

# **1st DRAFT REPORT**

## **COUNTRY CASE STUDY ON REFLECTING NATIONAL CIRCUMSTANCES AND DEVELOPMENT PRIORITIES IN NATIONAL CODES ON GOOD AGRICULTURAL PRACTICES THAT CAN BE BENCHMARKED TO EUREPGAP**

**20<sup>th</sup> November 2005**

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## **1.0 Objective of the Case Study**

The country case study is aimed at putting the benchmarking option into the specific national trade and development context with a view to (i) identifying the potential impact of national GAP Codes on the major stakeholders (producers, local communities, exporters and the government) and (ii) reviewing the options for shaping national GAPs and related policies and measures in a way that duly reflects national conditions and development priorities.

## **2.0 Scope**

The study will confine to the Malaysian Horticulture sector (Fruits and Vegetables only) in West Malaysia (excluding Sabah and Sarawak).

## **3.0 Profile of Malaysia**

Malaysia has a total land area of 339.733 sq. km, consisting of two geographical regions (West or peninsular Malaysia and East Malaysia). These regions are separated by the South China Sea. Their climatic and agro-ecological environments are somewhat different despite their belonging to the same warm humid tropics classification. West or Peninsular Malaysia has an area of 131,587 sq. km. (13.16 million ha) of which 8.10 million ha is arable.

Malaysia characteristically experiences heavy rainfall (average 2540 mm per annum and above), average daily temperatures of 21-32 °C and a humidity average averaging about 85 percent.

Malaysia's population of 25.6 million (2004) continues to grow at a rate of 2.0% per annum. Malaysia's population comprises many ethnic groups, with the Malays comprising the majority followed by ethnic Chinese and Indians. About 61% percent of its population are in the middle-to-upper middle class income groups.

#### 4.0 Malaysian Economy

The Malaysian Economy has performed remarkably well over the years due to the country's political stability, the sound financial and economic policies adopted by the government and the efficient management of its natural resources which include oil and gas. The economy maintained its momentum growing 7.1% (real GDP) in 2004, after expanding 5.3% in 2003.

Malaysia's Key Economic Indicators are shown in Table 1.

**Table 1: Malaysia Key Economic Indicators**

	<b>Year 2004</b>	<b>Year 2005 (forecast)</b>
GDP	USD 65.3 billion	USD 69.1 billion
GDP Growth	7.1 % *	5 % - 6 %
Per capita income	USD 4,235	USD 4,393
Inflation rate	1.4 %	1.8 %
Labour force	10.9 million	11.3 million
Unemployment	3.5 %	3.4 %
Total Export (f.o.b)	RM 479.9 million (USD 126.3 billion)	RM 514.05 billion (USD 135.3 billion)
Total Import (f.o.b)	RM 398.8 billion (USD 105.2 billion)	RM 427.6 billion (USD 112.5 billion)

Source: 1. "Economic Report 2004/2005 published by the Ministry of Finance, Malaysia  
2. Bank Negara Malaysia 2004 Annual report

The major exports are manufactured goods (electronic products, chemicals and plastic products, wood products, iron and steel products, metal products and petroleum products).

The major imports are the intermediate goods (thermionic valves and tubes, primary and processed industrial supplies, parts and accessories of capital goods, primary and processed fuel lubricants and parts and accessories for transport equipment)

The better than expected expansion in 2004 was fuelled primarily by the continuing better performance of the manufacturing sector, particularly the electronics and chemical industries. Malaysia recorded excess trade of RM80.7 billion during the year 2004 of which total export was RM480.7 billion while total import was RM400.1 billion. This is illustrated in Table 2.

**Table 2: MAJOR EXTERNAL TRADE, JANUARY – DECEMBER 2004**

DESCRIPTION	EXPORT		IMPORT	
	RM'000	%	RM'000	%
Grand Total of External Trade Malaysia	480.7	100	400.1	100
Agricultural sector	61.6	12.81	35.5	8.89
Electrical and electronic products	241.5	50.23	182.1	45.52
Petroleum	30.9	6.44	19.4	4.85
Articles of apparel	8.8	1.84	0.96	0.24
Liquefied natural gas	17.1	3.55	0.00	0.00
Machinery and transport equipment	20.8	4.32	49.1	12.28
Chemical	25.7	5.34	28.8	7.19
Other manufactured goods and articles	58.3	12.13	60.3	15.07
Others	16.1	3.34	23.9	5.97

The main export was from electric and electronic while agriculture sector being the second contributor followed by other manufactured goods and articles (other than from agriculture). The high figure for agriculture is due to the inclusion of the “industrial crop commodities” i.e. palm oil, rubber, cocoa.

For import items, the greatest was on electric and electronic followed by other manufactured goods and articles (other than for agriculture) and third was machinery

However, the economic prognosis is that the economy’s growth will slow down in 2005; the current projection is between 5-6%, primarily due to the impact of continued high oil prices.

## **5.0 Background on Agriculture in Malaysia**

The Malaysian economy, post-war, depended on and was fuelled by the agricultural enterprise. The lucrative plantation crop commodities namely rubber and later oil palm, were the mainstay of economy. Other farming activities were largely shifting and subsistence in nature.

The lucrative returns on plantation crops, notably oil palm, resulted in the utilization of the best agricultural land in West Malaysia relegating other crops such as fruits and vegetables to marginal areas.

However, in later years, the planners were pre-occupied with moving the dependency of the economy from agriculture to manufacturing which relegated priority for agricultural enterprises.

In 1984, the first National Agricultural Policy was promulgated, which was designed to take advantage of available arable land and utilize for export crops, in particular, the development of oil palm plantations. However, favourable policies towards industrialization detracted from the further development of the agricultural sector, apart from oil palm and resulted in a net outflow of resources from agriculture.

A revision of the Policy, National Agricultural Policy 2 (NAP2) for the period 1992-2010 was introduced focussing on Productivity, Efficiency and Competitiveness of the agricultural sector.

During this period, the World Trade Organization (WTO) was established and liberalization of agricultural trade sharpened competition and brought in issues of global concerns for sustainable development and environmental protection.

The financial crisis resulting in the decline of the value of the Malaysian Ringgit negatively affected the stability and security of the country's food supply. In 1997, the food trade, excluding palm oil, experienced a negative balance of MYR 4.74 billion, which represented 49% of the current account deficit in goods and services; this was expected to further deteriorate due to the lower value of the Ringgit.

Malaysia's agricultural sector was accorded renewed and extra importance by the government after the economic crisis of 1997, with a particular drive to reduce the food importation bill. One of the primary objectives in increasing exports and reducing the import of agricultural commodities is in meeting the challenge of enhanced and more efficient agricultural production.

As a consequence of the new issues in agricultural trade, the government formulated a strategic agricultural development master plan, referred to as The 3<sup>rd</sup> National Agricultural Policy (NAP3) for 1998-2010 (Ministry of Agriculture), designed to maximize income through optimal utilization of resources in this sector.

The objectives of NAP3 are:

- To enhance food security
- To increase productivity and competitiveness of the sector
- To deepen linkages with other sectors
- To create new sources of growth for the sector
- To conserve and utilize national resources on a sustainable basis

Under the NAP3, policy directions for the various product groups were issued, which include fruits and vegetables. Essentially, both categories are to be expanded to meet both domestic and export demands using technology and quality with the government providing institutional support, infrastructure and incentives for private sector ventures into commercial production.

## 6.0 Agricultural Planted Land Area in Malaysia

Agriculture has played a vital role in the development of modern Malaysia and continues to make a significant contribution to the national economy. The plantation crops occupy the major portion of the agricultural land in the country. The oil palm sector occupies the largest land area, and Malaysia still leads the world in terms of vegetable oil production and research and development. Table 3 illustrates the planted areas of selected crops in Malaysia.

