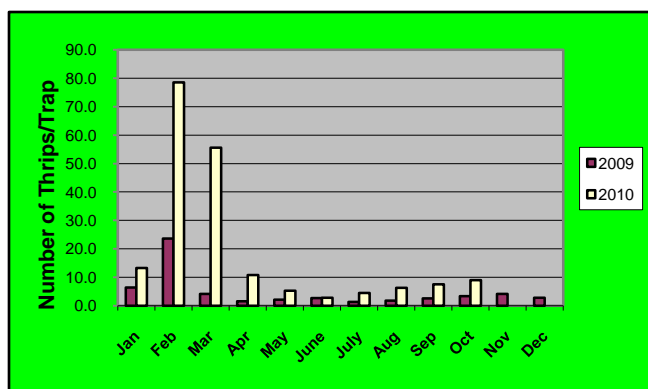
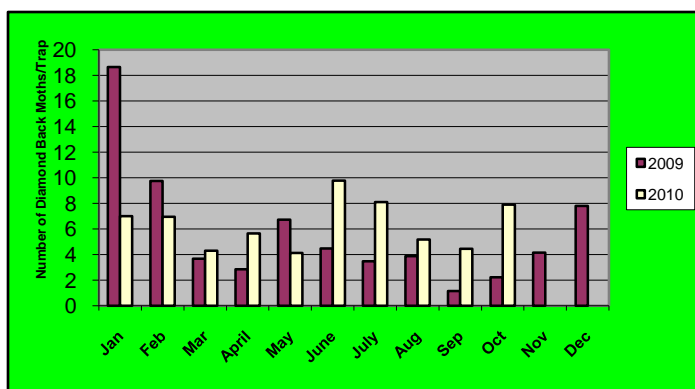


Thrips infestation on Orchids



Comments: The overall average thrips populations showed some increase as compared to last two months. As compared with the same month last year the population showed considerable increase as one farm recorded higher thrips count in the last 6-weeks. The farm has been informed to take up adequate control measures .

Diamond Back Moth infestation on Vegetables



Comments: The overall average DBM population is on the rise as compared with the last two months. The population is also on the higher side as compared with the same month last year as few farms recorded higher moths count. The farms have been informed to take up adequate control measures

ROOT-KNOT NEMATODES ON TURF GRASS

In recent years, golf has been increasing in popularity around the world. Two of the important features of a successful golf course are healthy and beautiful turf grass and a smooth and fast playing surface. Even using modern, highly adapted turf grass cultivars, it is extremely difficult to maintain a healthy root system. Therefore, plant-parasitic nematodes that feed on and damage turf grass roots are of great concern to golf course managers and others who manage golf course turf.

Plant parasitic nematodes that reproduce and feed on plants while their bodies remain in the soil are termed as ectoparasites. Nematodes that enter into plant tissue to feed and reproduce are called endoparasites. Turf grasses can be damaged by both ectoparasitic and endoparasitic nematode species. Several plant endoparasitic nematodes such as lance, dagger, root- knot nematodes affect the turf grasses. Among them root-knot nematode species *Meloidogyne* spp - are known to cause severe damage to turf grass. In warm and humid climates, important species of root- knot nematodes that can infect turf grasses are *M. graminicola*, *M. graminis*, *M. kikuyensis*, and *M. spartinae*. Other common species such as *M. incognita*, *M. javanica* and *M. arenaria* are also pathogenic to grasses in tropical and subtropical areas. Although root-knot nematodes are common plant parasitic nematodes on turf grasses, on golf courses these nematodes caused considerable damage on putting greens. Above ground symptoms typically exhibit yellowing of the leaves (chlorosis), die back of grass blades, thinning of the turf and stunting (Fig. 1). Turfs also showed sensitivity to stress, reduction in vigour and unresponsive to watering or fertilizing.

In lawn turfs, symptom of patchiness characterized by circular to irregular areas occurs as a result of the clustering distribution of the nematodes. Root gall formation or “root knots”, scanty brown to rotten roots and absence of feeder roots are some symptoms associated with the *Meloidogyne* infection. In most species, *Meloidogyne* develop from egg through four juvenile stages into adult spherical-shaped females (Fig. 2) and vermiform males (Fig. 3).



Fig 1. Chlorosis and die back caused by root-knot nematodes in *Cynodon dactylon*

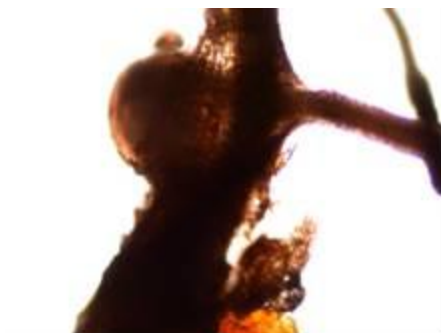


Fig 2. Female root-knot nematode embedded in turf grass root.



Fig 3. Anterior portion of adult male.

Management of nematodes on golf courses requires frequent monitoring of nematode populations, avoidance of stress on grasses, cultural practices and use of chemicals such as abamectin, fenamifos or carbofuran or other plant-derived materials.

Pest Interceptions from Importing Countries (Oct 2010)

AVA was notified of one pest interception from exported orchid cut flowers/foliages consignments for October 2010.

Commodity: Orchid cut flowers

Pest Intercepted: Live spiders

Intercepting Country: Australia

Exporters are advised to implement pest control management on farm and apply appropriate insecticide and miticide applications (correct dosage of insecticide will help in reducing the insect resistance) to control spiders infestations.

E- books for sale

The E-Books viz., “The Singapore Plant Health Guide” and the Chinese version of the “ Guide to Vegetable Growing” are still available for sale at \$ 5 each. Purchases can be made from the Plant Health Laboratory (Animal & Plant health Centre , Agri- Food and Veterinary Authority, 6, Perahu Road, Singapore 718827). You may wish to call or fax or email us as per below.

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](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>