

## Root Collars or Cylinders

### Root Collars:



Cool season crops, such as broccoli, turnips, rutabagas, cabbage, Brussels sprouts, are all susceptible to root maggots.

Also known as cabbage flies, root flies, or turnip flies, root maggots start out as small flies that are about half the size of a housefly.

- These pests lay up to 300 eggs in the soil, around the crown of host plants. When the eggs hatch, the larva (maggots) begin feeding on fibrous roots and burrowing into taproots.
- This feeding creates tunnels in the roots and makes root vegetables inedible.
- Maggot feeding also facilitates entry by pathogens that cause blackleg and bacterial soft rot. Heavy infestations can kill a mature plant.
- Infested plants incubate larvae, pupae and eggs and must be removed and thrown in the trash. They must not be composted.

Adult flies seek to lay their eggs in or on the soil next to the base of host plants. The 1/8" long, oval-shaped eggs hatch into tiny maggots a week or so later and then burrow down into the stem and root. Root collars prevent flies from laying their eggs next to the vulnerable plants.

A DIY plant collar may be made out of a flat piece of plastic, cardboard, felt, rubber, or heavy fabric that covers the soil around the base of a plant.

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### Cylinders:

Cutworms cause most of their damage to new shoots or transplants, curling their bodies around the base of the plant's stem and feeding on it.

- Since cutworms feed in the evening or at night, avoiding birds and other predators that are more active in the daytime, you might never see the actual worm.
- Cutworm damage shows up in the form of plant stems cut off just above the soil line.



Cutworm collars are simply raised cylinders placed around each seedling. A 3" section of cardboard roll from toilet paper or paper towels, pressed 1/2" into the soil, can make an effective barrier to cutworms.

Other cylinders can be made from a variety of other household items: plastic cups,



The cardboard tubes will protect seedlings from cutworms while they're most vulnerable and will fall apart within a few weeks afterwards.