



CROP PEST:

Flea Beetles

Coleoptera spp.

DESCRIPTION:

Flea Beetles are small (2-3 mm) black insects that can wreak havoc on young seedlings and transplants in the spring. Adults feed on the leaves of plants, leaving irregular shaped and sized holes. Larvae are generally tiny and white-colored. They live in the soil and feed on young roots. Scouting should be done during warm days when flea beetles are likely to be out feeding. It is important to get this pest under control quickly as a large population have been known to defoliate plants.



Photo Courtesy of Colorado State University

TARGET CROPS:

Flea beetles have a wide range of hosts but are generally most damaging to vegetable crops, young transplants, and germinating seedlings.

LIFE CYCLE:

Flea beetles can overwinter in the soil, cracks in flooring, yard debris, weed patches, etc. In the spring they will begin to attack newly emerging plants including annual weeds in the area. When vegetable crops get planted out they relocate and start attacking the new transplants. Adults lay eggs in the soil near the base of the plant. Eggs hatch in about a week and for the next 2-3 weeks (depending on temperature) the larvae feed on root systems in the soil until they pupate. Generally, over a week later they emerge as adults, allowing for multiple generations per year.

MONITORING TIPS:

- Use yellow or blue sticky cards at a rate of 1 trap/50-100 m² (500-1000 ft²). Place traps at the top of the plant canopy.
- Count the number of thrips on traps weekly; replace traps every 3-4 weeks as the glue dries out.
- Use a 10-15 X lens to examine leaves for presence of thrips or signs of feeding damage.

BIOLOGICAL CONTROLS:

Steinernema feltiae— a beneficial nematode species that can be an effective biocontrol agent. These parasites can be applied to the soil to infect and help control an array of soil-dwelling pests. Since flea beetles lay their eggs in the soil and the larvae spend several weeks there, a healthy population of nematodes have a good opportunity to knock back populations in each generation while not harming other beneficial inhabitants in the soil.

Introduction Rates and Release Information

There are a variety of nematode products, which will state an array of application rates, Make sure that you follow the manufacturers recommended rates.

For more information, Please contact **Sound Horticulture**

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For Sierra Biological: Generally, 1 million nematodes per 1000 square feet of soil medium. For each square foot you will need 0.66 gallons of water as a carrier to saturate a potting medium or soil 2" deep. Unless using your nematodes immediately, store in a refrigerator. Do not freeze! When applying, use cool water, and do not apply during hot dry conditions.

CHEMICAL OPTIONS:

Horticulture oil sprays with an active ingredient of Neem oil can knock back populations especially if done in the spring when the flea beetles are adults seeking out young plants and a spot to lay their eggs. Powdered Diatomaceous Earth applications are fairly effective as a desiccant, especially in garden bed applications. Kaolin Clay products such as Surround can be sprayed to coat leaves and greatly reduces the ability flea beetles to feed. Other products such as PyGanic EC 5.0 have also proven effective.

CULTURAL CONTROL TIPS:

- Since flea beetles can find habitat in yard debris and weed patches, it is important to keep a tidy garden by removing any excessive debris and weeds.
- Utilizing floating row covers and/or waiting until transplants are larger before planting can help you get ahead of flea infestations.
- Flea beetles enjoy feeding on early 'trap' crops such as radishes. Drawing them to this plant encourages a single place of congregation. You can then consider spraying or removing them manually.
- There are methods to trapping flea beetle using yellow sticky traps and lures that are available through Alpha Scents.