

GOOD AGRICULTURAL PRACTICES FOR CROP PRODUCTION AND THIRD PARTY AUDITS

By

Kadin Empari

Agriculture Research Centre, Semongok

INTRODUCTION

Sarawak is still basically an agricultural country though it is fast developing into an industrial country. In the National Agricultural Policy 3, agriculture is recognized as the third engine of growth, after manufacturing and service sectors. Under the current leadership, agriculture for the country's development has been given more emphasis. Plantation crops are grown on large scale and are usually well organized with good and proper management practices. However, most of the farmers in the food sector are smallholders who practise subsistence cultivation in uneconomic-sized farms. The cost of production is usually high, with sometimes low yield and poor quality produce. The government aims to improve food production for both the local and export markets. Thus, the government has launched several good agricultural practice (GAP) schemes in order to improve yield, quality and safety of produce as well as increasing the income of farmers.

GOOD AGRICULTURAL PRACTICE (GAP) SCHEMES

The first GAP scheme introduced in Sarawak was 'Skim Amalan Ladang Baik Malaysia' (SALM) by the Department of Agriculture Malaysia (DOA). SALM was launched on 31 January 2003 by the Federal DOA in Sarawak. Another scheme which can be considered as a GAP scheme is the 'Skim Organik Malaysia' (SOM). Each of these schemes has its own logo to identify the produce coming from their respective certified farms.



Logo for SALM



Logo for SOM

GAP AUDITING FOR SALM CERTIFICATION

GAP scheme is on a voluntarily basis. Any farm growing food 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 requirement as meted out by the SALM Committee. DOA then sends a team of auditors to check if the applicant conforms to the requirements before a certification of conformity is issued.

There are specific sections of the audit on which the farm or operations will be assessed. The specific sections include: (1) Farm Inspection, (2) Verification of Farm Practices, and (3) Residue Analysis of Farm Produce and Water.

1. 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 is operating is legal. Land title or contracted lease can be accepted as proof of operating the land legally.

Besides ownership, the background history of the farm is also important. A good example is 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 situated more than 1,000 meters above sea level, and the inclination of a farm should be not more than 35°. This is to prevent soil erosion during heavy downpour, which often happens on steep terrain in the highlands.

Water for irrigating the farm must be from a proper clean source and not polluted with industry waste. One sample from the water source will be taken for chemical residue analysis (heavy metals and pesticide residues). 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.

2. Verification of Farm Practices

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

- ⤴ Not to use Genetically Modified (GM) planting materials.
- ⤴ Not to use industrial or animal waste as fertilisers.
- ⤴ To use only registered pesticides meant for the crops planted.
- ⤴ To use recommended rates of pesticides as stated on the labels.
- ⤴ To follow the pesticide application intervals recommended strictly, especially the pre-harvest interval (PHI).
- ⤴ To practise integrated pest management (IPM) either wholly or partially.
- ⤴ To dispose of farm waste, including pesticide containers, in an environmentally friendly manner.
- ⤴ Pesticides, fertilisers and farm equipment are kept in proper, well-ventilated stores.
- ⤴ To employ farm labourers aged 16 years old and older.
- ⤴ To employ legal foreign farm labourers.
- ⤴ To ensure health and well-being of farm labourers.
- ⤴ To follow the proper dress code for labourers spraying pesticides.

In farm verification record keeping is very important. Every farm activity should be recorded for the sake of traceability should anything happen to either the produce or the farm labourer. All in all, farmers need to keep about 19 records in a Farm Record Book provided by DOA. Farm record must be kept properly and made available to farm auditors upon request.

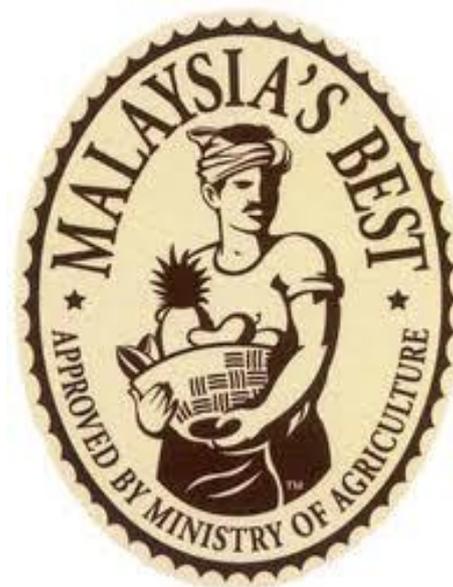
The results of the verification of farm practices are submitted to the SALM Committee for endorsement to go through the next step, which is residue analysis of the farm produce and water.

3. Residue Analysis 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 the 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 contain residues above the MRL, then another three separate samples will be taken. For heavy metal residues, the farm produce should not contain heavy metals such as arsenic, lead, mercury and cadmium above the level permitted under Schedule 14 of Food Act 1983. In addition to samples of farm produce, three water samples used for irrigation and washing of the farm produce are also taken and analyzed for pesticide residues and heavy metals.

The results of analyses of farm produce and water samples are reviewed by the SALM Committee. If the Committee agrees that all samples contained no residue or have residues below the permitted MRLs, the farm can then be approved for SALM certification. The certification is awarded to those farms that have fulfilled the set requirements and is valid for two years, but the certified farm can be audited at anytime. A failing mark may be a reason to withdraw the certification. Before the end of the two-year period, the farm owner can reapply for certification. For such farm, only one sample will be taken for residue analysis instead of three.

The certified farms can now join “Malaysia's Best” programme of the Ministry of Agriculture and Agro-based Industry (MOA). Under this programme, 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.



‘Malaysia's Best’ logo given to the best produce from SALM farms

Certificate awarded to a SALM-accredited farm