**Table 3: PLANTED AREAS OF SELECTED CROPS**

( ' 000 hectares )

<b>CROPS</b>	<b>1998</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
RUBBER	1,556	1,660	1,564	1,545	1,570	1,560
OIL PALM	3,078	3,431	3,633	3,714	3,593	3,647
COCONUT	117	159	151	139	150	147
COCOA	118	76	58	42	59	53
PADDY	674	699	674	679	672	675
<b>FRUITS</b>	<b>178</b>	<b>288</b>	<b>277</b>	<b>283</b>	<b>282</b>	<b>281</b>
<b>VEGETABLES</b>	<b>33</b>	<b>40</b>	<b>43</b>	<b>42</b>	<b>44</b>	<b>46</b>
TEA	2.96	3.52	3.46	3.48	3.49	3.48
PEPPER	11	13	14	12	13	13

The horticulture sector in Malaysia, essentially the fruits and vegetables sector, occupy relatively a smaller planted area and as shown in Table 1, and it has not changed significantly during the period 1998-2004.

## 7.0 Farming and Cropping Systems in Malaysia

Three farm categories exist for crop production, namely the smallholders, the new land development schemes and the large commercial (estate or plantation) holdings. The new land developments schemes (FELDA, FELCRA and State Economic Development Corporation – SEDC) are initiated by the public sector. The FELDA schemes have holding sizes of 4.04 ha of agriculture area (planted with oil palm or rubber) and 0.10 ha house lot for each farm-holding family.

The smallholdings are those whose area is less than 40 ha, the majority having an average between 0.5 and 3. ha. These smallholders usually practice some form of mixed cropping, oil palm or rubber intercropped with other crops, mostly food crops. Small farm sizes, and often low productivity, have been a major cause of the low incomes of many smallholders due to diseconomies of scale. The government of Malaysia, through the Ministry of Agriculture is committed to overcome this problem by grouping small farms into mini-estates and ‘group-farming’ in order to achieve better economies of scale, improved farm resource management and maintain sustainability of production. This is a key objective of the government’s policies for improving the living standards of the rural poor and small farmers.

Large holdings (> 40 ha) are those of commercial plantations. Their production is well organized for both local and overseas markets. In almost all cases, they practice monocropping.

The average farm size of the fruit and vegetable industry for the following ASEAN countries are summarized below as a basis of comparison.

<b>Country</b>	<b>Average Farm Size</b>
Malaysia	0.3 – 3.0 ha
Indonesia	0.1 – 2.0 ha
Philippines	0.1 – 2.0 ha
Thailand	0.05 – 0.6 ha
Vietnam	0.52 – 5.1 ha

## **8.0 The Study**

### **I. Overview of the FFV sector in Malaysia and GAP Requirements**

#### **a) The Fresh Fruit and Vegetable Sector in Malaysia**

The fruit and vegetable industry in Malaysia is small and fragmented. All aspects of horticulture can be found in Malaysia, including fruit growing, vegetable production in the open and protected structures (fertigation) and ornamental cultivation.

Tropical fruits are widely grown either in mixed or single fruit orchards. Major fruits include banana, water melon, durian, papaya and pineapple. Temperate vegetables and flowers are grown in the highlands whereas tropical vegetables and flowers are grown in the lowlands. The planted hectarage of major fruits and vegetables in Malaysia are shown in Table 4 and Table 5 below.

To increase local fruit and vegetable production to meet domestic demand and exports, the government through its present five-year economic plan has provided various investment incentives to the private sector to venture into primary fruit and vegetable production and processing. Tax incentives for commercial fruit production include pioneer status, investment taxation allowance, re-investment allowance and agricultural allowance. Priority will be given to the promotion of large-scale fruit and vegetable cultivation.

Focus will be given to the production of high quality fruit and vegetables for domestic consumption and exports.

It is to be noted that the market for tropical fruits is encouraging in particular at the regional and international level. The consumption of fruits per capita in the region at 34 kg/capita (2001-reported in book 'Fruits Industry in Malaysia : Issues & Challenges') compared to the average consumption per capita in the developed economies of between 63 – 150 kg/capita (FAO 2003). Hence, the potential increase in local consumption is enormous.

**Table 4: PLANTED HECTERAGE OF MAJOR FRUITS**

<b>CROPS</b>	<b>1998</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
STARFRUIT	1,080	1,244	1,203	1018	923	837
PAPAYA	1,207	2,257	2,202	2,125	2,062	2,001
CEMPEDAK	8,434	12,542	12,151	12,600	12,637	12,637
SAPODILLA (CIKU)	1,309	1,354	1,297	1,189	1,115	1,045
DOKONG	5,717	18,498	18,829	20,300	21,275	22,297
DUKU LANGSAT	N.A	16,265	16,148	16,524	16,656	16,790
DURIAN	111,083	122,759	118,946	118869	116,984	115,129
GUAVA	1,735	1,809	1,642	2,076	2,255	2,449
SWEET ORANGE	5,717	6,276	6,956	6,621	6,821	7,027
PAMELO	1,778	2,260	2,305	2,285	2,283	2,291
MANGO	7,309	9,740	9,222	10,350	10,707	11,077
PINEAPPLE	11,104	15,720	14,043	15,117	14,888	14,664
MANGOESTEEN	7,632	8,150	8,058	7,557	7,989	8,447
JACKFRUIT	2,493	3,584	3,205	3,381	3,293	3,212
BANANA	23,168	33,584	33,704	31,233	30,144	29,092
RAMBUTAN	18,896	26,040	26,289	27,252	27,881	28,525
WATERMELON	4,736	8,487	5,996	7,187	6,846	6,521

**Table 5: PLANTED HECTERAGE FOR MAJOR VEGETABLES**

<b>CROPS</b>	<b>1998</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
Spinach	1,384	2,193	2,770	3,498	4,418	4,806
Chinese Kale	1,797	997	1,222	1,498	1,837	2,149
Water Spinach	1,341	2,236	2,699	3,263	3,945	4,245
Cabbage	561	1,370	814	1,410	1,685	2,081
Lettuce	846	1,159	1,273	1,398	1,535	1,664
Choysum	2,383	2,716	2,905	3,105	3,319	3,517
Pak Choy	1,601	1,519	1,285	1,518	1,794	1,942
Lady's finger	1,600	1,943	1,907	2,113	2,389	2,589
Chilies	2,734	3,264	2,900	3,263	3,670	3,958
Brinjal	1,332	1,499	1,568	1,640	1,715	1,787
Cucumber	3,025	3,484	3,396	3,484	3,575	3,666
Tomato	516	951	628	950	1,439	1,554
Carrot	8	16	26	42	69	58
Radish	113	39	375	393	426	411
Yam Bean	731	663	327	662	1,343	1,143
Sweet Shoot	240	418	404	418	433	448
Spring Onion	226	439	417	439	462	465
Cauliflower	40	114	98	114	133	128
Pumpkin	271	382	345	395	422	416

Generally the total planted area of the above selected crops has been rather stagnant, and has not changed since 2002 until 2004.

The following tables illustrate the production quantities of the major fruit and vegetable crops. Data has been extracted from the Agricultural Statistical Handbook published by FAMA.

**Table 6: Hectarage and production of major vegetable crops (Year 2000 - 2004)**

	2000	2001	2002	2003	2004
Area ('000 hectares)	40	43	42	44	46
Production ('000 metric tonnes)	404	1378	1442	1509	1662
Average Yield (tonne/hectare)	10.1	32.8	34.3	34.2	36.1

Generally, although there is no apparent increase in the planted hectarage with vegetables, the increase in production over the five years is notable, indicating improved efficiency and productivity on the farms.

**Table 7: Hectarage and production of major fruit crops (Year 2000 – 2004)**

	2000	2001	2002	2003	2004
Area ('000 hectares)	288	277	283	282	281
Production ('000 metric tonnes)	993	1,378	1,442	1,509	1,662
Average Yield (tonne/ hectare)	3.4	5.0	5.1	5.4	5.9

Generally, similar to the picture with fruits, while there is no apparent increase in the planted hectarage with vegetables, the increase in production over the five years is notable, indicating improved efficiency and productivity on the farms.

Malaysia is not self-sufficient in all its fruit and vegetable needs and there is an increasing demand for high quality imported fruit and vegetables, out of season fruit and vegetables and fruit and vegetables that are not grown locally.

