RUTGERS
New Jersey Agricultural Experiment Station

Rutgers Master Gardeners of Morris County
Community Garden IPM Team Report #11
September 8, 2022

TIPS	NEW PROBLEMS SEEN	SPOTLIGHTS
• Document your garden now for planning purposes.	• Marginal Leaf Burn • Tomato Fruitworm • Eggplant Lace Bug	• Milkweed Tussock Caterpillar

GARDENS SCOUTED FOR THIS REPORT: Morris County Park Commission Community Garden in Morristown, Morris Township Community Garden at ValleVue Preserve.

GENERAL OBSERVATIONS AND TIPS

In late August, the garden has reached maturity. Fruits and vegetables have reached their full growth and productivity is at its peak (or even starting to decline). Now is the time to ask yourself: am I happy with this? What is too much, not enough? What took more room than you thought it would? What will you change next year? Bring your phone or camera into the garden and document what worked well, and what could be improved. You may think you will remember all the details next year, but you probably will not! Taking notes, photos and measurements now will be a great help to your planning over the winter. Also, if you have perennial plantings that need to be divided or moved, do research now to learn the optimal time for transplantation. Some plants are better moved in fall, some in spring. In general, it is probably best practice to wait until the drought has subsided and high temperatures have declined a bit before moving any perennial planting.

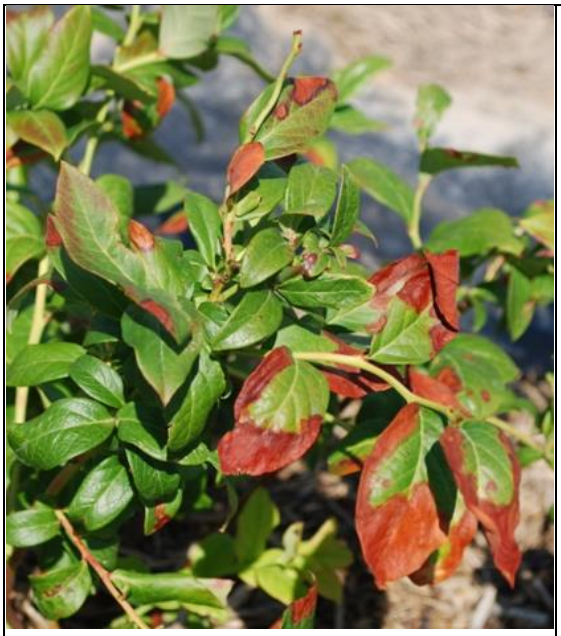
REPORTS ON NEW PROBLEMS

Problem: Marginal Leaf Burn on Blueberries	Where: Morris County Community Garden (8/29) Chatham Township Home garden (8/29)

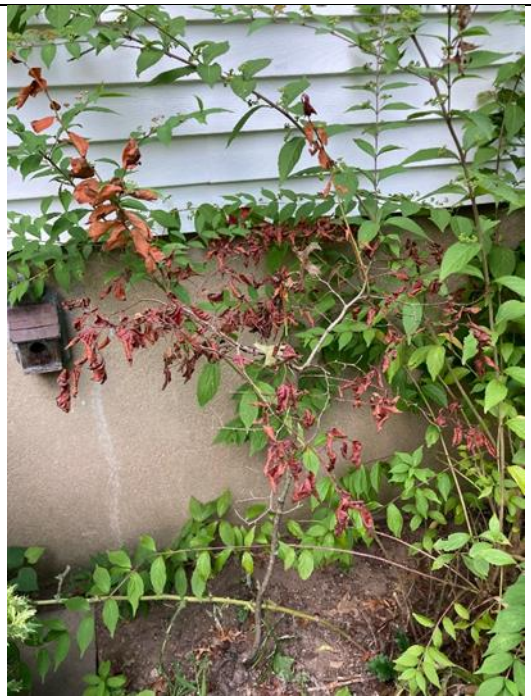
Description: While commercial growers usually irrigate their blueberry bushes, home growers may neglect to do this, especially if they have well-established plants. It may then come as an unpleasant surprise to see plant leaves begin to brown as drought stress takes hold. Any kind of stress to a plant decreases resistance to pathogens, opening the door to infection.

Young plants are especially vulnerable, because their roots are shallow and the plants themselves provide little shade, so the soil gets hot. But in extreme conditions, even established plants can succumb. Plant leaves progress from a rusty brown outer margin, to the entire leaf turning brown and dried up. When drought stress is severe, the entire plant may turn brown and dry.

While it may look like all is lost, according to Michigan State University, blueberries may resprout from even “burned up” plants in the following season, so refrain from cutting back or removing burned bushes.



