

# Organic Agriculture in Malaysia

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## INTRODUCTION

Increasing awareness on environmental issues and food safety led to the growth and practice of organic agriculture around the world. At the same time, consumers began to change their food choices and preferences for healthy food, including organic products. For example, a consumer study by Thomson Reuters in 2013 found that 58 % of consumers prefer organic products if they are given a choice. The interesting finding of this study is that most of the preferred consumers belong to the young and educated group of population. Consumers choose organic products due to health reasons, food safety, taste and its environmental benefits (Rozhan, 2009; Lea and Worsley, 2005; Roitner-Schobesber *et al.*, 2007).

The history of organic agriculture started long before the Green Revolution. At that time, chemical inputs, improved irrigation, and modern varieties were used to boost agricultural production due to malnutrition and widespread hunger in developing Asian countries (Hazell, 2009). Nowadays, demand of “healthy” food, including organic food is increasing, especially from European, U.S. and other developed nations (Willer *et al.*, 2014).

In Malaysia, organic agriculture have been practiced long time ago when farmers used compost from agricultural by-products. People also consumed organic agricultural produce which were collected from the jungles or naturally grown like wild mushrooms and bamboo shoots. The commercial organic agriculture is relatively new and is considered a small industry in Malaysia. Prior to the establishment of commercial organic farms, organic agriculture in Malaysia was initiated by Non-Profit Organizations (NGOs) that is concerned about the quality of food, and the influence of active environmental movements and organizations from around the world (Partap, 2010). The awareness on high chemical inputs used in conventional agriculture urged them to look for alternative sources of food. The Centre for Environment, Technology and Development Malaysia (CETDEM), an NGO, started the initiative by conducting an experiment on growing multiple organic vegetables and fruits on one acre of land. In a few years, outputs from their farms have penetrated supermarkets in Kuala Lumpur. The success of their experiment as well as the demands from consumers has led other farms to take the same approach to grow organic agriculture. The increasing demand from consumers who are willing to buy organic vegetables and fruits led the opening of the first organic shop in 1999 to cater to the Klang Valley market. Private companies are also taking advantage of the potential market by producing and supplying organic fertilizers to organic farmers.

### Consumption of organic products

The organic agriculture industry has expanded rigorously when the number of farmers involved increased from 900 in 2010 to more than 1500 in 2012. In 2014, 1700 hectares of farms are categorized as organic and produced fruits and vegetables. The number of farms accredited by myOrganic also increases from time to time. The growth of the agriculture organic industry is influenced by higher demand by local as well as international consumers. Consumers' interest on organic products has grown rapidly as a result of increasing awareness toward quality and food safety. People have become increasingly apprehensive about the

safety of the food they are consuming. A study by MARDI in 2010 found that more than 90% of Malaysian consumers knew about organic products and they associated this products with free chemicals, good for health and all-natural. The study also revealed that 53.8% of consumers in Malaysia have consumed organic products at least once in six months. Some of them consumed organic products regularly.

Vegetables were the most consumed, followed by fruits, food supplements and lastly, meat. The consumption of organic products is influenced by its availability or products offered in the markets. Supermarkets are the important sources of organic products in Malaysia, followed by wet markets and specific organic stores. The products purchased were mostly vegetables, followed by fruits and processed products. In general, organic products are consumed by all races in Malaysia that include the Malays, Chinese and Indians. The Chinese community however, purchased and consumed more frequently than the Malays and the Indians. Factors that influenced these people to purchase organic products are for due to health reasons, followed by rapid promotion by the NGOs and the physical appearance of the products itself. The new technology helps farmers to produce high quality organic products. The demand for organic products in Malaysia is projected to grow more than 12.4% a year with the financial value of more than RM20 million a year.

## **Policy and Accreditation**

The government policy on organic agriculture started in 1998 when a formal guideline for organic farming was introduced to the farmers. Furthermore, the Third National Agriculture Policy (NAP3, 1998-2010) focuses on agricultural programmes, which aim at high productivity while ensuring conservation and utilization of natural resources on a sustainable basis. This policy formulates integrated agriculture with the main emphasis on agro-forestry, mixed farming, rehabilitation of marginal land, recycling of organic wastes, mulching, cover cropping, composting, organic farming, and soil and water conservation. The measures are taken to support sustainable agriculture in Malaysia. The NAP3 has identified organic farming as niche market opportunity, particularly for small-scale producers (Ahmad, 2001). Under the NAP3, the government targeted to open 20,000 hectares of organic land by 2010 and generate income worth \$US300 million. Even though the target was not achieved due to many issues and challenges, the government still supported organic farming through its policy, which is addressed in the 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, 10<sup>th</sup> Malaysian Plan (2010-2015) and the National Agrofood Policy (DAN 2011-2020). The government encourages small-scale producers to invest in organic farming to increase their incomes, protect the environment and promote the country's exports. The government also establishes certification scheme to maintain quality and product standards.