Despite the improvement in self-sufficiency levels of fruits and vegetables over the period 1995 – 2005\* as shown in Table 8 below, the trade balance has continued to widen in favour of imports.

**Table 8: Malaysia: Self sufficiency levels of fruits and vegetables (%)**

	1995	2000	2005*
Fruits	88.9	91.3	98.6
Vegetables	71.6	88.5	95.6

\*Estimated

Source: Eighth Malaysia Plan (2001-2005)

Table 9 and 10 show that fruit and vegetable imports have increased progressively over the years

**Table 9: Export and Import Value of Fruits (RM '000)**

	2000	2001	2002	2003	2004
Exports	512,418	497,215	523,967	513,465	467,213*
Imports	561,594	596,158	616,306	608,375	642,576*
Balance of Trade	(- 49,176)	(- 88,943)	(- 92,339)	(- 94,910)	(- 175,363)

\*Year estimate based on Jan-May value

Table 9 illustrates that the trade balance for fruits has not improved over the last 5 years, with increasing dependency on imports. However, the total value of trade in fresh fruits has been increasing substantially over the last 5 years.

**Table 10: Export and Import Value of Vegetables (RM '000)**

	2000	2001	2002	2003	2004
Exports	278,411	312,194	358,283	391,707	465,562*
Imports	1,023,596	1,121,877	1,185,861	1,176,091	1,564,582*
Balance of Trade	(- 755,185)	(-802,683)	(- 827,578)	(- 784,384)	(- 1,099,020)

**\*Year estimate based on Jan-May value**

Table 10 illustrates a similar trend for the vegetable sector where the trade balance shows an increasing dependency on imports. However, the total value of trade in vegetables has been increasing substantially over the last 5 years.

The continued increasing trend in value of fruits and vegetable imports could be attributed to the varied taste of consumers, including for produce that are not grown locally which is also brought about by the increase in affluence of the Malaysian society. Another factor is the rise in the expansion of the supermarket sector at the expense of the traditional wet markets due to the rapidly changing lifestyle of consumers. These supermarkets offer opportunities to promote high value fruits and vegetables which are imported. There are currently more than 400 supermarkets in Malaysia, of which 37 are located in the Klang Valley (Kuala Lumpur) area.

Fresh fruits that are imported, among others, include oranges, apples, pears, grapes, plums, mandarin oranges, lemons, mangoes, stone fruit (e.g. peaches, apricots, cherries), strawberries and kiwi fruit.

Fresh vegetables that are imported, among others, include cauliflowers, carrots, broccoli, celery, lettuce, potatoes and onions.

**Table 11: Malaysian Fruit Exports and Main Destinations (Year 2001-2004) (Expressed as a % of total value)**

	2000	2001	2002	2003	2004
Asean*	54.1 %	51.0 %	48.2 %	51.5 %	51.8 %
Hong Kong	20.2 %	25.4 %	25.8 %	28.5 %	25.9 %
EU**	8.6 %	8.5 %	8.0 %	9.0 %	10.2 %
India	1.9 %	1.1 %	1.0 %	1.1 %	1.4 %
China	0.3 %	0.3 %	0.5 %	0.7 %	1.4 %
USA	0.9 %	0.3 %	0.1 %	0.04 %	0.2%
Japan	0.1 %	0.1 %	0.1 %	0.05 %	0.1 %
Others	13.9 %	13.3 %	16.3 %	9.1 %	8.1 %

Asean \* (Brunei, Indonesia, Myanmar, Philippines, Singapore, Vietnam)

EU \*\* ( 25 countries)

The above data shows that at least 50% of the fruits are exported to other ASEAN countries while 20-25 % of total exports go to Hong Kong. Of the ASEAN trade, Singapore accounts for about 90 % of import value.

**Table 12: Malaysian Vegetable Exports and Main Destinations (Year 2001-2004) (Expressed as a % of total value)**

	2000	2001	2002	2003	2004
Asean*	90.7 %	90.5 %	87.8 %	79.1 %	78.5 %
Hong Kong	0.06 %	0.06 %	0.16 %	0.03 %	0.21 %
EU**	0.08 %	0.13 %	0.08 %	0.24 %	0.18 %
India	1.2 %	1.7 %	0.85 %	0.17 %	0.18 %
China	0.01 %	-	-	0.03 %	0.21 %
USA	0.15 %	0.03 %	0.13 %	0.95 %	0.98 %
Japan	-	0.04 %	0.12 %	0.14 %	0.32 %
Others	7.8 %	7.6 %	10.9 %	19.4 %	19.1 %

Asean \* (Brunei, Indonesia, Myanmar, Philippines, Singapore, Vietnam)

EU \*\* ( 25 countries)

A major proportion of the Malaysian vegetables are exported to other ASEAN countries with Singapore accounting for about 80 % of the ASEAN trade. It is quite likely that produce may be re-exported from Singapore to other destinations.

## **II. Malaysian experience with developments of 'quality systems for export of horticultural produce**

### **a) Current situation in Farms on GAP implementation**

The agricultural sector is being confronted with many issues and challenges that need to be addressed. Globalization and dismantling of trade barriers is resulting in many changes in the international food trade. Notable among these changes are those relating to the agri-food sector pertaining to Environmental soundness, Food safety, and Worker Health and Welfare. These current challenges are faced by the FFV sector in Malaysia and initiatives are being undertaken by way of implementing GAP Program.

There are about 5000 farms involved in fruits and vegetable growing in Malaysia. The majority being the smallholders, who are traditional farmers, and there are also the commercial farmers.

### **b) Perceived importance of GAP implementation at farm level**

Generally, the perceived importance of GAP importance at the farm level is low; it is not a priority issue. This is very much expected as the majority is smallholders from the rural sector, who are traditional farmers. The rural sector is directly or indirectly dependent on agriculture. The bulk of them run non-commercial agricultural activities in the production of fresh vegetables, fruit orchard etc., as they are mainly for own consumption less the surplus that could be sold for cash.

The commercial farmers, however, are more receptive to change and willing to learn.

### **c) National Quality Assurance System for the FFV sector**

#### **i) The Farm Accreditation Scheme of Malaysia**

In line with the objectives and the national aspirations of being a significant net food producer and exporter in the year 2010, the food and agribusiness industries need to be transformed into a competitive sector producing safe and quality products that can effectively compete in both the domestic and world markets.

The Ministry of Agriculture and Agro-based Industry, through the Department of Agriculture has responded to the challenges in food safety and quality by establishing a Quality Assurance Programme for primary producers by introducing the Farm Accreditation Scheme of Malaysia (SALM) in 2002 and the Malaysian Organic Scheme (SOM) in 2003.

SALM is a national programme developed to recognize and accredit commercial farms which adopt Good Agricultural Practice (GAP), operating in an environmentally friendly way, sensitive to workers welfare and yielding products that are of quality, safe and suitable for consumption.

SOM is introduced with the objective of giving confidence to consumers that the organic food products purchased are actually organically produced. The scheme accords recognition to participants who cultivate crops according to the requirements outlined in the National Organic Standard, MS 1529. This standard on organic production is modeled after the FAO/WHO Codex Alimentarius Commission guidelines and IFOAM Organic Standard.

#### ii) **SALM Scheme**

SALM was developed primarily for farms producing fresh fruits and vegetables. The basic references used in developing SALM included the FAO Draft Document on Good Agricultural Practices, the EUREPGAP Protocol for Fresh Fruits and Vegetables and the WHO/FAO CODEX Code of Hygienic Practice for the Primary Production and Packaging of Fresh Fruits and Vegetables.

SALM is not a DOA program but it is a National Program initiated by Department of Agriculture (DOA), run by DOA as the Secretariat but with the full co-operation of MARDI, FAMA, LPP and other related government agencies such as MOH. All decisions pertaining to SALM are made by a steering committee comprising representatives from these groups. DOA provides the administration.

The approach used in SALM is developmental in nature and incorporates the element of continuous improvements as the implementation relies on minimum standards. The goal of the scheme is to get farmers to adopt and practice GAP as a work culture or as a norm on their farms.

