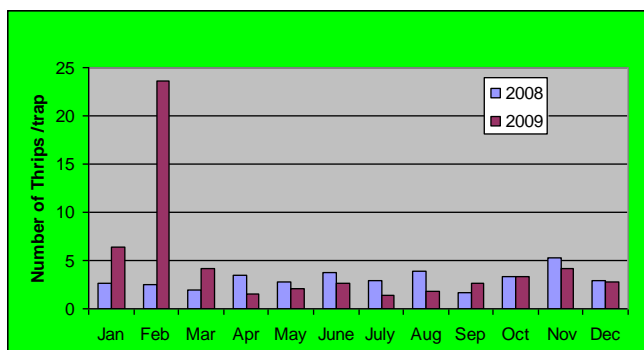
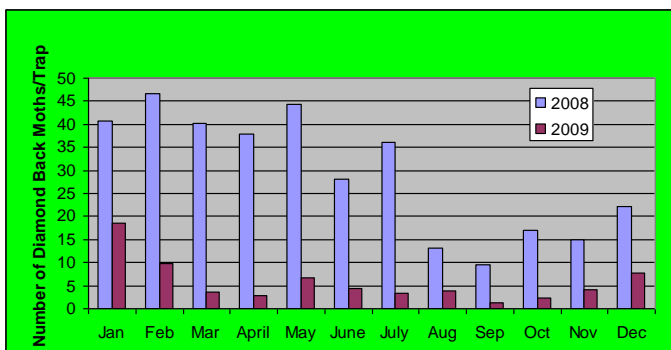


Thrips infestation on Orchids



Comments: The thrips population is maintained at low levels so far this year, except for one-off high population in Feb., compared to that of last year. Low population was due to the adequate plant protection measures taken by orchid growers.

Diamond Back Moth infestation on Vegetables



Comments: The average DBM population is maintained at low levels for the past 12 months as compared to last year's. This was due to adequate plant protection measures taken and removal of debris from the farm by the vegetable growers.

PAPAYA MEALYBUGS DETECTED IN SINGAPORE

The papaya mealybugs, *Paracoccus marginatus* Williams and Granara de Willink, (Insecta: Hemiptera: Pseudococcidae) were recently detected infesting papaya plants in Singapore. The papaya mealybugs are native to Mexico and Central America. In the early 1990's they have spread to the Caribbean and are now found in many Asian countries, including Indonesia, Thailand, India, Sri Lanka, Bangladesh, and Maldives.

Papaya mealybugs are polyphagous pests feeding on plants recorded from 22 plant families. The bugs infest both the leaves and fruits of papaya grown here. Elsewhere, they have been known to occur on plumeria, hibiscus, avocado, citrus, tomato, eggplant, pepper, bean, pea, sweet potato and mango. Infestations occur along the veins of older leaves and on all parts of young leaves and fruits. The mealybugs inject a toxin as they feed on leaves (Fig. 1) and fruits which results in chlorosis (yellowing), stunting, deformation (Fig. 2), early leaf and fruit drop. They also secrete a honeydew liquid that attracts secondary sooty mold growth. Extensive black sooty mold over the leaves impede plant photosynthesis adding to the insect damage. Heavy mealybug infestations could kill plants.

The infested leaves should be removed, bagged and discarded away from site. Further control is to suppress the mealybug population with foliar sprays of any one of the insecticides, imidaclopyrid 200 SC at 0.5 ml/l, dimethoate 40% EC at 2 ml/l, abamectin 1.8% EC at 0.3 ml/l, or fipronil 50 SC, at 0.3 ml/l. The sprays should be directed to the undersides of leaves, fruit stem and crevices where the populations feed.



Fig.1 Heavy mealybugs infestation along the veins of papaya leaves



Fig. 2: Papaya leaf severely malformed from mealybug feeding.

Pest Interceptions from Importing Countries (December 2009)

AVA was notified of one pest interception from exported aquatic plant consignments for November 2009. They were:

Commodity = *Vallisneria americana*
Pest Intercepted = *Hirschmaniella* sp
Intercepted = France

Exporters are advised to implement pest control management on farm . Apply nematicides in the aquarium beds to control the nematodes.

CONTACT US

Please report any unusual occurrence of pests and diseases (new or severe occurrence) to Plant Health Laboratories, AVA. It would help to protect our plant industry and the garden city from new invasive pests or diseases. You can report your observations through:

Email : AVA_Planthealth@ava.gov.sg or Telephone: 63165168 or 188 or Fax: 63161090.

Please provide the location, plant hosts attacked and suspected pests or diseases to our officers to follow-up and confirm the situation if required.

Visit us at:

<http://www.ava.gov.sg/AgricultureFisheriesSector/PlantHealthServices/PlantHealthLabServices/index.htm>