### ***Malaysian Standards for Organic***

The Department of Agriculture Malaysia (DOA) has been mandated by the Ministry of Agriculture, and Agro based industry to set up an organic agriculture accreditation called Sijil Organik Malaysia (SOM) or literally translated as the Malaysian Organic Certificate. This scheme was launched in 2002 where a total of 581 hectares of vegetables farms were accredited with SOM (Ramli, 2002). The accreditation of SOM has been developed, supervised and monitored by the DOA to ensure the organic farms follow the criteria and procedures under the Malaysian Standard MS 1529:2001.

In 2014, the Malaysian Standard MS1529:2001 has been updated to MS1529:2015 Plant-based organically produced foods – requirement for production, processing, handling, labelling and marketing, and it has been released by the Department of Standards, Malaysia in 2015. The aims of this standards are (i) to protect the producers and consumers against the deception and fraud in the market place and unsubstantiated product claims; (ii) to ensure that all stages of production, preparation, storage, transportation and labelling are complied with the standard and (iii) to be equivalent with international standards so that it can be used to facilitate trade. The inclusion of the requirement for labelling and marketing are very important as it is to be in line with the relevant labelling requirement under the enforcement law in Malaysia.

In line with the revision of the Malaysian Standard, the government changed the SOM's logo from Skim Organik Malaysia to myOrganic in March 2015. The new logo of myOrganic is presented in Fig. 1.



Fig. 1. Transition of the organic certification logo in Malaysia

Currently, 151 farms with total areas of 1,848 ha are certified with myOrganic. The majority of organic farms are in Pahang and mostly produce vegetables (Table 1). Farmers prefer to grow organic vegetables because of its higher demand, compared to the other crops. The vegetable production includes leafy vegetables such as cabbage, broccoli, mustard, Chinese's kale and spinach. The organic fruits being planted include durian, papaya and banana. These fruits already have a specific market. At the same time, the number of mushrooms and herb farms certified with myOrganic is also increasing because they are not using any chemical input in current farming practices and the procedure for certification is easier. As a result, the number of companies which received accreditation has increased from three in 2003 to 151 in 2015 (Table 2). The highest number of farms which received myOrganic certification was in 2011 with 29 farms. The total production organic produce from these certified farms is 65, 591 tons s with the estimated value of RM175 million, in 2014 (DOA, 2015).

Table 1. Number of farms accredited with myOrganic based on commodities, 2002-2015

Commodity	My Organic accreditation	
	No. of farms	Hectare
Fruits	36	321
Vegetables	44	125
Rice	3	118
Others including mushrooms and herbs	68	1283
Total	151	1848

Table 2. Number of farms accredited with myOrganic certification, 2003 - 2015

Year	2003-2005	2006-2010	2011	2012	2013	2014	2015 (until June)
No. of farms received SOM/myOrganic accreditation	3	43	29	21	23	23	9

### ***Marketing approaches***

The increasing standard of life has resulted in the rapid development market for organic products in Malaysia. The organic business in Malaysia grows well and is well-supported by consumers (Tiraieyari, Hamzah, & Abu Samah, 2014). Currently, Malaysia is experiencing an established market for organic products as the demand comes from the health-concerned consumers. The organic market in Malaysia is driven by consumers, and the price is also driven by the market itself. There is no government intervention in organic marketing. In general, the market approaches are divided into three categories, which are, direct home-distribution, through organics retail/outlets and through organic farmers association.

The first approach is the initial development of organic marketing by distributing the products right to consumer's door step. This is done by very few producers to their regular customers in the early '90s. Nowadays, this approach expands to the selected consumers with guaranteed great quality of products. Besides that, the direct home-distribution is also available to some regular customers who are willing to pay slightly higher than the ordinary market price.

