**RESEARCH** AND **EXTENSION** 

2021 Throckmorton Plant Sciences Center :: Kansas State University :: Manhattan, KS 66506 :: 785.532.6173

#### **Problem:** Flea Beetles



**Hosts:** Watermelons, pumpkins, peas, beans, eggplants, sweet potatoes, beets, spinach, strawberries and potatoes.

#### **Description:**

"Flea beetle" is a generic name applied to many species of small jumping beetles commonly seen early in the gardening season. Some species are general feeders while others have a more restricted host range. All flea beetle life stages are completed underground. Only the adults are commonly seen by gardeners and vegetable producers.

Flea beetles may be somewhat elongate to oval in shape, and vary in color, pattern, and size. For instance, potato flea beetles (*Epitrix cucumeris*) tend to be more oval, blackish, and about 1/16-inch long.

Striped flea beetles (*Phyllotreta striolata*) are more elongate and dark with yellowish crooked stripes, and measure about 1/12-inch long.

Spinach flea beetles (*Disonycha xanthomelaena*) are both oval and elongate. They have a black head, antennae and legs. The collar behind the head is yellow to yellowish-orange. Wing covers have blackish-blue luster. They approach 1/5 inch in body length.

With most species of flea beetle, the adults overwinter underground or beneath plant debris. During April and May, they become active, mate, and deposit eggs.

Egg laying varies depending upon species. Some deposit individual eggs while others deposit them in clusters. Egg sites may be in soil, on leaves, on leaf petioles, or within holes chewed into stems.

Eggs typically hatch in 10 days. Larval and pupal development take place during the summer. "New" adults emerge and feed during late summer and fall before seeking overwintering sites.

Larvae feeding on underground portions of plants may result in decreased plant vigor. In some instances, crops produced underground may be scarred because of larval feeding activities.

Large populations of feeding adults can devastate plantings, especially if the planting is in the seedling stage. Small circular gouges taken mainly from bottom leaf surfaces cause plants to take on a peppered or shotholed appearance. Corn flea beetles feed between veins on upper leaf surfaces, resulting in a silvery and streaked appearance.

Flea beetles also transmit Stewart's Bacterial Wilt to corn.

## **Recommendations:**

Cultural practices used to reduce flea beetle populations include:

- Weed control in and around planting sites to deprive larvae of food sources needed for successful development.
- Removal of old crop debris and other surface trash to deprive overwintering beetles of protective cover.
- The use of later planting dates when warmer temperatures assist plants in outgrowing or overcoming flea beetles feeding damage.
- The rotation or isolation of current-year plantings from those of the previous year.
- Once flea beetles are on the crop, insecticides will be required such as cyfluthrin (BioAdvanced Tomato and Vegetable Insect Killer), permethrin (Bonide Eight; Hi-Yield Garden and Farm Insect Control) or cyhalothrin (Spectracide Triazicide).

## **References:**

1. Flea Beetles, University of Minnesota Extension

2. <u>Insect and Mite Pests of Vegetable Gardens</u>, K-State Research and Extension, Entomology Pub MF3480

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