devoted for food processing industry. However, lack of enforcement has led the food processing enterprises to purchase the GP wheat flour. This has led the government to accommodate higher flour price subsidies. The price factors also affect the supply of wheat flour. Manufacturers prefer to offer NGP wheat flour because the price was determined by the market and it is not controlled by the Government. This will lead to reduce supply of GP wheat flour when only 15% of GP wheat flour are produced. Trade liberalization opens opportunities for importers

of NGP wheat flour to import the commodity directly from producing countries. However, lack of enforcement has led to a poor quality flour being brought in. Abundant source of supply causing many producers do not keep stocks and this could affect food security in the event of a crisis or natural disaster.

Policy Implication

The Government needs to ensure that food security is at the appropriate level in order to guarantee an adequate food supply, with good quality, safe to eat, nutritious and has the ability to meet the demand. In addition, consumers are more likely to get nutritious food, for health needs. Therefore, several approaches and strategies should be practiced in insuring food security. To ensure that rice quality is maintained throughout the supply chain, good agricultural practices (GAP) and post-harvest handling practices are recommended. Increase paddy price subsidy scheme could encourage farmers to increase production and quality of rice. The application of new paddy production technologies such Clearfield Management System (SPC) shows high increase in yield. On the other hand, substitution products for sugar such as *stevia* gives the user an option to get a nutritious source of sweeteners. Besides that, by putting sugar under controlled in term of supply and price could guarantee the purchasing power of the consumers. The introduction of policies that can reduce imports of food, improve productivity, product diversity and viability of local production should be given.

Conclusion

The changes in the price of food is a major concern of the low and medium income groups because it will affect the ability to buy basic needs such as rice, cooking oil, wheat flour or sugar. Sufficient supplies and affordable prices are important factors in ensuring the country's food security. At the same time, awareness towards healthy lifestyle such as reducing the consumption of sugar and cooking oil will also contribute to sustainable national food security.

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