### iii) **Concept of SALM**

This programme is based on the concept of inspection and evaluation of farm and farming practices by inspectors (“auditors”) for conformance to accepted and defined protocols, national guidelines, standards, legislation and policies of Good Agricultural Practices. SALM incorporates field inspection, observations, interviews and auditing with the sampling and analysis of harvested produce for pesticide residues and heavy metals.

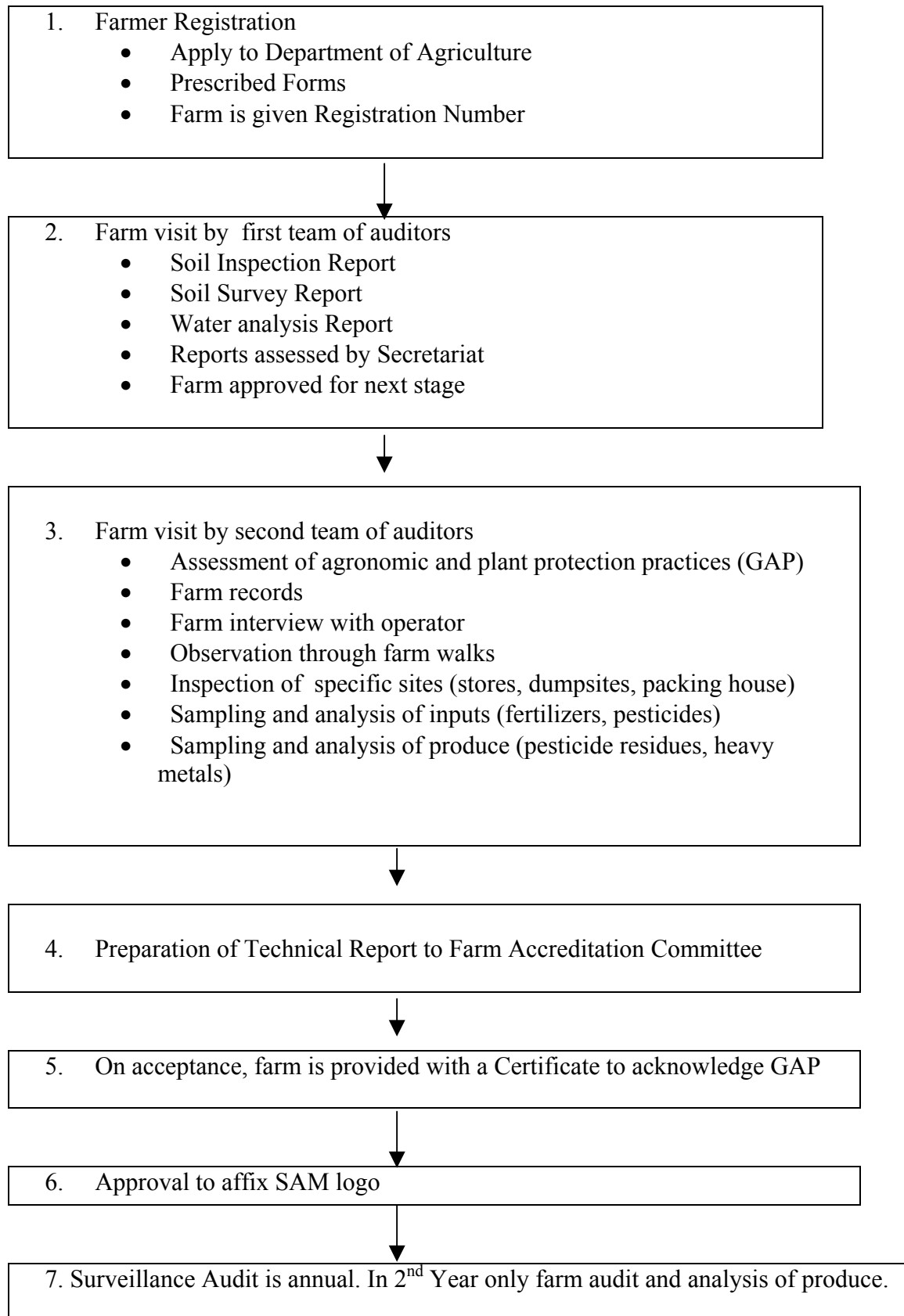
### iv) **SALM Certification**

Certification is achieved through visitation to farms to evaluate farming practices so that there are in compliance to stipulated conditions. The conditions are grouped into Major and Minor Must category, and the former requires mandatory adherence. Farms conforming to the stipulated conditions will receive a certificate of official recognition.

The following are the 17 Major conditions for certification the farmers need to conform to the following:-

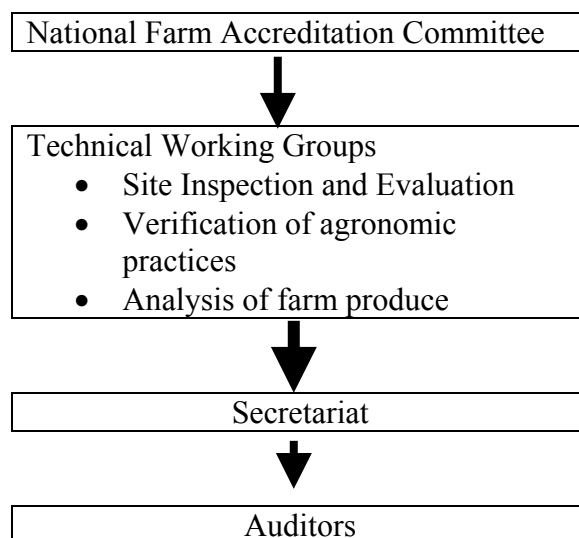
1. The farm is a legal entity
2. The farm has a soil inspection report
3. The soil and terrain is suitable for the intended crop
4. The farm is situated at an elevation less than 1000 meters above sea level- exemption given to those operated before 2002
5. Farm practices sound soil conservation measures
6. Farm maintains up-to-date records of activities (17 types)
7. Sewage or industrial sludge is not permitted for fertilization. Use only approved fertilizers.
8. Non-GMO planting materials
9. Pesticides used are legally registered by the pesticides Board.
10. Farm practices integrated pest management (IPM)
11. Farm has proper storage area for pesticides and fertilizers
12. Farm workers must use personal protective clothing
13. Farm possess a proper waste disposal plan
14. Farm practices good harvesting management system
15. Farm employs legal workers (above 16 years)
16. Pesticide residues in farm produce are less than MRLs in Schedule 16 Food Act 1983
17. Heavy metal contents (As, Pb, Hg, Cd) below permissible levels of Schedule 14 Food Act 1983

The Assessment and Certification process in SALM can be outlined as follows



vi) **SALM Scheme Working Structure**

The working structure comprises the following:-



The National Farm Accreditation Committee comprises of representatives from the government and government related agencies namely the DOA, MOA, MARDI, FAMA, LPP and MOH. There is no private sector representation in the committee.

The technical working groups comprise of members from the DOA and the same goes for the auditors. The Secretariat is the Department of Agriculture (DOA)

**d) The Impact of SALM on Market Access and Malaysia Best Branding**

Up to-date (November 2005), a total of 150 farms out of 930 applications are certified. A large proportion of the farms which have or are seeking accreditation are the commercial farmers who have their own established markets.

Our discussion with the Deputy Director in DOA, revealed that SALM registered farms get priority in the local market because they qualify as a preferred supplier. SALM offers differentiation of products from the rest.

SALM certified farms are also eligible to qualify for the Malaysia Best logo which is a branding exercise administered by FAMA. The Malaysia Best branding is based on a grading standard as specified in the Malaysian Standard for specific fruits approved by the DSM.

The SALM scheme at present does not get the required recognition for market access in the overseas market where requirements on food safety and quality are demanded.

It is opined that the SALM program does not exhibit sufficient transparency and credibility in its implementation because of the lack of third party certification. This is based on the fact that it is being managed and audited by the Department of Agriculture. The problem of lack of 3<sup>rd</sup> Party Certification is being addressed by the DOA.