Close up of blueberry Marginal Leaf Burn. Photo: Michigan State Univ.



Established blueberry bush is completely brown and yet, may rebound next year. Photo: D. DuBrule, NJAES

Management:

- Water regularly. Under drought conditions, bushes may require up to 1/4" water per day.
- Resist the urge to cut plants back. This may prompt regrowth, which will waste available moisture.
- Allow plant to stay as-is, in the hope that it may recover and sprout new growth in the next growing season.

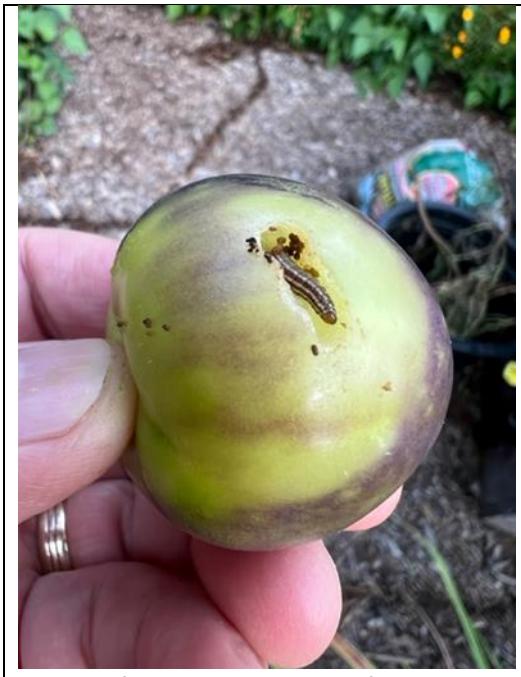
Fact Sheet / References

- Michigan State University: Drought symptoms in blueberries - MSU Extension
- Michigan State University: What to do with drought-stressed blueberries - MSU Extension

Problem: Tomato Fruitworm AKA Corn Earworm (*Helicoverpa zea*)	**Where: Morris Township Community Garden (8/28)**

Description: Tomato fruitworms are one of the most damaging insect pests of tomatoes and many other fruits and vegetables. These caterpillars feed directly on the fruit, and a single caterpillar can damage three or four tomatoes by the time it becomes fully mature and crawls to the ground to pupate. The night-flying moths lay their eggs individually on bloom clusters, and a moth can lay dozens of eggs in a single night. It does not take many moths to cause a serious infestation in a backyard tomato crop.

This insect attacks a wide range of vegetable crops: tomatoes, tomatillos, peppers, corn, beans, peas, and okra, as well as major field crops such as cotton, corn, sorghum, and soybeans, and ornamental plants like geranium, gladiolus, roses, and zinnias. Because of its wide host range and damage potential, this is one of the most economically important insect pests in the country for commercial agriculture, but less so for community or home gardeners.



Tomato fruitworm emerging from a tomatillo. These pests cause significant damage inside the fruit. Photo: N. Gardner, NJAES

Tomato fruitworm feeding. Photo: B. Layton, MSU Extension Service

Larvae come in many different colors. Photo: J. Obermayer, Purdue University

Management:

- With pepper and tomato plants, harvest fruit before the first week of August to avoid fruitworm damage. Harvest ripening fruit as soon as possible, as the longer the fruit is on the plant exposed to fruitworm attack, the greater the chance of infestation.
- Fruitworms generally appear in late July in South Jersey and early August in North Jersey. Sweet corn silks need to be protected with sprays when the ears show silk, and sprays need to be applied every 3–5 days until harvest, depending on fruitworm moth activity.
- Products containing spinosad will control fruitworms.

Fact Sheet/References:

- Rutgers NJAES FS282: Corn Earworm (Rutgers NJAES)
- Texas A&M Univ: Tomato Fruitworm (tamu.edu)
- MS State Univ: Tomato Fruitworm, No 10 | Mississippi State University Extension Service (msstate.edu)

Problem: Eggplant Lace Bug (*Gargaphia solani*)	**Where: Morris Township Community Garden (8/30)**

Description: This insect is quite tiny and it is difficult to see any details using only the naked eye. Use of a hand lens can be helpful but only under a microscope can you really see what this insect looks like. Four adult lacebugs were observed on eggplant leaves, 3 together on one leaf and the other a loner on a different leaf, but no eggs or larvae were observed. An interesting aspect of the eggplant lace bug is that they remain near their eggs and larvae to protect them from predators.

Adult eggplant lace bugs are mottled gray to dark brown and measure about 1/16 inch in length. Their nymphs are wingless, yellow with black markings, black antennae and develop black spines on their bodies as they mature. At the most mature nymph stage, they are only about 8/100 inch long.

