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Regulation Of Cut Foliages From West Malaysia

Cut foliages are commonly imported from West Malaysia as part of bouquets or as individuals for use in floral arrangement. They are sold in domestic as well as overseas markets such as Australia, Japan, New Zealand, etc.

With effect from 1st November 2005, five cut foliages from West Malaysia are being regulated. They are *Chrysalidocarpus* spp, *Rhapis* spp, *Codiaeum* spp, *Draceana* spp and *Cycas* spp.

Declaring agents have to use the following HS, Product and Unit codes for declarations of any of these five foliages imported from West Malaysia in the TradeNet system.

HS Code: 06049100

Product Code: ALN0FOF

Unit Code: NMB

Description: Foliage, fresh branches and other part of plants, without flowers or flower buds being goods of a kind suitable for bouquets or ornamental purposes; and including *Chrysalidocarpus* spp, *Rhapis* spp, *Codiaeum* spp, *Draceana* spp and *Cycas* spp from West Malaysia.

For non-regulated foliages from West Malaysia, the following HS, Product, Establishment and Unit codes are to be used in declarations.

HS Code: 06049100

Product Code: ALN0OTHF1

Unit Code: NMB

Establishment Code: MYJHFOF1

Description: Foliage, fresh from West Malaysia only, but excluding *Chrysalidocarpus* spp, *Rhapis* spp, *Codiaeum* spp, *Draceana* spp and *Cycas* spp

Survey On Consumption Of Locally Grown Leafy Vegetables



AVA conducted a consumer survey at the 'Vegetarians and Fruits Jamboree' organized by the Health Promotion Board (HPB) and participated by 5 GAP-VF* certified farms at Parco Bugis Junction, from 22 to 24 July 2005, to gauge consumers' level of preference for locally grown leafy vegetables, awareness of vegetables produced by GAP-VF certified farms, and weekly intake for leafy vegetables. Using prescribed forms, face-to-face interviews were conducted with 524 randomly selected consumers.

Consumers' Level Of Preference For Locally Grown Leafy Vegetables - 65% of all respondents were not particular about the source of supply of the leafy vegetables, 22% would buy only locally grown ones and 10% would buy only imported ones if locally grown ones were not available. Only 3% had indicated preference for imported leafy vegetables.

Awareness Of GAP Vegetables - 54% of the respondents were unaware of the GAP-VF Certification Scheme. Among those who are aware of the GAP vegetables, 21% did not know where to purchase these vegetables. After being informed of the GAP-VF Certification Scheme and knowing that AVA is encouraging local vegetable farmers to be certified in the scheme, 67% have indicated that they would recommend others to purchase locally grown leafy vegetables. Moreover, 70% of the respondents, who were initially not particular on the source of supply of the leafy vegetables, had changed their mind and expressed preference for locally grown leafy vegetables.

Consumption Of Leafy Vegetables - On the average, local consumer takes in 0.67kg of leafy vegetables weekly. The HPB recommends a daily intake of 2 servings (300g) of vegetables per person. Assuming 50% of the vegetable intake for locals are leafy vegetables, the recommended weekly leafy vegetable consumption per person should be 1kg. Hence, steps should be taken to increase the public awareness on the need to consume adequate amount of vegetables for a healthier living.

*GAP-VF: Good Agricultural Practice for Vegetable Farming

Fruit Flies In Singapore

Use Of Oil-Palm Waste Compost For Cultivation Of Leafy Vegetables

Fruit flies belong to the insect order of Diptera of Families Drosophilidae and Tephritidae. The Tephritid fruit flies are of major economic importance worldwide, causing billions of dollars in direct losses to a wide variety of fruits, vegetable and flower crops (e.g. citrus, apple, mango, sunflower). Indirectly, fruit flies limit agriculture trade in many countries because of the strict quarantine imposed to prevent their spread. Of the >4,000 species known worldwide, nearly 200 are considered as pests, of which about 70 species are important agricultural pests. Most Tephritidae species attack fruits, and the majority of them belong to the genera *Anastrepha*, *Ceratitis*, *Bactrocera*, *Dacus* and *Rhagoletis*. In Singapore, some *Ceratitis* and *Bactrocera* fruit flies are endemic here.

