

# STATUS AND PERSPECTIVES ON GOOD AGRICULTURAL PRACTICES IN MALAYSIA

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## ABSTRACT

*As an offshoot of Malaysia's Third National Agriculture Policy in 1999, the emphasis has been on improving the quality of fresh produce, particularly for the export market in order to balance the Malaysian trade by 2010. To achieve this target, the Malaysian government launched good agricultural practices (GAP) promoted to agricultural farmers, animal and fish breeders and organic vegetable growers. The government has introduced several certification schemes and this paper focuses on the Malaysian Farm Good Agricultural Practice Scheme (SALM), mainly for vegetable and fruits growers. This is a voluntary scheme in which interested farmers have to meet a set of requirements before being certified. The ultimate goal of the scheme is for a produce to be branded as "Malaysia's Best," which is an internationally accepted mark.*

Keywords: Malaysia, GAP, SALM

## INTRODUCTION

Malaysia is still basically an agricultural country though it is fast developing into an industrial country. It has 4.06 million hectares of agricultural land distributed throughout 13 states. Eighty percent of this land is cultivated with industrial crops such as oil palm, rubber, cocoa, coconut and pepper. Agriculture contributed about 9% to gross domestic product (GDP), worth about US\$5.5 billion in 2004. Sixty-one percent of this contribution came from industrial crops and only 39% came from agricultural food crops.

Export revenue from agriculture was about US\$10 billion in 2004. About 68.6% came from palm oil, sawn log and timber. The food sector contributed only 21.4%. Malaysia has been burdened with hefty bills on the importation of food, worth about US\$3.5 billion each year. The current deficit in agriculture, especially food, is about US\$1.35 billion. Thus, the Malaysian government is trying to

encourage production in the food sector for export in order to balance the trade, especially in agriculture by 2010. For that purpose, the third National Agricultural Policy (NAP3) was launched on 22 February 1999. The NAP3 covers 1998 to 2010. In this policy, agriculture is recognized as the third engine of growth, after the manufacturing and service sectors. Under the current leadership, agriculture for the country's development has been given more emphasis.

Commercial crops are grown in large scale, well organized, and almost always with good and proper management. However, 90% of the farmers in the food sector are smallholders, practicing subsistence cultivation in uneconomic-sized farms. The cost of production of these smallholders is high, with low input and low yield of poor quality produce. The government aims to improve food production for both the local and export markets. Thus, the government launched several good agricultural practice (GAP)

schemes in order to improve yield and quality of produce and the income of farmers. These smallholders are the target for the GAP schemes.

### **WHY GOOD AGRICULTURAL PRACTICES?**

The schemes are required because of the challenges the country faced when the World Trade Organization (WTO) started to implement the concept of free trade worldwide. Likewise, the country also needed to prepare for the implementation of ASEAN Free Trade Area (AFTA). The requirements of sanitary and phytosanitary standards (SPS) by many countries necessitate Malaysia to produce agricultural products that comply with these requirements. Besides, the issue of food safety is very much on the consumers mind nowadays. A consumer wants to know how safe is the food he or she is eating, especially in terms of pesticide residues.

Besides the production of the food, the government is also concerned with the environment in terms of pesticide residues in the soil or on the rivers, as well as fertilizer run-off from the farms, whose overuse of nitrate fertilizers may cause environmental disaster. Severe soil erosion sometimes happens in improperly managed farms and those normally cultivated on steep slopes and highlands. These will take years to repair and more often than not, they may never get back to their original state.

GAPs in Malaysia also consider human rights. The rights of farm hands, usually foreign workers from Bangladesh, Indonesia, Vietnam and Myanmar, are being taken care of.

