

## Insect/Disease Information

### VEGETABLES

#### Cucumber Beetles



As melons and other cucurbits ripen, they are at risk from feeding by cucumber beetles. Both the western striped and western spotted cucumber beetles are in their second generation now, actively feeding on the rinds of watermelon, cantaloupe, zucchini, winter squash, pumpkin, and cucumber.

Monitor for cucumber beetles by examining all plant parts including undersides of leaves, at least once/week. If a treatment is warranted, thorough coverage of foliage and fruit is important. Where populations are high, adults can easily reinfest an area after treatment. Re-check plants 5 days later to determine if another application is warranted.

**Treatment:** acetamiprid (Assail, Ortho Max), spinosad (Conserve, Entrust, Success, Bonide<sup>H</sup>, FertiLome<sup>H</sup>, Monterey<sup>H</sup>), pyrethrin (Ace Flower and Vegetable Insect Spray<sup>H</sup>), imidacloprid (Admire), carbaryl (Sevin<sup>H</sup>, Bayer Advanced<sup>H</sup>), indoxacarb (Avaunt), kaolin clay (Surround), synthetic pyrethroids (many

<sup>H</sup>also for homeowner use

#### Spider Mites

Spider mites are still multiplying rapidly in this hot and dry weather on melons, cucumber, eggplant, tomato, and other vegetables.



The whitish stippling on the surface of leaves forms in response to the mite feeding, as they suck chlorophyll from plant cells. Eventually, leaves will bronze and die and the plant can be killed. When mite infestations reach a high level, they are difficult to manage.

**Treatment:** Use miticides or oil to control mites rather than broad-spectrum insecticides such as pyrethroids. Apply twice at 7-day intervals.

Acramite (bifenazate; 1 application), Agrimek (abamectin), Oberon (spiromesifen), Golden Pest Spray Oil (soybean oil), horticultural oil<sup>H</sup>, insecticidal soap<sup>H</sup>

<sup>H</sup>also for homeowner use

#### Stink Bugs

Stink bug adults and nymphs are increasing in vegetables. They are mostly found in weedy areas, and migrate out as weeds or field crops dry down. Now is the time to pay attention to fruit for signs of damage. Feeding on tomato and pepper fruits causes a diffuse blotch that is whitish in color on green fruit, changing to bright yellow as the fruit ripens. The damage on tomato is sometimes called cloudy spot.

On home-grown fruits, the discolored area and damaged tissue is superficial, and can be cut away to leave a still-edible fruit.

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Stinkbugs are difficult to monitor because they are very mobile. You can look for them by shaking a plant and examining the dirt beneath for the fallen insects. One stinkbug per plant could cause about 5-10% damage. If you opt for insecticide, cover vegetables thoroughly, as well as weedy areas.

**Treatment:** Warrior, Pounce, Baythroid (synthetic pyrethroids), Lannate (methomyl), Actara (thiamethoxam), Venom (dinotefuran), Surround (kaolin clay<sup>H</sup>; organic; repels but does not kill), insecticidal soap<sup>H</sup> (many; must be applied regularly), Sevin (carbaryl<sup>H</sup>)

<sup>H</sup>also for homeowner use

**Beet Armyworm**

Beet armyworm does not overwinter in northern Utah, but adults are blown north every year by late summer, as our trapping program has found. Plants should be monitored for this pest during August and September. Although it is primarily a pest of field crops such as alfalfa, it is also attracted to cabbage, beans, peppers, tomatoes, spinach, onions, and more.

A single female moth can lay up to 600 eggs, in random clusters of 80 on the undersides of leaves. Larvae feed on leaves and fruit. Young fall plantings are especially vulnerable.

**Precautionary Statement:** Utah State University Extension and its employees are not responsible for the use, misuse, or damage caused by application or misapplication of products or information mentioned in this document. All pesticides are labeled with ingredients, instructions, and risks. The pesticide applicator is legally responsible for proper use. USU makes no endorsement of the products listed herein.

**Poor Fruit Set**

Several growers have found poor fruit set this season on squash, zucchini, tomatoes, and melons. Several conditions can cause vegetables to not set fruit, the primary reasons this year being hot days and warm nights and poor pollination. Too much nitrogen fertilizer, irregular watering, shade, or genetics can also cause poor fruit set.

Tomatoes do not require pollination for fruit set, but an extended period of temperatures above 90 (when followed by a long period of cool temperatures), will cause the flowers to drop off before the fruit can set. As nighttime temperatures cool, fruit set improves. Some varieties are more sensitive than others.

Most vining crops have both male and female flowers and require pollination. Fruit that does not develop fully, or that is misshapen means that it was not fully pollinated. There could be a variety of reasons such as lack of pollinators or lack of male or female flower production.

To combat the problem of poor fruit set, there are a few things you can do for next season:

- plant multiple cultivars of each type of vegetable you are growing to ensure there is adequate mix of male and female flowers (for vining crops) and adaptability to climate (for tomatoes)
- maintain even soil moisture and do not over-fertilize
- plant pollen- and nectar-producing plants around the farm or garden to promote pollinator activity

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