Through a bilateral arrangement (the only one) with Singapore, consignments of produce from SALM certified farms are sampled and allowed to proceed to retail distribution centers without detention at the Customs. On the contrary, consignments of produce from non-SALM certified farms are held at the point of entry until pesticide residue analysis results of produce are available.

#### **e) Impediments to the implementation of SALM program among FFV sector farmers**

Generally, awareness of food safety and quality requirements, is low to non-existent among farmers in the country. Getting farms, especially smallholders to implement GAP in a form that can be inspected and audited for conformance is not an easy task as they have been so used to their traditional farm practices and conventional ways of doing things. The farmers are not prepared to change their practices.

For the small-scale farmers, the size does not provide the economies of scale to enable effective implementation of the GAP scheme. The farmers are also reluctant as certification to the scheme does not guarantee better or higher prices as compared to produce from farms without certification.

### **g) Private sector initiatives on GAP implementation in meeting export requirements**

Some of the commercial farmers who have established markets overseas are seeking international recognition on GAP practices for their farms. To-date, 3 farms supplying fruits to Europe have obtained EUREPGAP certification.

Farms supplying their produce to traders who sell the produce to the local hypermarkets e.g. TESCO require farmers to meet quality specifications, in-line with TESCO's in-house requirements.

### **h) The Malaysian Standard on Good Agricultural Practice (MS-GAP)**

Mounting global concerns on the impact of agricultural practices on the environment, health problems and worker safety have translated into growing consumer demands for certificated evidence of conformance to good and safe practices. Such demands for evidence are emerging as non-tariff barriers to trade.

The agricultural sector in Malaysia, given the encouragement and incentives by the planners are seeking market access to premium areas especially the EU countries. Adherence to EU laws and compliance to retailer standards and or Eurepgap are being demanded of Malaysian produce.

It was also noted that there is no National Standard on GAP, to which standard imports to Malaysia could be mandated to meet.

The SALM programme initiated by Department of Agriculture and drafted by a team comprising of representatives from the various government departments is a "private" standard as only standards developed by the Department of Standards are legally National Standards.

A proposal was made by **qa plus asia-pacific sdn. bhd** to SIRIM Berhad for the development of a Malaysian Standard for Good Agricultural Practice (MS GAP), which is essentially a code of practice, which will set out generic guidelines, consistent with environmentally sound agricultural practices and food safety considerations, for Malaysian farms and plantations. This proposal was circulated throughout public and private organizations in the agricultural sector for comments and subsequently accepted by DSM.

Work on a Malaysian standard on GAP started in early 2004. The Food and Agricultural Industry Standards Committee (ISC A) in SIRIM Berhad, under whose authority this Malaysian Standard was developed using the multi-stakeholder approach, comprising a team of experts and representatives from various government agencies, grower associations, exporter associations, major agricultural producers, consumer associations and smallholder organizations.

The draft standard was approved in January 2005 by the Department of Standards Malaysia (DSM) after public comments.

- Malaysian Standard on Good Agricultural Practice

The Standard MS 1784:2005 Crop Commodities is generic in nature, being applicable for all crop commodities and includes both food and non-food crops. The standard is intended for use in certification schemes to recognize and certify farms which adopt GAP in Malaysia. The requirements established under the SALM scheme were used as the basis of drafting this standard. Hence the development of MS GAP 1784:2005 involved much referencing to the EUREPGAP Protocols on Fruits and Vegetables.

Based on the framework of the generic MS 1784:2005, GAP specific standards for 6 major crop commodities are being drafted by Technical Working Groups comprising experts. These crop commodities include oil palm, rubber, cocoa, pepper, herbs, fruits and vegetables and flowers and ornamentals.

The MS-GAP contains 16 elements, and these include:

- (i) Traceability
- (ii) Record Keeping and Internal Audit
- (iii) Planting materials and rootstock
- (iv) Site history and Site management
- (v) Soil and substrate management
- (vi) Fertilizer management
- (vii) Irrigation and fertigation
- (viii) Crop protection
- (ix) Harvesting

- (x) Post-harvest handling
- (xi) Pesticide residue analysis of produce
- (xii) Waste and Pollution management
- (xiii) Environmental issues
- (xiv) Record of complaints
- (xv) Legality

The MS-GAP will be officially launched on December 19<sup>th</sup>, 2005. It will be administered and managed by SIRIM-QAS, the only certification body in Malaysia, which is accredited to the Department of Standards Malaysia. The details of how to manage the auditing and certification system of MS-GAP has not been finalized.

### **III. Identifying priorities in the development of National Protocol on GAP**

#### **a. Is there a National Code on GAP in Malaysia?**

The SALM scheme is at present the only recognized initiative on GAP that is being implemented by the horticulture producers in the country. SALM is a commitment from the policy makers and managed by the DOA.

It is a developmental project the government has adopted to put the horticultural produce sector on a higher footing. To enable farms, especially smallholders, to implement GAP in a form that can be inspected and audited for conformance is not any easy task as they have been so used to their traditional farm practices.

The government presently bears the cost of inspection and analysis and provides the publicity for promotion – indirect government subsidies.

The various components of SALM essentially, address the scope of GAP i.e. food safety, food quality, environmental impact and worker health and social issues.

The SALM program is however acceptable within the country. It does not have international acceptance, except for Singapore only, based on a government to government bilateral arrangement.

The SALM certification is a DOA label and does not have international recognition nor acceptance. In the long run, it will be appropriate to adopt the MS-GAP as the National Code, managed by SIRIM Berhad. The MS-GAP can then be benchmarked to the EUREPGAP Standard through the Benchmarking Option.

Parallel to the GAP Programme on crop commodities, Malaysia has also undertaken work on GAP for livestock and fisheries. A scheme entitled the Malaysian Accreditation Scheme for Livestock Raising has been developed while for the Fisheries and Aquaculture sector, the Malaysian Certification Scheme of Aquaculture Farms for responsible Fisheries Practices has also been introduced.

#### **b. National laws and Regulations are incorporated in SALM / MS-GAP**

In establishing the criteria on GAP for both SALM and MS-GAP, the national guidelines, legislation and policies in relation to food safety, environment and worker health and welfare are not compromised.

Both these standards fulfill the following legislations and its requirements:

##### 1) Food Act 1983 and Food regulations 1985

This Act is administered by the Ministry of Health and is enforced to protect the public against health hazards and fraud in the preparation, sale and use of food.

##### 2) Pesticides Act (1974) and Regulations

The Pesticides Act is administered by the Pesticides Board. The Director General of the Department of Agriculture is the Chairman. The clauses in this Act details conditions on the importation, manufacture, storage, sales and use of pesticides in the country.

##### 3) Environmental Quality Act (1974) and Regulations

The Act relates to the prevention, abatement, control of pollution and enhancement of the environment. It is administered and enforced by Department of Environment Malaysia.

#### 4) Occupational Safety and Health Act 1994

An Act which makes further provisions for securing the safety, health and welfare of persons at work, for protecting others against risks to safety or health in connection with the activities of persons at work.

#### 5) Occupational Safety and Health Act Regulations 2000 (Use and Standards of Exposure of Chemicals Hazardous to Health – USECHH 2000)

The Act emphasizes identification of chemicals hazardous to health at workplace, the permissible exposure limits, assessment of risk to health, monitoring of exposure, health surveillance, protection and record-keeping. It is administered by the Department of Occupational Safety and Health.

### **c. Benchmarking of GAP schemes in Malaysia to EUREPGAP**

Our discussions with the senior officers in DOA and FAMA clearly identified the need to upgrade the status of the local GAP schemes to provide market access and acceptability in the international markets.

Both the SALM scheme and MS-GAP makes close references to the EUREPGAP Protocols on Fresh Fruits and Vegetables. This provides an advantage for the benchmarking exercise.

The EUREPGAP benchmarking Option allows existing private or public schemes in different regions or countries to be contrasted with the EUREPGAP standards. This provides an opportunity for local regulations, needs and culture to be reflected in the standards.

