



## Seedcorn Maggot

John C. Palumbo, Extension Specialist  
University of Arizona, Yuma

**Description:** The seedcorn maggot, *Delia platura*, is a white, legless larva of a small light gray fly that attacks the planted seed of cantaloupes and watermelons during the spring. The adult is a grayish brown fly with a mid-dorsal strip on the abdomen.



Late instar larvae of the seed corn maggot



Adult seed corn maggot fly

Maggots can also be found attacking seeds of field crops such as cotton and safflower. They can be particularly serious if there is a cold period that prevents quick germination of the seed. Maggots may overwinter as larvae in the soil or hatch from eggs laid in the spring. They usually have three-four generations per year, but only the first is usually economically significant.

**Damage:** The maggot attacks germinating seeds or transplants in the early spring when the soil is cool. The maggots bore into seeds or into the developing hypocotyl of developing plant. Seedlings with maggots can wilt and die within a few days. Watermelon transplants are also susceptible to maggots where they bore into the stem.

In general, the adult flies will readily lay eggs in temperatures ranging from 50-80° F. Larvae may develop at rather low temperatures (50°F), but optimal growth occurs at about 70°F where immature development can occur in 14 days. Under favorable growing conditions for melons (85-90 °F), little damage is likely to occur. The conditions that favor seed maggot infestations include high levels of decaying organic matter (produce plant residue) and cool wet weather. Manure, either composted or not, can also attract seed corn maggot flies to lay more eggs. Warm dry weather reduces the threat of continued seedcorn maggot damage. The flies can also be attracted to the commercially prepared growing medium used to start melon transplants in the greenhouse.

**Management:** Fields with heavy-textured soil usually experience the worst problems with seedcorn maggots. Incorporation of previous crop residues, by disking or plowing well in advance of planting helps to reduce the attractiveness of the field to ovipositing flies. Avoid when possible direct seeding or transplanting melons after cole crops, or lettuce fields that were lightly harvested. Rapid seed germination greatly reduces the risk of infestation. Late season planting may avoid the early season infestation of this pest. An in-furrow spray application or transplant drench with an insecticide is a good method of control when conditions are ideal for maggot infestation. Bifenthrin (Capture LFR, Athena) and clothianidin (Belay) applied as in-furrow sprays during planting have shown moderate-good level of control. Neonicotinoids applied 2-3" below the seed for aphid and whitefly control may not be taken up by the plants in sufficient quantities to prevent maggots from damaging seeds. However, neonicotinoid seed treatments with this chemistry (FarMore-Cruiser), have been shown to provide better control of maggots in melons. Recently, control of maggots has been observed with in-furrow applications of chlorantraniliprole (Coragen and Durivo).



Damage to germinating cantaloupe seed by maggots