Currently, there are about 200 organic outlets available in Malaysia and the number is increasing. However, the organic outlet is not the largest marketplace for organic products in Malaysia as most of the consumers prefer to purchase organic foods from the conventional supermarkets. Some organic products are mainly bought from conventional markets. These are followed by natural and whole food supermarket in Klang Valle. Due to their expensive prices, many people cannot afford to purchase organic products (Ahmad & Juhdi, 2010). In Malaysia, the organic foods are sold at 50-300 % higher than the conventional foods. To overcome this challenge, farmers have used the alternative channels to market their products such as through the organic farmers association. The association establishes direct contact with special domestic buyers. For instance, the organic farmers' association in Cameron Highland developed a specific website for selling their own products (Tiraieyari, Hamzah, & Abu Samah, 2014). Besides all the approaches, a few organic producers have exported their products directly to Singapore as the demand is enormously high. Currently, the capacity to export organic produce are limited due to shortage in supply. This is among the main challenge for marketers in Malaysia.

### **Issues and challenges**

#### ***Inconsistency of supply***

In spite of higher demand from local markets, farmers could not commit to supply a fixed amount of organic produced to outlets each month. For example, retail outlets request a minimum quantity of carrots every month, as demanded by their customers. Wholesalers are facing difficulties in getting supplies of carrots since farmers are not growing carrots throughout the year due to the application of strict crop rotation. Farmers also could not promise to supply certain amount of quantity in advance. Consumers need continuous supply while growers could not meet the demand.

The competition to use land with other sectors such as commercial and industrial that offer higher returns, resulted in farmers not being able to expand their farm size. Farmers have to move from the urban area to the villages that is very far from their homes, and this situation increases the operation cost of the farmers. Furthermore, the use of organic fertilizers produced a lower yield as compared to the conventional way of farming, hence farmers need more suitable lands to increase production.

Organic growers also having the risk of uncontrolled pests and disease occurrence due to the absent of chemical based pesticides and insecticides. Hence, they are exploiting the ecosystem to balance and control the effects. This has contributed to the inconsistent supply of fruits and vegetables in the market.

### ***Labor***

Organic farming is an labor intensive industry. Farming activities such as weeds and pest controls are done manually since chemicals are not applied to organic farms. It will directly affect farm operational costs. Workers must be trained with organic farming procedures and good agricultural practices before they are allowed to carry out farm work. Insufficient local labors resulted in the employment of foreign workers. However, foreign workers prefer to work in other sectors that offer higher salary and comfortable working places such as in factories or as retail assistants. Insufficient workers led to unproductive organic farms since most farm activities are carried out manually. On the other hand, higher wages will increase operation costs and as a result farmers get a lower profit margin.

### ***Procedure to receive organic certification***

One of the most critical challenges faced by organic farmers is the grace period before their farms can be categorized as organic farms. Farmers need to practice organic farming for two years straight before the farm can be awarded with the myOrganic certificate. Within these two years, farmers are not allowed to use “organic” labels on their farm produce. They have to sell it at normal price, similar to the conventional products. Although the breakeven point on capital investment will be longer than other agriculture farms, the quality of organic produce must be maintained to ensure it meets consumer demand.

### ***Niche markets***

Organic products are considered niche products for niche markets. Currently not many people would like to buy organic products because the price is 30-500 % higher than that the conventional one. Only certain group of consumers are willing to buy organic products in Malaysia as they think it is worth buying. Changing lifestyles and increasing health awareness have influenced consumers to consider buying healthy and nutritious products, including organic products. More people get to know the effects of using chemical inputs, and they start looking for safer foods. Nevertheless, market size is still smaller than the conventional one. Market expansion has relied on the public awareness on healthy products and the determination of “worth-buying” products for organic food.

### ***Question on the benefits***

Consumers are aware of the existence of organic products, including fresh organic produce, in the market. However, not many consumers are buying organic products frequently

(Rozhan, 2009). They might buy organic products once or a couple of times a year, so they buy the products not really because of their inherent benefits. Mostly, consumers think that the benefits of consuming organic foods are very minimal to their health. Until now, there are no scientific studies proving that the consumption of organic products may reduce the risk of cancer or any other chronic diseases. Consequently, a study by Bradbury *et.al* (2014) found that the consumption of organic foods is not associated with reduction in the incidence of cancer. Although it has been argued that “certain confounding variables were not addressed” and the mechanism of pesticides going into food was not fully understood by those involved in the study (Pantziarka, 2014).