### **MALYSIAN GOOD AGRICULTURAL PRACTICE SCHEMES**

The first GAP scheme introduced in Malaysia was “Skim Akreditasi Ladang Malaysia” (SALM) or Malaysian Farm Accreditation Scheme by the Department of Agriculture Malaysia (DOA). The scheme was later changed to “Skim Amalan Ladang baik Malaysia,” carrying the same acronym SALM, meaning Malaysian Farm Good Agricultural Practice Scheme (Fig. 1). The change was necessary because it was pointed out that the DOA was in no position to accredit farms complying with the conditions set by the

department. The only department recognized to accredit farms internationally is the Department of Standard Malaysia (DSM) or any agency licensed by DSM.

Other GAP schemes in the making are the Malaysian Aquaculture Farm Certification Scheme or “Skim Pensijilan Ladang Akuakultur Malaysia” (SPLAM) of the Department of Fisheries Malaysia (Fig. 2) and the Good Animal Husbandry Scheme or “Skim Akreditasi Ladang Ternakan” (SALT) of the Malaysian Department of Veterinary Services (Fig. 3). Another scheme which can also be considered as a GAP scheme is the “Skim Organik Malaysia” or Malaysian Organic Scheme of the DOA (Fig. 4). Each of these schemes has its own logo to identify the produce coming from their respective certified farms.

### **MALYSIAN FARM GOOD AGRICULTURAL PRACTICE SCHEME (SALM)**

This scheme was launched on 31 January 2002 by the DOA. It is a voluntary scheme, where interested farms can register and undergo a series of steps before the farm can be accredited. Initially, DOA, in performing its primary function, gives advice to a farm interested in SALM accreditation. Afterward, DOA audits the farm to see if it complies with the requirements. However, it was later learned that DOA could only advise the farm and not able to serve as farm auditor to accredit the farm. What was needed was an independent, third-party auditor and accreditation agent such as the DSM or any DSM-licensed agency recognized internationally. Thus, the scheme underwent a name change, but still retaining the original acronym SALM.

Initially, SALM was modelled after the Euro-Retailer Produce Working Group–Good Agricultural Practices (EurepGAP) and the Codex Alimentarius Commission. Later, it was modified to suit the needs of the local and international markets. The scheme is on a voluntarily basis. Any farm growing crops of importance to the Malaysian economy can apply to join the scheme. Upon registration, the farm is required to conform to a series of requirements meted out by the SALM Committee (Fig. 5). DOA then sends a team of auditors to check if the applicant conforms with the requirements before a certification of conformity is issued.

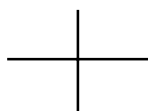




Fig. 1. Logo for Malaysian Farm Good Agricultural Practice Scheme (SALM).



Fig. 2. Logo for Malaysian Aquaculture Farm Certification Scheme (SPLAM).



Fig. 3. Proposed logo for Good Animal Farm Husbandry Scheme (SALT).



Fig. 4. Logo for Malaysian Organic Scheme (SOM).

### Farm Inspection

This is the first requirement. This step aims to confirm the legal status of the land used for farming. The farmer must be able to furnish proof that the farm he or she is operating is legal. Land title or contracted lease can be accepted as proof of operating the land legally. Sometimes, farmers tend to operate government lands (federal or state government) without permission. The government does not condone such illegal activities as these may encourage farmers to illegally use not only government land but also other lands without getting prior consent from the owners' permissions.

Besides ownership, the background history of the farm is also important. A good example are the landfills. Because of their many unknown materials that may be toxic, landfills are not allowed to be used as farms. Since 2000, any new farm applying for SALM certification should not be more than 1,000 meters above sea level. This is to prevent soil erosion during heavy downpour, which often

happens in the highlands. However, farms established before 2000 are exempted from this ruling. The inclination of a farm should be not more than 45° for the same reason as above. Even then, efforts must be shown to prevent soil erosion before the certification process can proceed.

Water for irrigating the farm must be from a proper clean source and not polluted with industry waste. Three samples from the water source will be taken at three different times for bacterial count and chemical residue analyses. The farm must also be at least a kilometer away from the nearest waste disposal sites, be it industry or animal farm.