Moreover, achieving the benchmarking also improves the credibility of the local agricultural sector among global retailers.

The EUREPGAP Benchmarking procedure involves the following steps:

1. Application
2. Preliminary Technical Review
3. Peer Review
4. Independent Technical Review
5. Independent Witnessed Assessment
6. Technical Standards Committee (TSC) review
7. Notice of intent to approve
8. Provisional approval
9. Approval

The EUREPGAP Benchmarking Fee Schedule is as follows

Standard Owner Application Fee (Fruit & Vegetable Standard)	AUD 6400.00
Independent Assessment (Scheme Owner Witnessing Fee)	2400.00
Travel Fare, Travel time and application processing	5000.00

The Benchmarking exercise would cost the GAP scheme owner about AUD 15,000.00 (RM 45,000.00). The fee although not prohibitive to Malaysia could be expensive for the developing countries.

#### **d. Development priorities that need to be reflected in a National GAP**

- a) Key success factors in implementing a National GAP must be taken into consideration
- b) The root problems faced by the farming community in the country must be identified
- c) Workable solutions must be built into the GAP implementation program.
- d) Adequate technical and institutional capacity must be in place, which otherwise would lead to fire-fighting techniques
- e) The various government institutions and private stakeholder organizations in the supply chain must come together to form a strategic 'think-tank'
- f) There is a need to look at some of the experiences of implementing GAP in other countries
- g) Intra governmental cooperation between the various related government agencies are essential.
- h) Small farmers must have access to reliable information on GAP and its implementation.
- i) The various parties that are involved in the planning, management and implementation of the national GAP must have a clear understanding, knowledge and commitment
- j) The roles of the accreditation body, the certification body and inspectors must be clearly defined, otherwise it creates more confusion, and further impedes the progress.

**e. Issues that need to be addressed in developing a National GAP with relevance to the Benchmarking requirements of EUREPGAP**

A comparison of the SALM scheme requirements and EUREPGAP control points were made to identify issues that have not been addressed or emphasized in SALM.

SALM and EUREPGAP requirements

	SALM	EUREPGAP
Traceability	Do not emphasize that a traceability system must be in place	A documented traceability system to track the registered product must be in place
Record Keeping and Self Audit	Emphasizes up-to-date record of activities but do not mention self-audit	Record Keeping is vital. One self audit must be done per year
Varieties and Rootstock	The source of seeds and planting materials is not emphasized.	Document to show origin and guarantee of planting material is important
Site History	Do not emphasize a risk assessment to be undertaken	Emphasizes the need for a documented food safety, operator health and environment risk assessment
Crop Protection	PHI and Re-entry interval is not emphasized	PHI and REI are major musts
Produce handling and post-harvest chemicals	Hygiene is not emphasized. Details on use of post-harvest chemicals not mentioned	This is important
Waste and Pollution Management	Does not emphasize wastage reduction, pollution and recycling	Waste minimization, waste management plan must be implemented
Worker Health, Safety and Welfare	Do not emphasize that a risk assessment for safe and healthy conditions be carried out and a documented action plan in place	This is recommended
Environmental Issues	Do not mention that the farmer should understand and be able to assess the impact of his farming activities on the environment	This is well detailed
Complaint form	Not spelt out as a requirement	All complaints must be addressed and action taken

#### **IV. Implementation of GAP at farm level in Malaysia**

The key issues, specific constraints, concerns and challenges in the implementation of GAP are reflected in a SWOT analysis.

##### **Strengths**

- 1) GAP program has been adopted as a National Agenda for the Malaysian agriculture in total, namely the Horticulture, Livestock and Fisheries sectors.
- 2) The Ministry of Agriculture and Agro-based Industries is the driving force
- 3) The Department of Agriculture (DOA) has developed a common GAP program called SALM for the Fresh Fruits and Vegetable Sector in Malaysia and is responsible for the implementation.
- 4) The SALM program has been implemented from Year 2002
- 5) The DOA is wholly responsible for the management of the program
- 6) The DOA conducts the audits and provides the certification at no cost
- 6) The DOA provides 'free' consultancy and advisory services to the farms through its extension officers based in the state offices in the implementation of the program
- 7) The DOA conducts the sampling and testing of the soil, water and produce for pesticide residue and heavy metals under its expense.
- 8) The farmers are provided with pre-formatted checklists to manage the keeping of records on the farm
- 9) The Federal Agricultural Marketing Authority (FAMA) has set up the infra-structure for Collection Centers (CC) which provides an outlet for farmers to sell their products to the traders. This lightens the burden on the farmer who otherwise has to look for his own markets.
- 10) FAMA has also launched the contract farm concept where selected farms are encouraged and to achieve SALM certification and FAMA buys the produce from these farms. FAMA will identify the markets for these produce either locally or for export. The produce from these farms will also be provided with the Malaysia Best Branding by FAMA.

## **Weaknesses**

- 1) Majority of the farmers are small-holders and farm-size is small. Many are traditional farmers who grow for their own consumption and the balance is sold in the market.
- 2) The farms are situated in rural areas which are in remote locations where logistics can be a constraint.
- 3) The prevailing market mechanism which works against the farmers with small plots must be changed. The traders or middle men who buy from the farmers take advantage.
- 4) The small farmers are poor to adopt changes unless financial assistance is forthcoming. The DOA estimates that the cost to implement SALM will be in the region of RM 5,000 – 6,000/- per year.
- 5) The ‘mind-set’ of the farmers have to be changed as they cannot visualize the plus points of implementing a GAP scheme. They see it as additional cost.
- 6) There is a general lack of knowledge and understanding on the concepts of GAP and the objectives why the government has embarked on this project. This is coupled with the low level of education among farmers, particularly the traditional farmers.
- 7) The farmers see no economic benefits in implementing SALM. Certification to SALM does not guarantee a price premium.
- 8) There is the general fear that implementing SALM on the farm involves a lot of documentation and paper-work which the farmer will not be able to cope or manage.
- 9) At present, the DOA is the judge, jury and executioner for implementation of SALM. The extension officers situated in the various offices in the State provide the advisory and consultancy service to the farmer on the procedures to implement SALM. The DOA officers at the headquarters level conduct the audits of the farms.
- 10) The certification process is generally slow. To-date, out of a total of 930 applicants, only 150 farms are certified. The bottle-neck is the lack of sufficient auditors. The DOA has about 80 auditors, who are basically part-time auditors, who do the audit over and above their normal routine jobs.
- 11) The auditors presently use a ‘soft approach’ for auditing. As SALM is still new, and as it is DOA’s intention to get more farmers to subscribe to the scheme, they fear that strict auditing may work negatively.  
Presently, the auditors while identifying non-compliances on the farm also provide advisory services.

- 12) Applicants to SALM must initially pay about RM 120/- for soil investigation, soil analysis and testing of water samples. This is a requirement in the first phase of the audit. Farmers are not keen in paying for this.
- 13) Samples of produce are drawn by the auditors at the time of visit for pesticide residue testing and heavy metal analysis. The testing is presently done by the DOA laboratory which is accredited under the SAMM scheme (the Accreditation Scheme for Malaysian Laboratories) at no cost. These tests are expensive and unless the government continues to undertake and subsidize the testing, it will not be possible for the small farmers to cope.  
  
The total testing charges for organo-phosphates, organo-chlorines and heavy metals is in region of approximately RM 1,350/- per sample.
- 14) Farmers continue to adopt their conventional practices in the use of pesticides. They lack the knowledge on IPM technology.
- 15) In contrast to the bigger commercial farmers who produce for the export markets, and are aware of the requirements for food safety and quality, the small farms are unable to see the need for GAP in their farms. The prime reason being that the customers of the small farms are traders or middle-men who are more interested in dictating prices.
- 16) There is a general lack of consumer awareness on GAP, food safety and quality among the Malaysian public. As a result the farmers do not see the pressure of these demands and of the opinion that there is no need to change as long as the market does not want it.
- 17) There is some confusion on the stringent demands mentioned in the EU food safety laws which are to come into force on 1<sup>st</sup> January 2005. Our discussion with the Malaysian Fruit Exporters' Association and a private fruit exporter to Europe, revealed that fruit exports, largely through Rotterdam, does not demand any GAP certification and/or data on pesticide residues. As a consequence FFV are being exported through this port without any specific quality specifications apart from visual characteristics e.g. size, shape etc.
- 18) There is a lack of intra-departmental co-operation between the various government agencies in agriculture. They seem to be compartmentalized and individualistic and do not see a holistic approach to the implementation of GAP as a national agenda.