### ***Quality***

Malaysians are still not fully confident about the quality of their the local organic products. In fact some of them dispute the various claims of the experts regarding the benefits of organic products. The general perception on the local organic product is still weak. Supervision by the authorities required more efforts to make sure the local organic products follow the procedure and standards. Consumers are questioning about the reliability of myOrganic, whether the accreditation panels are too lenient in giving the certification. Some of the concerns are on the originality of the products, whether the organic producers are selling the products from their own farms, or if they get the supply from uncertified producers due to high demand on certain products. Consumers are also of the opinion that producers are mixing both organic and inorganic products when selling them to the market.

Until now, the myOrganic accreditation scheme is still not recognized by the international bodies. It creates negative perception on the existing organic products from Malaysia. Organic products from Malaysia are not accepted worldwide unless the farm received the international organic certification. Currently, some producers used accreditation from the National Association for Sustainable Agriculture Australia (NASAA) and the Department of Agriculture, United States of America (USDA) in order to export their products to Europe and US markets. Nevertheless, most of the Malaysia's organic products are highly demanded in Singapore.

Most of the consumers in Malaysia associate quality with the appearance of the agricultural produce. Because of this, consumers perceive non-organic products as more attractive compared to the organic ones. Organic agricultural products usually have minor defects, which affected the appearance in general, while consumers expect to get the same appearance quality with non-organic products due to lack of chemical used.

### ***Priority on food security***

During the Asia's financial crisis in the 1997-1998 and food crises in 2007-2008, the price of food increased more than triple. However, many exporting countries refused to sell their rice to their traditional customers due to food security reasons in their home countries. In the event of food crisis, the food exporting countries refused to export their food until they ensure that there is sufficient supply for their local consumption. At that time, the importing countries including Malaysia was at risk of food insecurity. As a result, most countries including Malaysia gave a high priority on food security to ensure sustainable domestic food supply. The country focused on producing conventional agricultural produce to increase the quantity, rather than the quality of the products. In this regard, organic farming was not given high priority since its contribution to the food security of Malaysia was very minimal. Government is emphasizing on increasing farm productivity and food production.

## **Technology application on organic agriculture**

MARDI carried out a study to investigate the application of technology by organic farmers in Malaysia in 2014. This study aims to understand issues and challenges faced by organic farmers in Malaysia, and to what extent they used technology in organic farming activities. This study makes a comparison between farmers from Malaysia, Indonesia and Japan in the application of organic technology. Five technology parameters were identified: control of pest and diseases, accreditation, use of legumes for control of weeds, mulching, fertilizer and buffer zones. The study found that in general, the application of technology among Malaysia's organic farmers is moderate, as compared to farmers from Japan and Indonesia. Malaysian farmers gave emphasis on buffer zones to ensure the land area is separated from the conventional farming system. However, they neglected the application of pest and diseases control technology that might affect the productivity of the farm. The Japanese farmers on the other hand, gave emphasis on the application of mulching and fertilizer, whereas farmers from Indonesia gave emphasis on the application of fertilizers in legumes. The study also found that the productivity of farms in Japan is the highest, follow by Indonesia and Malaysia. Thus, farmers from Malaysia need to learn more from their counterparts from Japan and Indonesia. At the same time, more organic technologies should be invented and transferred from government research institutions to farmers in Malaysia.

## **CONCLUSION**

Organic farming is relatively new and is still considered an infant industry in Malaysia. However, much progress on organic farming in Malaysia has been seen for the last 15 years. Increasing awareness by consumers has contributed to higher demand of organic products in Malaysia. Although policies have been set up for organic cultivation to support the industry, most of the initiatives towards the growth are industry-driven. Incentives or subsidies have not being offered to both producers and consumers.

The "free market environment" should be continued in this industry although it will hinder the entrance of new producers into the industry due to lack of incentives from the government. Nevertheless, it could be tackled by strengthening the marketing system such as more opportunities on exporting organic products, enhancing delivery system of organic produce to reach more people and promoting more awareness of the beneficial of organic products. This can be done if the current accreditation is being recognized globally. Consumers will gain more confidence of the Malaysia's organic products and the producers will have the opportunity to expand the market outside Malaysia. This will not be possible if the industry players and government do not support each other and work towards a market-driven industry.

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