The results of the farm inspection are submitted to the SALM Committee for endorsement. If all requirements have been met, the committee will then endorse the farm to go through the next step, which is verification of farm practices. If not, then corrective actions are advised to the applicant for a period of time before the farm is inspected again.

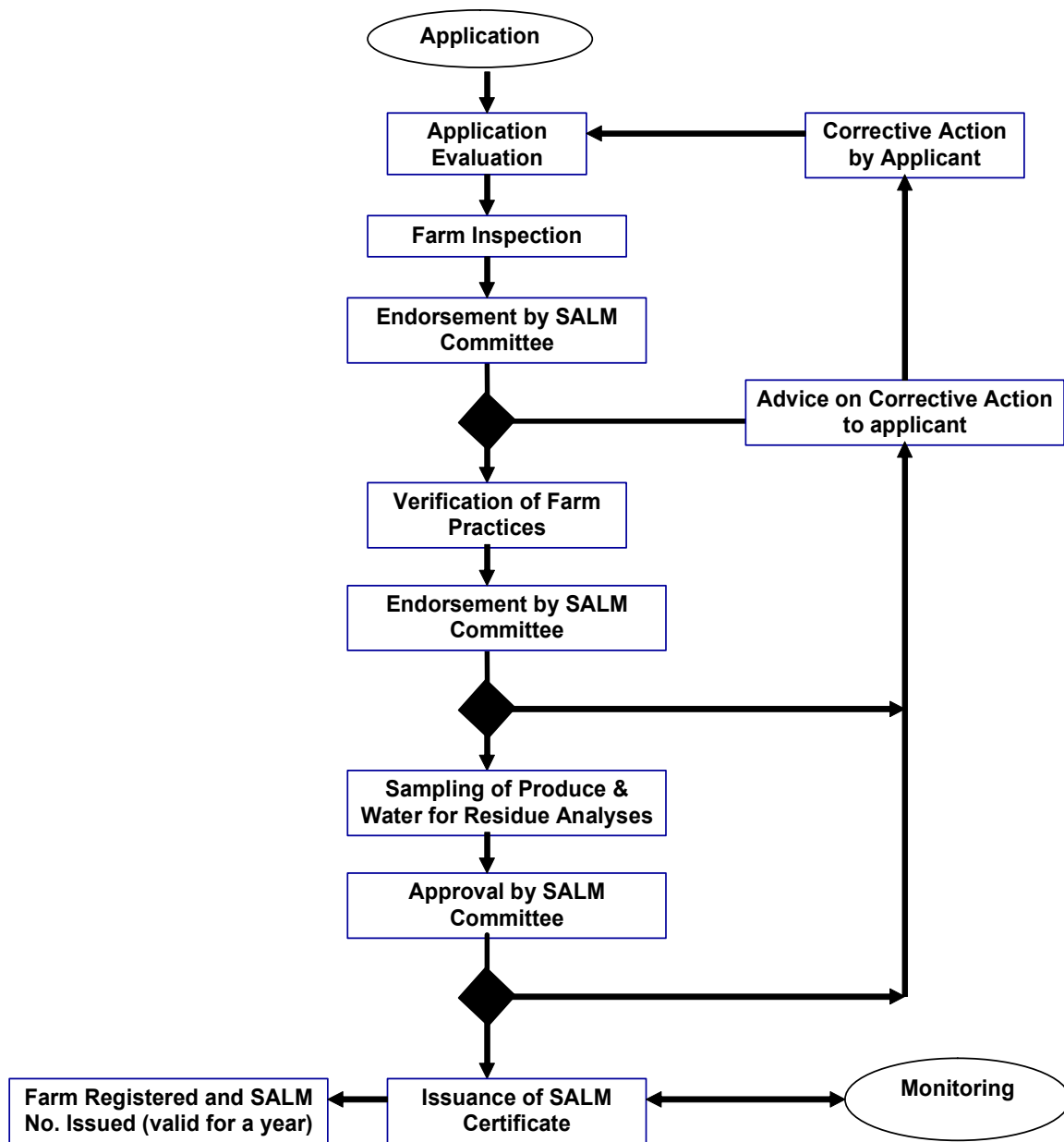


Fig. 5. Flow chart of Malaysian Farm Good Agricultural Practices Scheme or SALM.