## **Opportunities**

- 1) The SALM program is already in place and is being managed by the DOA. A framework for GAP implementation has already been created.
- 2) The DOA has indicated that it is finalizing an agreement with SIRIM Berhad to outsource the 3<sup>rd</sup> party Auditing. This will reduce the burden on DOA and also to create more credibility to SALM. Internal audits will continue to be conducted by the DOA.
- 3) There is an opportunity for the benchmarking of the MS-GAP to EUREPGAP standard, as the former makes close reference to it.
- 4) The DOA has mentioned that in order to gain market acceptance and recognition, the SALM program must be upgraded for the future. It intends to adopt the MS-GAP to replace SALM, once it is fully operational.
- 5) The Government has already approved under the 9<sup>th</sup> Malaysian Plan the setting up of another 3 laboratories in Ayer Hitam, Besut and Cameron Highlands to carry out testing of fresh produce. This will help clear the present bottle-neck in testing services being provided by DOA.
- 6) The concept of Farmer Group Associations is being encouraged by FAMA and the Farmers' Organization Authority. This augurs well for the implementation of GAP as the small farmers can be guided and motivated by the associations.
- 7) Implementation of SALM or MS-GAP on farms can translate into improved productivity and efficiency

### **Threats**

- 1) At present, Malaysia is a net importer of fruits and vegetables. The shortage in supply actually enables the farmer to sell his produce with or without quality specifications. The absence of incentives or price premiums on GAP certified products may discourage the farm from seeking certification as his market is still open.
- 2) Irregularity in inspection and certification would damage the reputation and interest of the GAP program in place.
- 3) The lack of Consumer awareness on food safety and quality must be addressed. Unless there is a heightened demand for Quality and Food Safe produce in the domestic market, the farmers have got no obligation to adopt GAP.

## **VII. Governmental role in national GAP development and implementation**

### **a) Role of Government sector and agencies in providing extension services**

Apart from the Department of Agriculture, under the purview of Ministry of Agriculture and Agro-Based Industries, there are a couple of other private and public agencies that are involved in providing the extension service.

Such public agencies which are statutory bodies, are Federal Agricultural Marketing Authority (FAMA), Malaysian Agriculture Research & Development institute (MARDI), Farmers' Organization Authority (FOA) and the private body is the Malaysia Fruit Exporters Association. Visits were made to these agencies to obtain the relevant information.

The extension services rendered by the **Ministry and Department of Agriculture** at State level are vital in disseminating, implementing and management of GAP. The main assistance provided to the farmers' are mainly the testing of samples from the farms, notwithstanding the other aspect of good agronomic technique and farm basic book keeping. On regular basis, training and awareness courses are being conducted for the farmers'.

## **Federal Agricultural Marketing Authority (FAMA)**

For **FAMA**, the roles are to supervise, coordinate, regulate and improve the marketing of agriculture produce. This includes both import and export. The main functions are as follows:-

- To improve the efficiency and effectiveness of supply chain management
- To improve further marketing access of agricultural produces
- To supervise and coordinate agricultural marketing activities from both private and public sectors.
- To gain local and international brand recognition – “ Malaysia Best ”
- To improve capacity building.
- To issue license for export of papaya and carambola (star-fruit) fruits

FAMA also manages the branding of “Malaysia Best” for fruit produce to clearly communicate the promise of quality of each Malaysian fruit. The pre-qualification for the use of the ‘Malaysia Best’ logo on the produce is that the farm must be SALM certified. The FAMA auditors will then carry out the grading of the fruits based on visual quality specifications i.e. colour, shape etc. which are specified in a Malaysian Standard, specific for each fruit type. FAMA provides advisory service on Produce Handling and Packaging i.e. ex-farm gate, but agronomic practices on the farm are covered by DOA under the SALM program.

## **Malaysian Agricultural Research and Development Institute (MARDI)**

MARDI’s function is to carry out research to generate innovative technologies for the development of the food and agriculture industries. MARDI also provide consultancy and technical services to support the development of food and agriculture industries. Lastly, MARDI offers joint ventures and licensing arrangements for the commercialization of research results. MARDI incorporates in all the research and development activities, good agriculture practices (GAP). The innovative technologies are transferred to prospective farmers.

MARDI's Research and Development Activities are focussed towards the following:

- Technology development to enhance competitiveness in the food processing industry.
- Technology development in the production of fruits, vegetables, flowers, cereals and others related to the crop industry
- Technology development related to the livestock industry
- Technology development in biotechnology, mechanization as well as resource and environment management
- Socio-economic studies and technology management for the food and agriculture industries
- Transfer of technologies and commercialization to improve agriculture productivity and food quality, as well as to create viable agri-businesses.

### **MARDITECH**

This is the commercial business arm of MARDI, incorporated in 1992, to exploit MARDI technology and expertise. Its objectives include, to accelerate the uptake of research results, to facilitate technological innovations and to impart professional management experience in order to develop successful agro-based businesses.

MARDITECH serves this purpose by generating the vital link between the reservoir of scientific minds from MARDI and the industry. MARDITECH identifies feasible concepts, ideas and prototypes and help translate them towards commercial realities of businesses opportunities and growth.

The services provided by MARDITECH cover namely :-

- Techno-Business Due Diligence & Feasibility Studies
- Food Production & Process development
- Food Quality Assurance & Food Safety Consultancy
- Technology Development & Innovation Services
- Policy, Strategic and Economic Studies.

### **Farmers' Organization Authority (FOA)**

There were 1531 agro based cooperative societies and 119 farmers associations serving the farmers in the rural areas. They were under various associations and agro-based co-operatives governed by different ministries and departments. Thus, farmers' Organizations Act 1973 was enacted to specially reorganize the farmers' associations and agro-based co-operatives into **Farmers' Organization Authority (FOA)**

The **Objectives** is to increase the involvement of Farmers' Organizations (FO) in production, marketing and processing of agriculture produce to generate the income of the FO and their members.

- To create 5,000 farmers' entrepreneurs by the year 2005 who will contribute towards the national food production.
- To strengthen the financial position of FOs to the level where they are able to fully bear all operational costs.
- To activate and strengthen the 3-tier FOs approach to business.
- To inculcate business culture and ethics in the FOA and FOs management and operations.
- To develop farmers' community through social and welfare activities.

## **Malaysia Fruit Exporters Association**

A private sector initiative, the formation of **Malaysia Fruit Exporters Association** was to assist commercial fruit farms in marketing their produce. It presently has a membership of 18 members who occupy about 3,500 acres of agricultural land. The size of farms range from 50 acres to 300 acres. The members of the Association account for nearly 75% of the total quantity of fruits exported from Malaysia directly through the Kuala Lumpur International Airport (KLIA).

The association provides advisory services to farmers in implementing SALM on the farms. It also assists farmers in seeking more market access and represents the farmers in negotiating pertinent issues concerning the trading of fruits with the relevant Authorities.

## **VIII. Support role of International Organization in particular UNCTAD & FAO**

Currently there are several initiatives, both national and public organizations, to address the concerns of health, safety, environment and worker welfare in agricultural practices.

Recent profile cases of abnormal weather and ‘bird flu’ have served to focus on horticultural practices and their influence on these events.

The FAO’s Committee on Agriculture (COAG) have worked on a framework for GAP.