The *Bactrocera* spp. is the most economically significant with about 40 species considered as important pests. It is native to the tropics, mainly of the Oriental and Australasian regions. The Oriental fruit fly, *B. dorsalis*, Hendel; the melon fly, *B. cucurbitae* Coquillett; the fruit fly, *B. umbrosa* Fabricius; the fruit fly *B. albistrigata* Meijere, *B. papayae*; *B. carambolae*; and the Queensland fruit fly (QFF), *B. tryoni* Froggatt are among the most important species. The 10 *Ceratitis* spp. are mostly restricted to Africa. The exception is the Mediterranean fruit fly (MFF), *C. capitata* (see picture below), which has spread to many tropical and subtropical parts of the world.



The MFF is the most notorious of the genus, has the widest host range and is the most widespread species of Tephritidae. Among the *Bactrocera* spp., *B. cucurbitae*, *B. umbrosa*, *B. albistrigata* and *B. dorsalis* complex (*B. papayae* and *B. carambolae*), are found in Singapore. The QFF, *B. tryoni* and MFF, *C. capitata* are not present here and are quarantine pests here.

A surveillance programme is essential for fruit fly control of endemic pests and for eradication of quarantine fruit flies. AVA monitors both the populations of quarantine and endemic fruit flies and seeks out unknown local FF species. Such information facilitates free trade in the fruit and fruit products industry in Singapore. The surveillance is largely carried out through the use of lure traps placed in the shade canopy of host trees at selected locations all over the island. The traps are checked for fruit flies on a weekly basis. Fruit samples are also collected to monitor for infestations and distribution.

Plant quarantine measures to detect MFF and QFF here include post-entry inspection of fruit and vegetable consignments. Disinfestations with cold/heat treatments may be used to ensure fruits marketed are free of fruit flies. Contingency plan in the event of detection of MFF or QFF is to define the outbreak zone, suspend movement of host products, destroy infested fruits and spray the fruit trees with systemic insecticides to kill immature stages present in fruits. For the control of endemic fruit flies, insecticides should only be used when infestation is severe, affecting yield. These may be malathion, naled (Fly killer-D), pyrethrin or spinosad. Chemicals should not be applied 10-14 days within fruit harvests. Alternatively, fruits may be wrapped in bags to physically ward off fruit fly attacks.

The AVA had been conducting trials to assess the effectiveness of oil-palm waste compost as a basal fertilizer to grow leafy vegetables. It was found to be as effective as chicken manure compost for growing caixin, Chinese cabbage, gailan and xiaobaicai.

A commercially available oil-palm waste compost consisting of 2.6% Nitrogen, 3.5% Phosphorus and 6.5% Potassium was used in the studies. The average biological yields (measured as fresh weight, excluding roots, in kg/m²) of the various vegetable crops with 1 kg/m² of compost applied are as follows:

Type Of Vegetable	Oil-Palm Waste	Chicken Manure
Caixin	2.2	2.6
Chinese Cabbage	4.8	5.0
Gailan	2.3	2.3
Xiaobaicai	3.4	2.8

As the oil-palm waste compost is imported from Malaysia, it costs about 10 times more than chicken manure compost, which is usually sourced from local poultry farms. One way to reduce cost is to apply a reduced amount of the compost. Comparable yields for xiaobaicai could be obtained when oil-palm waste compost was applied at rates as low as 0.25 kg/m². But, for other vegetables like gailan, yields were lower with reduced application rates. Farmers are encouraged to try this compost and experiment with its application. It could be a suitable alternative basal fertilizer in the event that local chicken manure compost is unavailable. For more information, please contact Ms Poh Bee Ling at tel: 67519819 or Mr Ong Pang Hwa at tel: 67519848.



Plant Bulletin is published biannually by the **Horticulture Working Group, Agri-Food and Veterinary Authority**,

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The aim of this bulletin is to disseminate horticulture and plant health information to plant growers, exporters and importers in Singapore. If you have any suggestions, comments or enquiries, please contact us at :

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