

insect answers



SEEDCORN MAGGOT

The seedcorn maggot, *Hylema platura*, can be a serious pest of beans, seed potatoes, corn, peas, and many other crops. This pest is of European origin but is now found throughout most of the United States and southern Canada.

Damage is usually caused in the spring when the larvae or maggots burrow into the seeds or seedlings. The greatest damage occurs in cool, wet seasons and in soils containing large amounts of organic matter. Attacked beans that sprout often show a "bald-headed" condition (a plant without primary leaves) or severely ragged primary leaves. This results in stunted plants, deformed beans and reduced yields. Attacked corn seedlings are weak and sickly (Fig. 1). Typical symptoms are curling, drying, or dead leaves. Seed potatoes are often attacked if they are bruised, decaying, or diseased (Fig. 2). Damage to these fields is not spotty like wireworm damage but usually covers large areas and occasionally most of the field. Sometimes when there is heavy feeding of maggots, replanting may be necessary.

Seasonal History

This insect spends the winter as larvae in a tan to brown-colored puparium that is less than 1/4-inch long and located about three to six inches in the soil (Fig. 3). The larvae

pupate inside the puparium in the spring. The grayish brown adults resemble a small housefly about 1/5-inch long. Adults emerge as the soil warms in late April and May (Fig. 4). They emerge only during the night or in the very early morning and are most active at temperatures between 60° F and 85° F. They feed upon the nectar of a number of different kinds of flowers.

Soon after emergence, the females begin depositing the eggs in soil where there is an abundance of organic matter or close to seeds in the soil. Recently worked soil tends to be favored for egg deposition. Each female lays an average of 100 eggs. Under normal field conditions the eggs hatch in less than a week and



Fig. 1. Damage to young corn plants.



Fig. 2. Seedcorn maggot damage in potato.

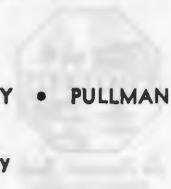




Fig. 3. Seedcorn maggot puparia.



Fig. 4. Seedcorn maggot fly.

the yellowish white to dirty yellow, legless larvae begin feeding on the germinating seeds or organic matter (Fig. 5). Partially decayed seeds, injured seeds, or poorly healed potato pieces are favorite foods. The larva lives in the seed, feeding and destroying the seed for two to three weeks. After this, the larva pupates in the first two to three inches of soil. The summer resting, pupal stage lasts from seven to 20 days. There are from three to four generations annually. The first spring generation is most injurious to crops; injury by summer generations is of less importance.

Control

Preventative treatments with chemicals are the



Fig. 5. Seedcorn maggot (larva).

only effective way of controlling these maggots on most seeds. An additional cultural preventative measure is to plant when the soil and weather promote rapid germination. Also, planting in highly organic soils, wet soils, or during wet weather periods should be avoided as this often leads to increased problems with seedcorn maggots. Severely damaged stands may be reseeded with little danger of reinfestation.

Seed treatment is the best treatment for these pests. For seed treatments on corn, snap beans, and lima beans, use chlorpyrifos (Lorsban) plus captan or thiram. For seed treatment on peas use lindane. A preplant treatment of phorate (Thimet) may be used with dry beans or lima beans if maggots are known to be a problem. Seed treatments may not be effective under conditions of heavy irrigation or rainfall.

There are no registered compounds for use against seedcorn maggot in potatoes. Use of some fungicides has reduced seed piece damage and subsequent maggot damage. The best way to prevent damage to potatoes by this maggot is to plant well-suberized or healed potato seed pieces. When cutting and storing seed pieces, the areas and equipment used should be disinfected and free from damaging bacteria and diseases.

For specific recommendations and further information see your county Extension agent or pest control consultant and Extension publications EM 3305, 3306, 3315 and 3316.

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Assistance from Washington State University is available to all persons, without regard to race, color, or national origin. Trade names have been used to simplify the presentation of information. No endorsement of products is intended.



Use pesticides with care. Read the label and follow its directions. Never smoke while using pesticides and avoid breathing the spray or dust. Wear natural rubber gloves when handling pesticides. Wash hands and face carefully with soap and water after applying. If insecticides are spilled on skin or clothing, remove contaminated clothing and wash skin thoroughly. Store pesticides in their original containers and be sure labels remain on the containers. Keep containers away from food or feed and out of reach of children or irresponsible persons.