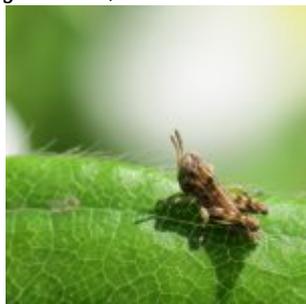


Grasshoppers and Flea Beetles

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- **Grasshoppers:** treat now where populations are high

Flea Beetles

Flea beetles are active and adults have been seen feeding on young potato, chard, cole crops, and others. Plants less tolerant to flea beetle damage include cole crops, edible greens, and seedlings (tomato, pepper, turnip).

Thankfully, this season appears to be a mild flea beetle season since their activity is hampered by fluctuations in temperature from hot to cooler combined with intermittent rains.

Most flea beetle damage is caused by adult flea beetles and occurs as shallow pits and small rounded, irregular, holes in the foliage, cotyledons, and stems of host plants.



Adult flea beetle next to feeding damage



Flea beetle feeding damage on a young chard plant

Watch young plants and transplants. Treatment thresholds vary from crop to crop. The threshold for tomato is when leaves are 30% defoliated. Eggplants should be treated when there is an average of 4 beetles per plant. Crucifers do not have a specific threshold, but treatment may be considered when considerable damage starts to show.

MORE MANAGEMENT INFORMATION

- Brassica management
- Potato management

TREATMENT

- Brassica commercial options
- Brassica homeowner options
- Potato commercial options
- Potato homeowner options

Grasshoppers and Lack of Nolo Bait



Even when tiny, grasshopper nymphs can cause quite a bit of damage. Nom Nom!

Grasshopper populations are skyrocketing in some locations of Utah, and while they are still in the nymphal stage, it is important to treat now rather than wait. They have voracious appetites and feed on just about everything, from grasses to ornamental plants to vegetables and fruits. Their chewing mouthparts tear away plant tissue, resulting in holes or complete defoliation.

Treatment - Organic

Many organic producers like to apply Nolo Bait (containing *Nosema locustae*, a pathogen of grasshoppers). Sadly, the factory that manufactures this product (M&R Durango, Inc.) burned to the ground. As a result, locations such as IFA that usually sell Nolo Bait, are out of stock for the year.

- Semaspore Bait (Planet Natural online) is still available, with the same ingredient.
- There are a few other organic spray options, including products that contain pyrethrin or azadirachtin (BioNeem, Aza-Direct, AzaGuard, etc.)

Treatment - Conventional

- For conventional management using a bait, there is Ecobran (Planet Natural, online and expensive), which is a bran bait laced with carbaryl.
- The other options are carbaryl dust, or sprays that containing diflubenzuron (Dimilin), malathion, permethrin, cyfluthrin, or bifenthrin. If selecting one of these products, make sure the application site or crop host is on the label.