

Seedcorn Maggot

(Order: Diptera, Family: Anthomyiidae, *Delia platura* (Meigen))

Description:

Adult: The adult flies are small (4-5 mm long), grayish brown and males have gray stripes on the thorax. The abdomen tends to be smaller than what you observe on houseflies, relative to the overall body size.

Immature stages: The eggs are white, oblong and about 0.9 mm in length. The larvae are less than 1 mm in the first instar to 7 mm in the third instar and tend to occur in clusters at the base of the plant or feeding inside of the root stem. The puparium is 4-5 mm long and is light reddish brown.



Seedcorn maggots and adults.

Biology:

Life cycle: The complete cycle from egg to adult ranges from 15 to 77 days depending on temperature, with an average of three weeks under warm conditions. Diapausing pupae in the winter have been reported in northern states, extending this time period.

Seasonal distribution: There are likely 3-4 generations per year in Georgia. Oviposition by adults occurs within a temperature range of 10-27°C and usually decaying plant material and/or newly emerging plant seedlings are targeted. In the Vidalia onion area, onions are infested in the fall and, if winter frost damage to the crop occurs, flies can be observed in damaged fields once the temperature warms up.



Damage to seedlings.

Damage to Crop: The two primary ways that seedcorn maggot damages crops in Georgia is through reduction of seedling stands and contamination of the crop later in the season. Mid- to late season stand loss caused by seedcorn maggot has not been observed, just secondary invasion of the crop after some other factor damages the crop. Pupae can be attached to harvested portions of root crops, from which adult flies can emerge in fresh pack stands in markets.

Management: Certain crops direct seeded in cool seasons have been reported with infestations of seedcorn maggot in seedlings, a problem generally not seen during the summer. The standard treatment for control of this pest is to treat preventatively with pre-plant, in-furrow insecticides. If infestations of flies occur mid- to late season due to crop damage which attracts flies to decaying organic matter, control of flies might be warranted. This is of most concern when dealing with a root crop such as onions or turnips because if flies invade the crop 1-2 months before harvest, contamination of the harvested roots with fly puparia can occur. Harvested produce with fly puparia can have adult flies emerge when at the market. If seedcorn maggot adults are detected on yellow sticky traps in the field 1-2 months before harvest, then we recommend a treatment for adults to reduce the level of contamination of the crop.



Adults on sticky traps.

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