

## Insect/Disease Information

### VEGETABLES

#### Insect Trapping Update



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Because of the colder evening temperatures and time of year, trap counts of most insect pests in field monitoring sites were at zero this week, except for beet armyworm, which continues to be seen in high numbers. Look for beet armyworm in peppers, and cool season crops like lettuce, spinach, and cole crops. Look for fine strands of silk it leaves behind as it feeds.

#### Cucumber Beetles

Cucumber beetles continue to feed on cucumbers, melons, and squashes, but as the day length shortens and nights remain cool, adults will soon begin searching for overwintering sites (under plant debris, in cracks and crevices of wood, etc.).

Late season feeding damage by the western striped and western spotted cucumber beetles includes chewed leaves, stems, and blossoms, and scars on fruit rind. Cucumber beetles can also spread squash mosaic virus. The virus is only spread by the feeding beetle, or by infected seed—not from plant to plant. Symptoms of the virus include distorted, blistered leaves with a light green/dark green mosaic pattern. Fruit can be distorted and have a mottled pattern on the rind.

#### Crown Rot of Rhubarb

If you have had problems with phytophthora root rot in your field, chances are that the same mix of species is causing damage to a variety of hosts. Rhubarb is susceptible to crown rot, caused by a variety of *Phytophthora* species. Leaves begin to slowly wilt, fade in color, and eventually die. The process is

usually very quick—in a matter of a few days. The leaves will be easy to pull up and the crown and roots will appear brown and spongy.

Phytophthoras (and related *Pythium* species) are a problem where water stands for more than a few hours, or in poorly drained soil. Improving drainage, purchasing healthy plants, and keeping rhubarb divided can help in managing crown rot.

#### Pumpkin

Pumpkin harvest is around the corner, and most vegetable specialists recommend that growers keep their plants as healthy as possible until harvest. A healthy vine will produce more marketable fruit. Although powdery mildew usually does not directly affect the fruit, a bad infection can cause the stem to weaken. If you are not harvesting for a while, consider a late season application of powdery mildew control.

#### Tomato Fruit disorders



*Blossom end rot is caused by a lack of calcium.*



*Catfacing is caused by cool temperatures during flowering.*



*Fruit cracking is caused by conditions that change the rate of growth, usually a sudden increase of water availability, but sometimes temperature changes. High nitrogen and low potassium can also be causes. Cracking can be concentric or radial.*

## Insect/Disease Activity, continued



*Yellow shoulder occurs when the fruit does not completely ripen. The problem may be genetic, a lack of potassium, or sudden exposure to sunlight.*

### Iris Yellow Spot Virus

*NOTE: The following article appeared in the latest edition of [Utah Pest News](#), and was written by Erin Frank, UPPDL Plant Disease Diagnostician.*



Iris Yellow Spot Virus (IYSV) is a new disease affecting onion crops worldwide. It was first observed in the western United States in the 1980s but was not described until 1998. It was found in a commercial onion field in Utah in 2000.

This summer, Kent Evans' lab and the UPPDL surveyed 15 fields throughout northern Utah for the presence of IYSV. ELISA (enzyme-linked immunosorbent assay) was used to test for virus presence on samples collected from each field until harvest. Early in the season, we found plants that were positive for the virus, but showed no visible symptoms. It wasn't until early August that symptoms became apparent in the field.

Infection by the virus causes dry, straw-colored lesions on both leaves and scapes. The lesions will usually appear on the

margins of the youngest, fully expanded leaves or on swollen portions of the scape. Sometimes the center of lesions will be green, or will have concentric rings of alternating green and straw-colored tissue. The number and size of lesions will increase and the lesions will become necrotic as the disease progresses. Large areas of foliage can become necrotic, slowing plant development. Infection in seedlings can kill plants or severely stunt growth so that the field must be replanted or abandoned (which has not occurred in Utah). Large necrotic lesions that develop on scapes will cause the scapes to lodge (fall over). The highest incidence of symptomatic plants is usually found around the field margins.

Little is known about the disease cycle of IYSV. It persists in areas where onion bulb crops, seed crops, or both are produced year-round. The virus can also persist in volunteer onions, infected onion transplants, ornamentals, and weed hosts without causing symptoms. IYSV is thought to be spread exclusively by onion thrips (*Thrips tabaci*), and a high population of this insect increases the risk of successfully transmitting IYSV in onion fields.

IYSV is a difficult disease to manage. Using clean transplants free of virus and thrips is important. Eliminating weeds, volunteer onions, or other alternate hosts will reduce the reservoir of IYSV and thrips. Uniform, dense plant populations can reduce the incidence of IYSV. Overhead irrigation seems to suppress thrips populations and decrease IYSV incidence and severity. Use management practices that reduce plant stress; stressed plants will have higher disease severity. Straw mulch can reduce thrips populations and increase moisture retention.

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