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Duponchelia fovealis Zeller

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BACKGROUND

The native range of *Duponchelia fovealis* Zeller includes the Mediterranean region and the Canary Islands. It is found in parts of Africa, Asia Minor, and southwest Europe. The first report of this moth outside of it's native range was from Finland in 1984. There was an out break of the pest reported from a cut-flower glasshouse in Italy in 1988. Recently (2005) this pest has been reported from three greenhouses in southern Ontario.

BIOLOGY

The adults are good flyers and live from 1-2 weeks. In it's native range adults are present from April to October. During her life a female will lay about 200 eggs. The eggs are laid singly or in groups of 3-10 overlapping in a tile-like fashion. The eggs may be found almost anywhere on the plant but most commonly they are located on the underside of leaves close to the veins; low down on plant stocks; at the base of the host plant or in the upper layer of the soil. In greenhouses hatching occurs 8-10 days after the eggs are laid. The emerging larvae are polyphagous and will feed on leaves, flowers, buds and leaf/plant debris. They will also bore into the plant stems. The larvae develop quickly, are very agile, and show a preference for the damp moist conditions that exist lower down in the crop near the soil surface. Under greenhouse condition the larvae reach maturity within four weeks of hatching. When fully mature the larvae will form a cocoon constructed of silk mixed with either frass or dirt. Pupation takes about 1-2 weeks under glasshouse conditions and occurs within the cocoon.

There are no reports of cold tolerance or any type of diapause during any portion of the life cycle.

SYMPTOMS

Shoots and foliage:

Look for signs of feeding damage i.e., holes, webbing, frass, also look for all life stages of the insect (eggs, larvae, cocoons, adults).

With flowers grown in greenhouse, look for signs of feeding on leaves and stems deep in the canopy and close to the ground, also when "ebb-and-flow" irrigation systems are used examine the flower buds and any exposed roots for signs of feeding.

On poinsettias, look for signs of boring through the stem; oviposition (egg laying) sites tend to be at the top of the plant.

MORPHOLOGY

Eggs are small 0.5 x 0.7mm, whitish-green in colour turning bright red as the young larva develops. The larva can be seen through the eggshell prior to hatching. **Larvae** are creamy white to brown in colour having a dark head capsule and dark spots on the body. They measure about 20-30 mm at maturity. **Cocoons** are 15-19 mm long oval in shape and constructed with silk, frass or soil particles. **Pupae** are light brown and about 9-10 mm long. **Adult** forwings are grey in colour with a darker centre and two yellowish-white transverse lines, the outer line has an outward-directed tooth-like notch. The wingspan is 19-21 mm. Males have a longer slender abdomen.

Click on image for larger view

Figure 1. Adult

Figure 2.
Larva feeding on Begonia

Figure 3.
Damage on Begonia

Figure 4. Larva

Source of all photos: Dr. Gerben Messelink, Wageningen, The Netherlands

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Date Modified:
2005-09-19

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