The 10 member ASEAN group of countries have with, resources provided by Australia, sought to produce a harmonized standard suitable for adoption as a basis for developing their National Standards on GAP. It was noted that in ASEAN the following is taking place

- Malaysia has introduced a SALM scheme
- The Philippines has a number of private companies implementing a QA scheme based on food safety and are in the process of implementing a government backed system
- Singapore has developed a food safety QA system for its major suppliers
- Thailand has a Q system based on food safety

It is also pertinent to note that China and Japan have developed or in the penultimate process of confirming their National GAP standards.

It is important to note that both have made plans to benchmark to EUREPGAP. Japan has a firm target to achieve EUREPGAP to market access for South East Asian agri-food producers as China and Japan are increasingly important markets.

While FAO and the ASEAN Secretariat supported initiatives encouraging GAP are to be landed as a step in the right direction, a weakness in their efforts that the development of the framework and standard did not include all stakeholders, more importantly, producers and exporters. Participants in the development of the Standard were largely from Government or government linked bodies.

In the implementation of a GAP Standard there are some key activities to ensure conformity of assessment.

- Auditing of the practices
- Testing of soil, water, chemicals and chemical residue
- Documentation
- Equipment

### Auditing

The auditing body and auditors must be seen to be independent of the farm or group being audited. The auditor should not assume any either role related to advisory or extension.

Auditing of practices is a subjective activity and this may give rise to variance in assessing conformance and result in doubts about the credibility of the Standard.

Auditors should be trained to ensure consistency in appraisal of practices.

UNCTAD/FAO should embark on creating a dedicated training programme for agricultural auditors for tropical and sub tropical fruit and vegetable farms. This will ensure consistency of audit practices and give credibility to the Standard of the various countries. It will remove perceptions of 'hard' and 'soft' standards relating to the strict or permissive auditing by auditors.

## Testing

This will be a major constraint in the promotion of GAP certification. Developing countries may not be equipped and have the skills to conduct the necessary chemical analysis to ensure conformance.

The capital expenditure to equip and run a laboratory will be prohibitive for most developing countries. Additionally the requirement for the laboratory to be accredited (as in EUREPGAP) would be a further barrier.

Sampling regimes and test procedures may also need to be standardized.

As the majority of farmers are small to medium it would be difficult for them to bear the cost of testing for chemicals and residues. A single test in Malaysia conducted by the DOA is reported to cost some MR450/- (USD1701).

Currently the DOA has only one facility to do tests and has plans to develop 3 more laboratories to cope with the anticipated volume. Three other laboratories housed with University of Science Malaysia (USM), MARDI and the Chemistry Department is to have facilities capable of conducting tests. Farmers are currently NOT charged and the entire costs are borne by the DOA.

It would be useful for UNCTAD/FAO to use chemical expertise to develop 'indicator' tests which will indicate if chemical levels are "below", "borderline" and "above" specified amounts. Borderline tests would have to be repeated with a full analytical protocol.

This would be a less expensive quality control test which the farmers may be able to bear.

## Documentation

The maintenance of documentation as evidence of good practice is an important feature of the GAP Standard. It permits traceability and evidence of chemicals used and dosages.

Record keeping can be onerous and complicated when devised by individual farmers.

Additionally auditing of such records can be time consuming.

For the SALM scheme some 17 documents have to be maintained by farmers. The DOA gives assistance to farmers in devising and maintaining records.

The Malaysian Fruit Exporters Association who account for some 75% of fruit exports from the Klang Valley, a principal industrial hub in Malaysia, employ a consultant who maintains records for farms.

For a GAP system it would be very useful if a documentation system tailored to the product type and formatted for farmers. Training for farmers in the maintenance of the records explaining the rationale behind them would be of help.

A further step would be to customize GAP software for maintenance of records. This would be useful for farmer groups and cooperatives and would help by centralizing records which would enable simple documentation audits by the auditors. Such a system would not require auditors to travel to remote farms for documentation audits.

A centralized computerized system could be used to remind the farmers of lapses in maintenance. Additionally, such a software could be used to provide the necessary information on traceability chemicals used etc to retailers.

Another pertinent area where UNCTAD/FAO could play a role is to provide assistance in training on Integrated Pest Management (IPM) at all levels. IPM is an ecologically based approach to crop protection. Farmers who have knowledge in IPM practices will be able to develop to the GAP system quickly. The extension officers who provide advisory services to the farmers and the Auditors should have a good understanding of IPM.

## **Appendix 1: List of Acronyms used in this report**

DOA – Department of Agriculture

FAMA- Federal Agricultural Marketing Authority

FOA – Farmers’ Organization Authority

FO- Farmers Organization

FFV – Fresh Fruit and Vegetable sector

GAP – Good Agricultural Practice

IPM – Integrated Pest Management

MARDI – Malaysian Agricultural Research and Development Institute

MS-GAP – Malaysian Standard on Good Agricultural Practice

MOA – Ministry of Agriculture and Agro-based Industries

RM – Ringgit Malaysia

SALM – Skim Akreditasi Ladang Malaysia (Farm Accreditation Scheme of Malaysia)

**Appendix II: List of Personnel, Organizations and establishments visited and interviewed for data**

- 1) Dato' Hjh. Khamsiah bt. Hj. Muhammad  
Director General  
Department of Agriculture  
Ministry of Agriculture and Agro-Based Industry Malaysia
- 2) Mr. Chan Han Hee  
Director  
Industrial and Floricultural Crops Division  
Department of Agriculture Malaysia  
Ministry of Agriculture and Agro-Based Industry Malaysia
- 3) Mrs Norma Othman  
Principal Assistant Director  
Horticulture Division  
Department of Agriculture  
Ministry of Agriculture and Agro-Based Industry Malaysia
- 4) Mr. Haris Bin Abdullah  
Director  
Malaysia's Best  
Federal Agricultural Marketing Authority (FAMA)  
Ministry of Agriculture and Agro-Based Industry Malaysia
- 5) Mrs Norma Saleh  
Principal Officer  
Quality Development and Promotion  
Federal Agricultural Marketing Authority (FAMA)  
Ministry of Agriculture and Agro-Based Industry Malaysia
- 6) Mrs Ahadiyah Mohd. Khairi  
Principal Officer  
Marketing Information Services  
Federal Agricultural Marketing Authority (FAMA)  
Ministry of Agriculture and Agro-Based Industry Malaysia
- 7) Mr. Mukhtiar Singh (former Director of Marketing, FAMA)  
Operations Manager  
Sebiro Agrifood Sendirian Berhad  
(Fruit Exporter to Europe / Asia)

- 8) Mrs Zaheran Abdul Ghani  
Assistant Director  
Vegetables and Cash Crop Unit  
Farmers Organization Board (FOA)  
Ministry of Agriculture and Agro-Based Industry
  
- 9) Mr. Ricky Y.K. Yong  
President  
Malaysia Fruit Exporters Association
  
- 10) Mr. Abdul Razak bin Salim  
Executive Director  
SIRIM QAS International Sendirian Berhad  
(A Wholly-owned subsidiary of SIRIM Berhad)
  
- 11) Dr. Mohamad Salleh  
Deputy Director  
Pest and Disease Management Program  
Horticulture Department  
Malaysian Agricultural Research & Development Institute (MARDI)
  
- 12) Mr. Hj. Ariffin Tawang  
Director  
Rice and Industrial Crop Research  
Malaysian Agricultural Research & Development Institute (MARDI)
  
- 13) Dr. Sivapragasam  
Deputy Director  
Pest and Disease Program  
Department of Rice & Industrial Crops  
Malaysian Agricultural Research & Development Institute (MARDI)
  
- 14) Ms Norma Omar  
Deputy Director  
Food Technology Research Center  
Malaysian Agricultural Research & Development Institute (MARDI)
  
- 15) Mr Azizi Meor Ngah  
Chief Executive Malaysian Palm Oil Association (MPOA)  
Chairman Working Committee on Malaysian Standard on GAP
  
- 16) Farm visit to a vegetable farm project managed by the Farmers' Organization, located in Bentong, Pahang (which is located about 250 km from Kuala Lumpur)
  
- 17) Site Visit to view agricultural land owned by a large corporate firm in Lembah Beringin (located 100 km from Kuala Lumpur)