

Root Maggots (Onion - *Delia antiqua*; Cabbage - *Delia radicum*)



Figure 1 Adult, 1/4" long



Figure 2 Root maggot larvae, 1/4" long



Figure 3 Damage to onion

Damage

The maggots feed on the roots and the bulbs (in the case of onions), creating numerous tunnels. Plants first begin to wilt and can eventually become stunted and yellowed. Heavily infested plants can ultimately die.

When Are They Active

Root maggots overwinter in the top few inches of garden soil. In late April - early May adult flies emerge to lay 50-200 white eggs on the soil near the base of crops. Eggs hatch in 3-7 days and larvae immediately begin feeding on the roots of the plants. Feeding continues for 3-4 weeks before larvae pupate in the soil.

Susceptible Plants

Onion maggots are an early season pest of root vegetables such as onion, garlic, carrot, and radish, whereas cabbage maggots are mainly a pest of cabbage, broccoli, cauliflower, Brussels sprouts, radishes, and turnips.

Prevention Methods

Most root maggot adults are attracted to rotting organic matter; avoid incorporating animal manure or green manure in spring. When possible, delay planting susceptible plants until the threat of root maggots is reduced, which is generally after June 1st. Plant crops in well-drained soils and only when the soil temperatures exceed 50° F. Row covers are effective during flight periods and must be set up in your garden by the time adults flies are laying eggs which is usually early to mid-May. Don't use row covers if onions or other root vegetables or cucurbits were planted in the same area the previous year. This is because root maggots overwinter in the soil as pupae near their host plants. Remove infected plants and turn crop residues after harvest to reduce overwintering sites.

Treatment Methods

Once damage is noticed it is too late to treat root maggots. Concentrate efforts on prevention methods.

Additional Information/Resources

- UW Extension Garden Fact Sheet [XHT1030 Cabbage Maggot](#)
- University of Minnesota Extension [Root maggots in home gardens](#)
- Dane County UW Extension Horticulture Hotline [608-224-3721](tel:608-224-3721) (M-F, 9 am-12 noon, April 15 – October 31) or horticulture@countyofdane.com

Photo Credits: Figures 1&3-University of Minnesota Extension Root Maggots in home gardens Publication, photos by Jeff Hahn; Figure 2-UW Extension Cabbage Maggot publication