



Crop Pest

Flea Beetle

Coleoptera spp.



Description

Flea beetles are small (2-3mm) dark metallic black, brown or bronze insects. Control is challenging as adults are highly mobile, can jump great distances and are strong fliers. Adults feed on the leaves of plants, leaving irregular holes. Larvae are small and creamy white. 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. Flea beetles can overwinter in the soil, cracks in flooring, yard debris, weed patches, etc.

Target Crops

Flea beetles attack plants in the Brassicaceae family (broccoli, kale, cabbage, collards) and the Solanaceae family (potatoes, tomatoes, peppers, eggplant). They are most damaging to transplants and seedlings.

Life Cycle

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 plants. 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. After about a week adults emerge to start feeding on foliage. They can have multiple generations each year, depending on species.

Biological Controls

Beneficial nematodes are effective for beetle larvae. These parasitic roundworms actively seek out grubs in the soil. Several species of entomopathogenic nematodes are used for beetle control, [*Heterorhabditis bacteriophora*](#), [*Steinernema carpocapsae*](#) and [*Steinernema kraussei*](#). These work across a wide range of crops and potting media. Sufficient water must be used during application for the nematodes to penetrate the soil and reach the root zone. *Sk* are effective between 40°F to 86°F while *Hb* and *Sc* work best in soil temperatures above 70°F. Multiple applications may be required, depending on the extent of the larval infestation and their age. While nematodes will not kill adult Flea Beetles, they will lower beetle populations by decreasing the larval stages. Nematodes can be used in an irrigation system. Refer to our [Beneficial Nematode Tech Sheet](#) for rates and further application information.

Insecticide Options- Use in rotation for best results.

For adults on foliage

For a quick knockdown, use [Pyganic](#) with Pyrethrin for an organic adulticide. [AzaGuard](#), [Molt-X](#), and [Azatin O](#) can also be used for Flea Beetle management. The active ingredient, azadirachtin, has

been shown to reduce beetle oviposition and increase laying of nonviable eggs. Diatomaceous earth can be effective in garden beds, acting as a desiccant. Kaolin clay products like *Surround* can be sprayed to coat leaves and greatly reduce the ability of flea beetles to feed.

For larvae/grubs below ground

Mycoinsecticides used as a drench are especially good for the soil dwelling grub stage. These include [Botanigard](#), [Mycotrol](#), [NoFly](#), [PFR 97](#) and [LalGuard M-52 OD](#). LalGuard M-52 contains the pathogenic fungus *Metarhizium brunneum*. Once these products are drenched into the soil, they come in contact with the insect, the spores attach and germinate, causing the larva and the adults to die within 3-7 days. LalGuard M52 requires temperature above 59°F to infect beetle larvae.

Monitoring Tips

Use yellow sticky cards at a rate of 1 trap/500-1,000 ft². Place traps at the top of the plant canopy. Count the number of pests on traps weekly, replace traps every 3-4 weeks as the glue dries out. Use a 10-15x lens to examine leaves for the presence of pests or signs of feeding damage.

Cultural Control Tips

The best management strategies should include early monitoring for plant injury, using row covers, utilizing trap crops and mulching around plants.

- Since flea beetles can find habitat in yard debris and weed patches, keep the garden clean by removing any excessive debris and weeds.
- Attract natural enemies by planting nectar and pollen producing plants such as anise, chamomile, clover, dill and marigold.
- Utilizing floating row covers and/or waiting until transplants are larger before planting can help get ahead of flea beetle 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 by hand.
- There are methods to trapping flea beetles using yellow sticky traps and lures that are available. Contact Sound Horticulture for more information.
- It's always a good idea to check with your state department of agriculture for regional information, control options, and pest levels in your specific area.

[WSU Extension, Organic Management of Flea Beetles](#)

[Utah State Extension, Flea Beetles on Vegetables](#)

[UMass Amherst, Flea Beetle, Brassica](#)