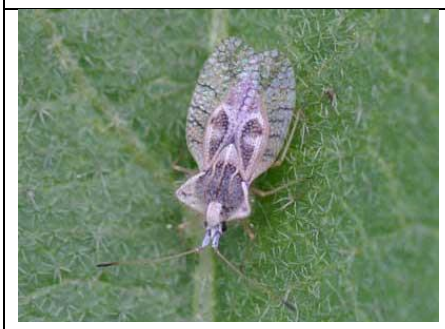
Eggs are 0.4 mm long, oval and greenish at the base, brown toward the tip. There is a crater-like depression on one end with a white lace-like border. Eggs are laid on end in a roughly circular cluster and lean in different directions. They would be difficult to detect and identify using only the naked eye.

Eggplant lace bugs feed on eggplant, tomato, potato, sunflower, sage, cotton and horsenettle. They feed by piercing and sucking the juices from plant tissues. This results in roughly circular areas of a whitened discoloration. The insects will be found on the underside of these discolored areas.

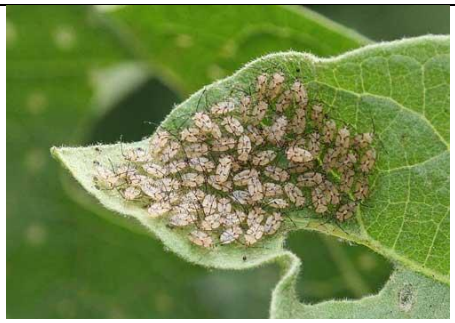
Eggplant lace bugs are most commonly seen in Maryland, Missouri, and Oklahoma southward. They have been reported as far west as New Mexico and Arizona and also in New Jersey, Pennsylvania, Connecticut, and British Columbia.

Eggplant lace bugs overwinter as adults among plant debris. They emerge to lay eggs in mid to late May. Up to 6 annual generations can occur on eggplant.

Natural predators of the eggplant lace bug are lady beetle adults and larvae, spiders and shield-shaped soldier bugs.



Adult eggplant lace bug (greatly magnified)
Photo: North Carolina Cooperative Extension



Eggplant lace bug nymphs (greatly magnified)
Photo: North Carolina Cooperative Extension

Example of damage caused by feeding.
Photo: Maryland Extension Service

Management:

- Inspect upper and lower surfaces of leaves if you notice stippling or loss of green color.
- Apply an ultra-fine horticultural oil or insecticidal soap being sure to spray both upper and lower leaf surfaces.
- Clear away all debris at the end of the growing season to help prevent overwintering of this pest.

Fact Sheet / References:

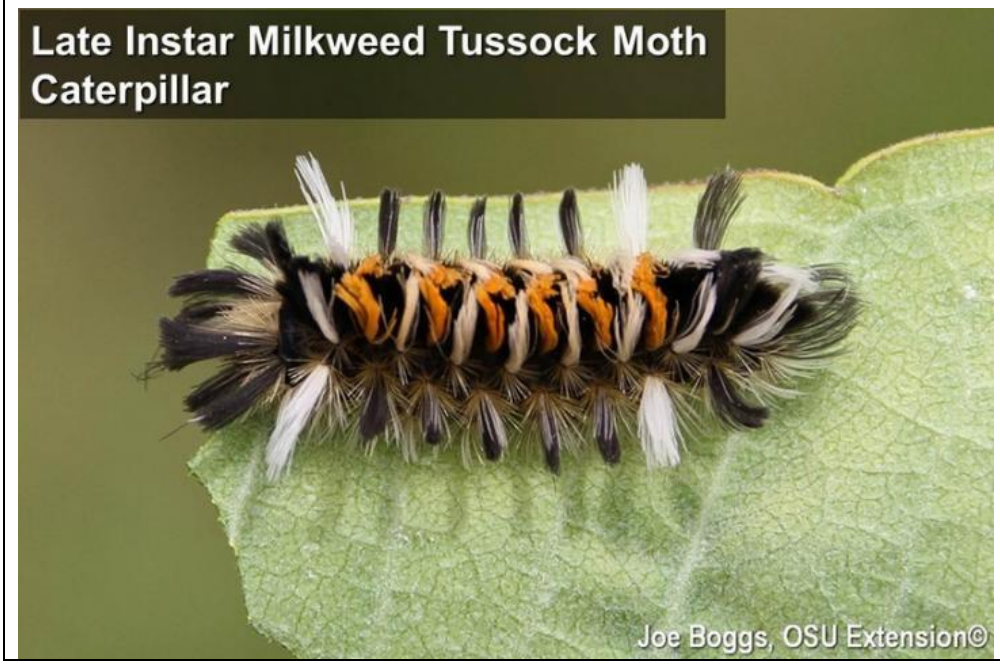
- https://www.pubs.ext.vt.edu/3104/3104-1548/3104-1548.html
- https://extension.umd.edu/hgic/topics/eggplant-lace-bug-vegetables
- https://growingsmallfarms.ces.ncsu.edu/growingsmallfarms-lacebug/
- https://content.ces.ncsu.edu/insect-and-related-pests-of-vegetables/pests-of-eggplant

