Cabbage Maggot

Introduction
The cabbage maggot (CM), Delia radicum (L.), is one of the most destructive early season pests of crucifers and certain root crops in NH. It can cause severe injury to cabbage, cauliflower, broccoli, Brussels sprouts, radish, turnip, rutabaga, beets and celery if not controlled.

Description
The adult fly is similar in appearance to the common house fly, but smaller (1/4-inch long). It is dark, ashy gray with black stripes on the thorax and black bristles over the body. In the spring, female flies are commonly seen flying close to the ground, depositing small white eggs in cracks and crevices near the stems of host plants.

The larvae that emerge from the eggs are white, legless, tapered maggots that feed on the roots of cole crops. The maggots later change to hard, brown, egg-shaped pupae about 1/4 inch long; they can be found in the soil from 1-5 inches deep.

Life Cycle
The CM spends the winter pupating in the soil. When the soil warms up in the spring, about the time gardeners are setting out transplants, the adults emerge from the soil, mate and begin laying eggs on the soil near the host plants.

The eggs hatch in 3-7 days and the small maggots seek out roots and begin feeding. They destroy plant roots by their tunneling habit. This will often cause young cabbage, broccoli and cauliflower seedlings to wilt and die. Plants like radish and turnip become scored with feeding trails, making them susceptible to attack by disease organisms.

The larvae complete development in 3-4 weeks and begin pupating. In 2-3 weeks, usually in late June and July, the adults emerge and work their way through the soil to the surface to start a new generation. There are typically 3 or 4 generations of CM each growing season in New Hampshire. Damage is worst early in the season.

Control
Prevention and non-chemical control
Cover cabbage family transplants or newly-seeded rows with floating row covers until June 1, or delay planting until then to foil the first generation of egg-laying cabbage maggot flies.
Alternatively, protect cabbage, broccoli, cauliflower and other cole crop transplants with barriers made by punching a hole in the center of a six-inch square of tarpaper and slitting the paper from one corner to the center hole. Then place the tarpaper square flat on the ground, with center hole snugly encircling the stem of the transplant.

Reviewed and amended by Dr. Alan Eaton, UNH Cooperative Extension Entomology Specialist, 9/00

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