### Verification of Farm Practices

Verification of farm practice is the main component of the SALM certification. The applicant is required to meet a series of requirements, as follows:

- Use no genetically modified planting materials.
- Use no industrial or animal waste as fertilizers.
- Use only registered pesticides meant for the crops planted.
- Use recommended rates of pesticides as stated on the labels.
- Follow the pesticide application intervals recommended strictly, especially the pre-harvest interval (PHI).
- Practice integrated pest management (IPM) either wholly or partially.
- Dispose of farm waste, including pesticide



containers, in an environmentally friendly manner.

- Pesticides, fertilizers and farm equipment are kept in proper, well-ventilated stores.
- Employ farm laborers aged 16 years old and older.
- Employ legal foreign farm laborers.
- Ensure health and well-being of farm laborers.
- Follow the proper dress code for laborers spraying pesticides.

In farm verification, recordkeeping is very important. Every farm activity should be recorded for the sake of traceability should anything happen to either the produce or the farm laborer. All in all, farmers need to keep about 15 records. Some examples of the forms for recordkeeping are in Figs. 6 to 9. All these forms must be kept properly and made available to farm auditors upon request. The DOA is in the process of modifying these forms for computerization.

Again, the results of the verification of farm practices are submitted to the SALM Committee for endorsement to go through the next step, which is residue analyses of farm produce and water.

### Residue Analyses of Farm Produce and Water

The produce from the farm is analyzed for pesticide residue and heavy metals. The pesticide residues should not exceed the

maximum residue levels (MRL) permitted under Schedule 16 of Food Act 1983. The farm produce is taken three times over the production season and the three samples must not have residues above the allowable MRL. If any of the samples contained residues above the MRL, then another three separate samples will be taken. Similarly, heavy metal residue will also be done in the same manner for the farm produce. The produce should not contain heavy metals such as arsenic, lead, mercury and cadmium above the level permitted under Schedule 14 of Food Act 1983. Likewise, three water samples used for irrigation and for washing of the farm produce are also taken and analyzed for pesticide residues and heavy metals. The results of both analyses from farm produce and water samples are then reviewed by the SALM Committee. If the SALM Committee agrees that all samples contained no residue or have residues less than the set MRLs, the farm can then be approved for SALM certification (Fig. 10). The certification can then be awarded to those farms that have fulfilled the set requirements. This certification will last for a year, in which the farm can be audited anytime. A failing mark may be a reason to withdraw the certification. Before the end of the term, the farm can reapply and the whole process will start all over again. However, for these farms, only one sample will be taken for residue analyses instead of three. The certified farms can now join “Malaysia’s Best” program of the Ministry of Agriculture

Name of Applicant : .....				
SALM Registration No. : .....				
Farm Address: .....				
Date	Material Acquired	Quantity	Price (MYR)	Source (Name of shop obtained)
(1)	(2)	(3)	(4)	(5)

Fig. 6. Form for recordkeeping of purchases of planting materials for the farm.



<b>Name of Applicant:</b> ..... <b>SALM Registration No.:</b> ..... <b>Farm Address:</b> .....							
Date	Crop Type	Block	Material Used	Formulation	Quantity	Area Covered (sq. m)	Application method
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

Fig. 7. Form for recordkeeping of fertilizer or growth regulator application.

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Fig. 8. Form for recordkeeping of pesticide application.

Fig. 9. Form for recordkeeping of harvesting of produce.