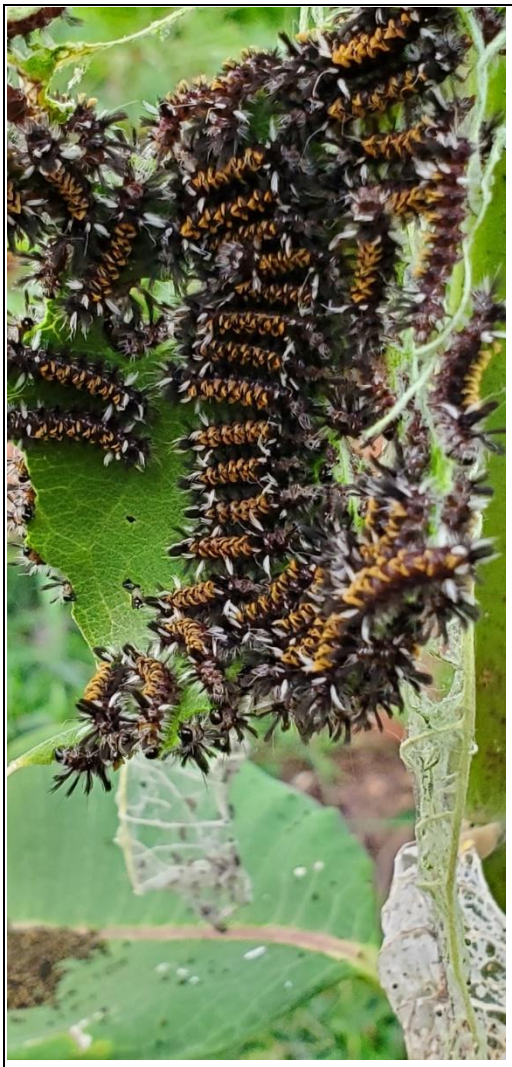
Spotlight

Milkweed Tussock Caterpillar (*Euchaetes egle*)

Many people have taken to growing gardens that support our endangered pollinators, and that is a very good thing. But we who grow milkweed have learned, it attracts more than monarch butterfly caterpillars! It is interesting, and a bit tricky, to identify the vistors to your milkweed. The Milkweed Tussock Caterpillar is one caterpillar that resembles the monarch in its black-orange-white color palette, but it is a different insect. It appears alongside monarch caterpillars, and does compete with them. But like many of the other visitors to milkweed, it has its place in the environment and we don't begrudge them their lunch, ravenous though they may be.

They are aggressive, mass feeders and can skeletonize milkweed leaves in short order. Do not handle the caterpillars, as they can cause a skin rash. Still, as Allison Kathleen O'Dell Jones of Clemson University reminds us, "It is important to remember that species diversity is necessary for a healthy ecosystem. I encourage you, especially if you have enough milkweed to sustain milkweed tussock moth caterpillars, to let them be. Feel good about providing habitat and resources for another species in your garden."





These Milkweed Tussock Caterpillars were sighted on milkweed in the Morris Township Community Garden on 8/27/22. Photo: Rachel Ritter

References

- Milkweed Tussock Moth Caterpillars | Home & Garden Information Center (clemson.edu)
- I Speak for the Milkweed Tussock Moth! | BYGL (osu.edu)

In Report 10, we stated that butterflies need a body temperature of 75 degrees F to fly. A reader let us know that Monarch butterflies can fly at 55 degrees.

ADDITIONAL RESOURCES

All Rutgers Gardening and Landscaping Fact Sheets & Bulletins
https://njaes.rutgers.edu/pubs/subcategory.php?cat=5&sub=1001
Rutgers Master Gardener Program https://njaes.rutgers.edu/master-gardeners/
Rutgers Soil Testing Laboratory https://njaes.rutgers.edu/soil-testing-lab/
Community Gardening Series https://njaes.rutgers.edu/community-garden/
Office of the New Jersey State Climatologist https://climate.rutgers.edu/stateclim/
Rutgers New Jersey Weather Network https://www.njweather.org/
Ticks and Tick-borne Disease https://njaes.rutgers.edu/tick/
Rutgers NJAES You Tube Channel https://www.youtube.com/user/RutgersNJAES

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