

# Vegetable Pest Alerts

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EXTENSION

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## What to be on the lookout for...

### Basil downy mildew

Downy mildew was confirmed in Hampshire County on Spicy Globe basil, earlier than usual. Its inoculum may be spreading around (air-borne dissemination).



*Yellow banding on upper leaf surface (left; Photo courtesy of University of Florida) and Dark, downy sporulation on underside of leaf (photo courtesy of UMass Extension).*

Leaf yellowing is often the first symptom of basil downy mildew. Yellowed areas are usually bordered by leaf veins. When spores are produced, a characteristic fuzzy, dark gray to purple growth on the underside of the leaves is evident. Sporulation on the upper surfaces of leaves may be seen in severe cases.

Preventively applied fungicides can provide control of this disease with regular, timely applications. Effective materials include Quadris, Reason, Revus, Orondis Gold, Orondis Opti, Ranman, and phosphorous acid fungicides. Resistant varieties have also been available for several years and have been providing an extra ~2 or more weeks of basil harvest compared to standard varieties. Based on varietal responses in UMass trials, a recommended combination is to grow Prospera and Passion, and then introduce the new Prospera Active (which contains a 2nd BDM resistance gene in addition to the gene in the original Prospera) later in the season.

### **Alternaria leaf spots and black rot of brassica**

Be on the lookout for foliar diseases like Alternaria leaf spot and black rot which can be expected to spread after all of the recent rain. Disease spread may be inevitable with all of this rain, but minimizing working in fields with wet foliage can help slow the spread. Spray options:



Black rot symptom on a cabbage leaf

<https://nevegetable.org/crops/disease-control-3>



### **Stink bug**

Stink bug damage on tomato may look like golden flecks but with white centers and not uniform. Various types of stink bugs (brown, brown marmorated, green) feed on blossoms, buds and fruit on a wide range of vegetables, fruits and weeds. Look for adults, eggs and nymphs and for damage. Insecticides labeled for stink bugs (without species indicated) may be used for Brown Marmorated Stink Bug. For spray options, click [New England Vegetable Management Guide](#).

## Pepper maggot

Adult/flyes are expected to emerge soon and start laying eggs especially if you have a history of this pest in your farm. Look for stings on the fruit, which are easiest to spot on cherry peppers. Females insert their eggs directly into the pepper fruit and leave a small dimple – an oviposition sting or scar. Yellow sticky-traps baited with a vial of 28% ammonium hydroxide may be used to capture adult flies if hung in nearby trees. Traps are most reliable when hung about 20' high, within the canopy of maple trees bordering the field. Make 2 to 3 applications at 5- to 10-day intervals beginning 1 week after oviposition scars are detected or when the first fly is captured. See <https://nevegetable.org/crops/insect-control-17> for spray options.



*Pepper maggot adult females insert their eggs directly into the pepper fruit and leave a small dimple – an oviposition sting or scar.*

## Squash beetles

Squash beetle, aka squash lady beetle adults were spotted this week. Most lady beetles in North America are beneficial as both adults and larvae, feeding primarily on aphids. They also feed on mites, small insects, and insect eggs. The two exceptions are the introduced Mexican bean beetle, and the squash beetle. The adults and larvae of both species feed on plants.

Usually squash beetles exist in such small numbers that they do not require control. However, extensive defoliation on young plants, or direct fruit feeding, may necessitate management. Squash beetles have seven large black spots on each wing covering (Mexican Bean Beetles have eight on each wing covering), and an additional four smaller black spots on the middle portion (thorax) of the beetle, just behind the head. Mexican bean beetle most often builds up to damaging levels where snap beans are grown in the same or adjacent fields over successive years.



*Squash Beetle adult and larva.*

## Bacterial wilt of cucumber

Bacterial wilt was observed this week in CT on cucumber and squash. Bacterial wilt is transmitted by cucumber beetles. Cucumber, muskmelon and summer squashes are highly susceptible to wilt, pumpkins and winter squashes are less susceptible, and watermelon is not. Seedlings at the cotyledon and 1- to 3-leaf stage are more susceptible to infection with bacterial wilt than older plants. Thus, it is especially important to keep beetle numbers low before the 5-leaf stage. Use crop rotation to reduce beetle numbers. Adult striped cucumber beetles can overwinter in field edges

with this bacterial pathogen in their gut and infect susceptible plants next year. To prevent bacterial wilt in highly susceptible crops such as cucumber, muskmelons, summer squash, and zucchini, treat when there is 1 beetle for every 2 plants. Less wilt-susceptible crops (butternut, watermelon, most pumpkins) will tolerate 1 or 2 beetles per plant without yield losses. Spray within 24 hours after the threshold is reached. Timely and effective early control will prevent the need for sprays during flowering when bees are active in the crop.

**Because this bacterium is transmitted systemically by cucumber beetles, copper or any other fungicide sprays are of no value.** Rogue infected plants.

Squash vine borers also cause similar wilting of cucurbit plants. Check at the base of the stem for holes or frass, or cut open the stem to check for the squash vine borer larva on a wilted plant.



*Bacterial wilt of cucurbit causes sudden wilting of plants. When dipped in water, milky white bacteria oozes streams from a freshly cut stem of the wilted plant*

### **Corn earworm**

Trap capture was 0.5/night this week in a farm in Berlin.

Table. Spray Intervals for Corn Earworm based on moth captures in Heliiothis net traps.

<b>Moths/Night</b>	<b>Moths/Week</b>	<b>Spray Interval</b>
0 - 0.2	0 - 1.4	no spray
0.2 - 0.5	1.4 - 3.5	6 days
0.5 - 1	3.5 - 7	5 days
1 - 13	7 - 91	4 days
Over 13	Over 91	3 days

**European corn borers** (ECB) are continuing to be trapped, but in low numbers (1-2 moths/trap/week in Berlin and Glastonbury). Corn with newly emerging tassels should be scouted weekly for the presence of ECB larvae by inspecting the tassels of 50 to 100 plants, in groups of 5 to 20 plants throughout the field. Treat if more than 15% of the plants have one or more larvae present. Use of selective products to control ECB will conserve natural enemies of aphids and ECB.

**Continue to be othe lookout for**

- Bacterial leaf spots on pepper
- Onion thrips
- Leaf mold in tunnel tomatoes
- Hornworms
- Cucurbit powdery mildew (rainfall helps to suppress it)
- Squash bugs (egg masses are being observed)
- Purple blotch of onions
- Striped cucumber beetles (seen this week in high numbers in not treated fields)
- Mexican bean beetles
- Potato leaf hopper (hopperburn seen in untreated fields)
- Squah vine borers (14 moths/week captured in Berlin; 1/week in Glastonbury; greatly varies from farm to farm)

***Thanks for reading!***

This report was prepared by Shuresh Ghimire, UConn Extension. All photos in this publication are credited to UConn Extension Vegetable IPM Program unless otherwise noted.

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**Contact us with any vegetable production related questions!**

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