

insect answers



THE CABBAGE MAGGOT IN THE HOME GARDEN

The cabbage maggot, *Hylemya brassicae*, is a common insect pest in Washington. It attacks a variety of plants including cabbage, broccoli, cauliflower, radishes, and rutabagas.

Damage

Cabbage maggots eat tunnels and grooves in the roots and lower stems of plants. Small roots may be eaten away. The maggots spread soft rot which additionally damages root tissues. The leaves of damaged plants are light green or yellowish and stunted. If damage is severe, the plants wilt and eventually die. Heavy populations of cabbage maggot are difficult to control.

Description and Life History

Cabbage maggots spend the winter in a resting stage called a puparium, an elongate brown structure with rounded ends. Somewhat hard, it is buried from 1 to 5 inches in the soil.

In early spring, the adult cabbage maggot, a fly, emerges from the puparium and rises to the soil surface. The fly is gray and resembles a house fly, but is only 5 mm or 3/16 inch long. It lays very small, white, oblong eggs on or just below the soil surface near the base of the host plants.

Maggots hatch from the eggs in three to seven days, then migrate through the soil and feed on underground plant parts. The maggots are cream to white in color and about 10 mm or 3/8 inch long when mature. The insect causes damage

only during the maggot stage which lasts from three to five weeks.

Mature maggots leave the plant and change to pupae in the soil nearby. In two to four weeks the adult fly emerges. There are usually three broods or generations a year.

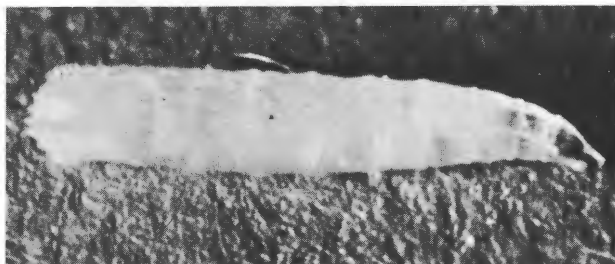
Cultural Control

A cheesecloth tent, which has no gaps through which flies can enter, may be placed over the seed furrow or transplants at planting time. (The cloth

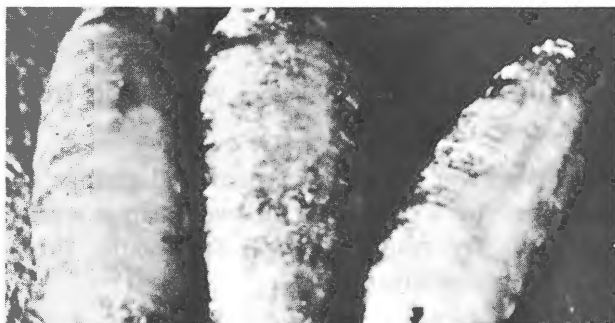


Cabbage Maggots in turnip

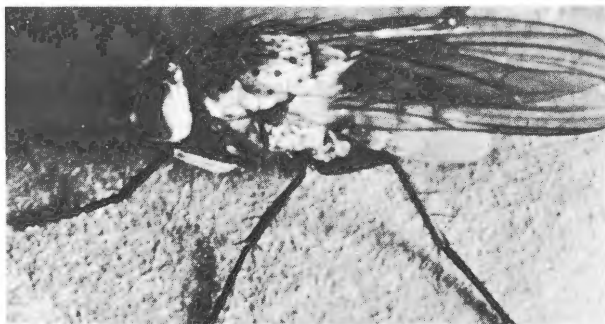




Immature Cabbage Maggot



Cabbage Maggot Puparia



Cabbage Maggot Adult

should have about 24 threads per inch.) The tent base should extend at least 6 inches on each side of the stems. Tent construction must allow easy access to the plants for periodic harvesting or

further planting, as well as room for plant growth. Standard “backdoor” screening constructed with scrap wood framing has also shown excellent results as a fly barrier in WSU experiments. Initial investment costs for materials, however, may make this method too costly to be practical.

Chemical Control

Diazinon is the only insecticide available to home gardeners for use in controlling cabbage root maggots. Use of this material does not insure complete control of the pest. Highly organic soils tend to reduce its effectiveness and longevity in the soil.

Crop	*Insecticide	Remarks
Cole crops including cabbage, broccoli, cauliflower, and brussels sprouts.	Diazinon, 25% Emulsifiable concentrate (also called Spectracide).	Cover transplants with soil and drench with 4 to 8 oz. of a solution containing 1 tsp. per gal. of water around the base of each plant.
Radishes	Diazinon, 5% granules	Apply in furrow at rate of 3 to 4 oz. per 500 linear feet of row at planting.
Turnips	Diazinon, 5% granules	Apply 4 oz. per 500 sq. ft. in seed furrow at planting time. This will not eliminate damage entirely but will reduce it.

*Dursban (registered under trade name of Chlorban) has a Washington State label and is excellent for controlling root maggots on the crops listed. User must procur supplemental label from dealer before using in this manner.

By Roy Davidson, Research Technologist and Arthur Antonelli, Extension Entomologist, WSU Western Washington Research and Extension Center, Puyallup. Issued by Washington State University Cooperative Extension, J. O. Young, Director, and the U.S. Department of Agriculture in furtherance of the Acts of May 8 and June 30, 1914. Cooperative Extension programs and policies comply with federal and state laws and regulations on nondiscrimination regarding race, color, national origin, religion, sex, age and handicap. Trade names have been used to simplify the presentation of information. No endorsement is intended. Revised January 1984. 25¢.



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.