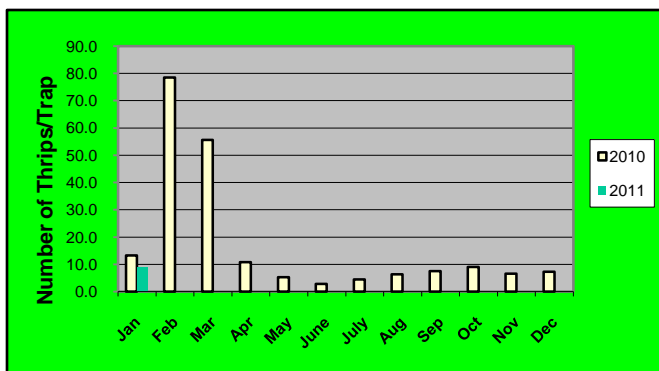
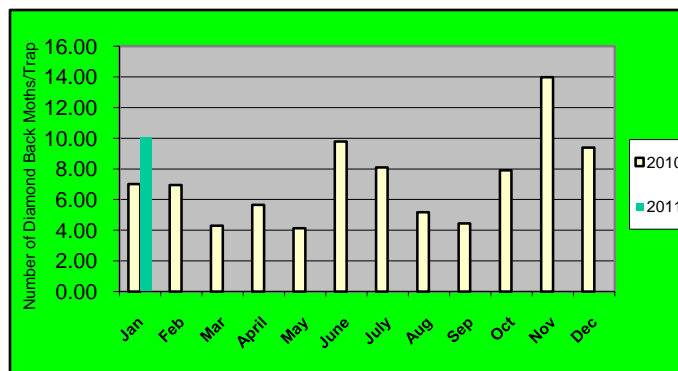


Thrips infestation on Orchids



Comments: The overall average thrips populations did not show much difference as compared with the last two month. The population showed a slight decrease as compared with the same month last year. One farm recorded higher thrips count in the first 2-weeks . The farm has been informed to take adequate control measures

Diamond Back Moth infestation on Vegetables



Comments: The overall average DBM population has increased moderately as compared with the last 10 -months. The population is slightly on the higher side as compared with the same month last year as a few farms recorded higher moths count. The farms have been informed to take up adequate control measures

Cucumber Downy Mildew Disease in Singapore

Cucurbits are members of the gourd family or Cucurbitaceae and include the popular crops cucumber, pumpkin, squash, snake gourd, ridge gourd, bottle gourd and watermelon. *Pseudoperonospora cubensis*, also known as the cucumber downy mildew, was recovered from the downy leaf blotches of the *Luffa acutangula* – ridge gourd sample collected from a vegetable farm in Lim Chu Kang Road (Fig. 1). Considered a highly destructive foliar disease, it has a world-wide distribution on a number of different Cucurbitaceae species, The pathogen, *P. cubensis*, causes angular, chlorotic lesions on the foliage. These lesions appear angular because they are bound by leaf veins. During humid conditions, inspection of the underside of the leaf reveals grey-brown to purplish-black ‘mildews’. This is the sporulation of the pathogen. Magnification of the sporulation reveals the acutely and dichotomously branched sporangiophores bearing lemon-shaped sporangia (Fig 2). Eventually, leaves will turn necrotic and curl upwards. The disease is sometimes called “wildfire” because of how rapidly it progresses, as if the crop were burnt by fire.

P. cubensis is an obligate parasite, meaning that it requires live host tissue in order to survive and reproduce. Symptoms appear 4-12 days after infection. The pathogen thrives under cool and moist conditions, but can do well under a wide range of conditions. The sporangia are released after short periods of dry weather and are subsequently dispersed through wind, rain splash or mechanical means. Motile zoospores are also formed within such sporangia, and are released under moist and humid conditions, and similarly dispersed. Infection of new host tissue occurs through the stomata, via germ tubes produced by the encysted zoospores

Control of the disease would be through the pruning and removal of infected parts of the plant, the use of good sanitation practices, the reduction of the moisture and humidity levels, and the maintenance of good drainage. Chemical control is highly recommended because downy mildew is an aggressive and destructive disease and satisfactory control without the use of fungicides is unlikely. Both protectant and systemic products should be applied. Fungicides are most effective when applied prior to infection and reapplied at 5- to 7-day intervals. Mancozeb+metalaxyl or other protectant fungicides such as chlorothalonil and mancozeb can be used. Early detection of downy mildew and immediate preventative fungicide application is imperative for the control of this disease.



Fig. 1 *Pseudoperonospora cubensis* leaf blotches on the leaf of *Luffa acutangula*.

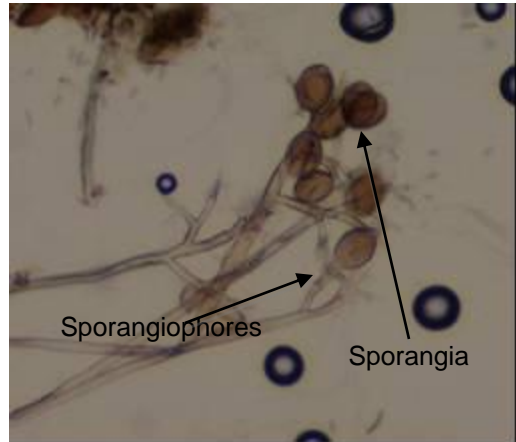


Fig. 2 The sporangiophores and sporangia of *Pseudoperonospora cubensis*.

Pest Interceptions from Importing Countries (Jan 2011)

There were no pest interceptions from importing countries for the month of Jan 2011.

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 Laboratory, AVA. It would help to protect our plant industry and the garden city from new invasive pests or diseases. Please provide the location, plant hosts attacked and suspected pests or diseases to our officers to follow-up and confirm the situation if required You can report your observations through: Email: AVA_Planthealth@ava.gov.sg or Telephone: 63165168 or 188 or Fax: 63161090 or Visit us at:

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