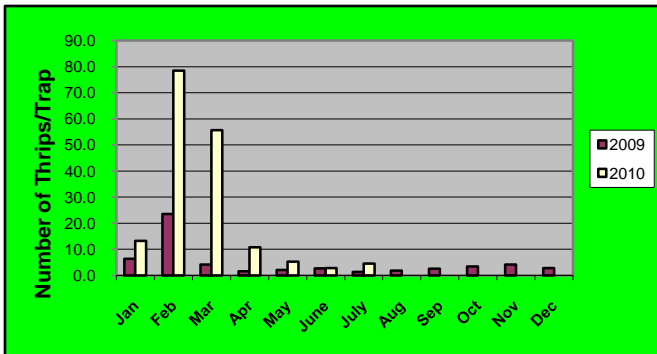
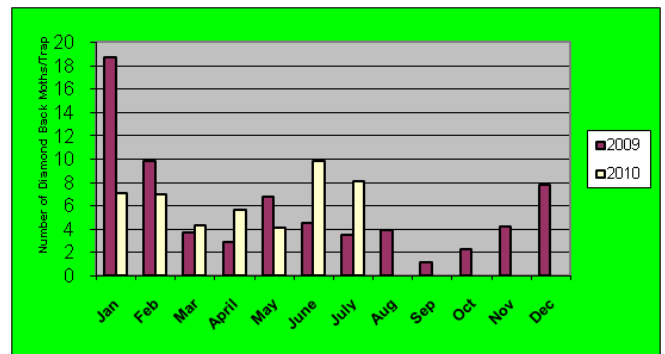


## Thrips infestation on Orchids



**Comments:** The overall average thrips populations did not show much difference as compared to last month which is due to farmers taking up adequate plant protection measures including rotation of chemicals and use of correct dosage to get the maximum kill.

## Diamond Back Moth infestation on Vegetables



**Comments:** The average DBM population is on the higher side as compared with the same month last year. The reason being that one of the farms not taking up adequate plant protection measures and removal of the debris. They were advised accordingly

## *Alternaria helianthi*- Leaf spot on Sunflowers

*Alternaria helianthi*, currently also known as *Alternariaster helianthi*, was isolated from the leaf spots of sunflowers- *Helianthus annuus* (Fig. 1). It is identified by its characteristic conidiophores and conidia (Fig. 2), and this pathogen has been reported throughout the world on *Helianthus* spp., and *Rudbeckia bicolor*. *Alternaria helianthi* causes the *Alternaria* leaf blight of sunflowers. The leaf spots begin as dark brown lesions with pale margin and yellow halo. These subsequently coalesce and become irregular, and will lead to the blight and defoliation and eventual death of the plant. It is also the cause of stem breaking and the blossom blight or head blight of sunflowers. Conidia are produced in abundance during prolonged damp weather, and are transferred to other hosts through wind, rain and splash dispersal, and hot weather and frequent rains favour infection. Seed transmission can also occur, and the fungus may survive in plant debris, or suitable weed hosts.



Fig 1. Leaf spots on sunflower

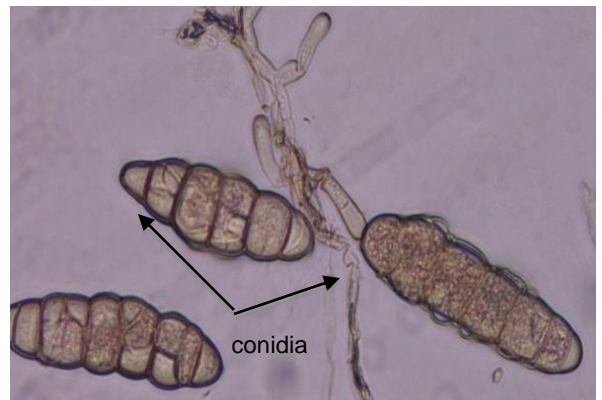


Fig2. Conidia of *Alternaria helianthi*

Control of the disease would be through the pruning and removal of infected leaves, the use of good sanitation practices, and the reduction of the moisture and humidity levels. Alternately, if re-infection occurs, copper oxychloride, mancozeb, difenoconazole or chlorothalonil may be used .

## Hibiscus Chlorotic ringspot virus on *Hibiscus rosa-sinensis*

The *Hibiscus* (*Hibiscus rosa-sinensis* L.) is a popular woody ornamental grown as hedges or potted plants. They produce large showy flowers of vibrant reds, pink, yellow and the rarer orange. Lately many new exotic varieties are imported that spot layered petals and leaf variegations. The local common varieties are easily grown from stem cuttings. One of the viral diseases of *Hibiscus* is caused by *Hibiscus chlorotic ringspot virus* (HCRSV). The virus is composed of a single ribonucleic acid (RNA) component with isometric particles about 28nm in diameter.

Infection from HCRSV showed leaf mottling of dark and light green patches ( Fig 1) , chlorotic spots and ringspots on leaves (Fig. 1). Plants continue to flower and are not noticeably stunted. *Hibiscus chlorotic ringspot virus* (HCRSV) is spread mechanically through pruning and cutting stems for propagation. There is no known insect vector. Plants exhibiting the symptoms should be discarded for incineration and no part of it should be used for propagation. Tools used in tending diseased plants should be disinfected in alcohol and flame sterilized.



Fig. 1 Mottling on *Hibiscus* sp



Fig. 2 Ringspots on *Hibiscus* sp

## Pest Interceptions from Importing Countries ( July 2010)

There were no pest interceptions from exported consignments for the month of July 2010.

### **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](mailto:AVA_Planthealth@ava.gov.sg) or Telephone: [63165168](tel:63165168) or [188](tel:188) or Fax: [63161090](tel: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>