Fig. 10. Certificate awarded to a SALM-accredited farm.



Fig. 11 "Malaysia's Best" logo given to the best produce coming from SALM farms.

and Agro-based Industry (MOA). Under this program, only the best produce meeting the requirements of "Malaysia's Best" standards can use "Malaysia's Best" logo, and the government will ensure the best price for these produce (Fig. 11). The government will also help promote this logo locally or internationally. Indirectly, the agricultural produce bearing this logo will be promoted by the government. Currently, only selected fruits such as mango, watermelon, papaya, pineapple and starfruit (*Averrhoa carambola*) have been identified as the test fruits that the government is promoting under the Malaysia's Best logo. Later, all agricultural commodities, including fishes and animal meats using various GAP schemes promoted by the government, will also be allowed to use the "Malaysia's Best" logo.

#### OTHER GAP SCHEMES

Other GAP schemes mentioned earlier such as SALT, SPLAM and SOM have their own modus operandi supervised and certified by various agencies involved. This paper will not make an attempt to elaborate on these schemes as each scheme is as lengthy as SALM.

Suffice it to say that eventually, the farms that have been certified by these schemes, just like SALM, will also be allowed to join the "Malaysia's Best" program. The government is working toward harmonizing all these schemes so that the modus operandi will be very similar even though they are meant for different commodities.

#### CONCLUSION

A number of Malaysian agricultural produce have the potential of being exported to more lucrative markets all over the world. However, the more advanced markets such as those in Europe, Australia, Japan, Taiwan and Korea will be imposing the requirements of good agricultural practices. Though at the moment the registration for the various GAP schemes in Malaysia is on voluntarily basis, hopefully all Malaysian farms in the near future will be registered with any of the many GAP schemes available. The government may make it mandatory for farmers who want their produce to be exported internationally. It is also our hope that "Malaysia's Best" branding will be internationally known, recognized and accepted

for quality and food safety. The certification schemes will eventually lead to accreditation of farms by accrediting bodies recognized internationally. These schemes are the Malaysian government's efforts to comply with international requirements (WTO, AFTA and Chapter 19, Agenda 21 of Rio Earth Summit) and to make our produce competitive internationally and to ensure sustainable agriculture for the future. Last but not least, all the Association of Southeast Asian Nations (ASEAN) members promoting and practicing the GAP schemes should sit together and harmonize their GAP practices so that ASEAN will have a stronger bargaining power in terms of agricultural trade with other countries.

### REFERENCES

- Ministry of Agriculture Malaysia. 1999. Third National Agricultural Policy (1998-2010). Ministry of Agriculture Malaysia, Kuala Lumpur, Malaysia. 265 p.
- Ministry of Agriculture Malaysia. 2005. Good agricultural practices. 14 p. (In Malay).
- Dato' Abi Musa Asa'ari Mohamed Noor. 2004. Transformation in agriculture and agricultural-based industries (In Malay). Paper presented by the Secretary General of the Ministry of Agriculture and Agro-based Industry at the Conference on Directions of Agriculture and Agricultural-based Industries; 12-13 August 2004; Selangor, Malaysia. 10 p. (<http://banktani.tripod.com/abimusa.htm>)
- Secretariat of Malaysian Farm Good Agricultural Practice Scheme. 2005. Recent development in Malaysian Farm Good Agricultural Practice Scheme and Malaysian Standard (In Malay). Paper presented at the Plant Health 2005; 20 April 2005; Kuala Lumpur, Malaysia.
- Zulkifly Kamaruzaman. 2003. Common problems faced in the implementation of Malaysian Farm Accreditation Scheme (SALM) (In Malay). Paper presented at the Plant Health 2003; 19 March 2003; Putrajaya, Malaysia.
- Zulkifly Kamaruzaman. 2005. Auditing process for farm certification. Paper presented at the Plant Health 2005; 20 April 2005; Kuala Lumpur, Malaysia.

