RUTGERS
New Jersey Agricultural Experiment Station

Rutgers Master Gardeners of Morris County
Community Garden IPM Team Report #8
August 8, 2025

WHAT'S IN THIS REPORT

TIPS	NEW PROBLEMS SEEN	SPOTLIGHTS
• Preserve your harvest with fermentation • Protect your garden in hot weather	• Bean yellow mosaic virus • Catfacing and cracking on tomato fruit • Mexican bean beetle larvae, pupae, and eggs (adults were seen earlier in the season) • Anthracnose on tomato and pepper fruit • Eggplant lace bug • Tomato/tobacco hornworms • Tomato fruitworm aka corn earworm	• Parasitoid wasps aka parasitic wasps • Common lambsquarters • Carolina horsenettle

IPM TEAM REPORTS

The Morris County Rutgers Master Gardener Integrated Pest Management (IPM) Team scouts one or more community gardens each week. Every other week the team provides IPM Team reports on problems first observed during the two-week period. These reports contain summary descriptions, management methods, and research-based references for more information.

Refer to Rutgers Fact Sheet 1123 and 1124 for all recommended controls for insect and disease pests. They are valuable resources throughout the growing season:
Rutgers Fact Sheet on Vegetable Insect Control: https://njaes.rutgers.edu/fs1123
Rutgers Fact Sheet on Vegetable Disease Control: https://njaes.rutgers.edu/pubs/publication.php?pid=fs1124

The gardens scouted by the IPM Team include the Morris County Park Commission Community Garden, the Morris Township Ted Largman Community Garden, the Madison Community Garden, the Wick Garden in Jockey Hollow National Park, and the Randolph Community Garden. The team also reports on sightings in the Pequannock Community Garden and their own vegetable gardens.

GENERAL OBSERVATIONS and TIPS

For gardeners in New Jersey, this is a good time of year to eat. Some of the arguably tastiest treats should be starting to produce bountifully. There really is nothing like a Jersey tomato. A nice big beefsteak style tomato that covers a piece of bread with one slice and drips with flavor is generous payment for our gardening labors. Fresh peppers, beans, cucumbers and so many others are at or close to their best of the season now too. It's a busy time in the garden but make sure to harvest your produce at its peak. If you have more than you can use or preserve, consider giving the excess to your community garden neighbors or a local food pantry. Yes, they will even take zucchini.

This time of prime growth for your produce can also be ideal for some diseases and insect pests so continue to be vigilant for issues. Try to take measures to mitigate damage as early as possible. Some issues are almost inevitable. If you can identify the disease or insect pest early that will give you an advantage in keeping it from causing serious issues in your plot. In general, the best plan is to prevent or at least delay problems. Spacing plants to provide adequate air flow, watering deeply but not too frequently, and avoiding overhead watering, when possible, go a long way to providing an environment for optimal plant growth. Healthy plants are less likely to suffer from disease and insect pests.

If you experience a particular disease you may want to try resistant varieties next year. Remember though, resistance usually doesn't mean complete immunity. Also, many diseases adapt, so a variety that had resistance in the past isn't necessarily still resistant.

Be fearless about removing diseased, damaged, and worn-out plants. This will help minimize spread and overwintering of pests. It will also give your healthy producing plants more room to thrive. The window is quickly closing, but you could still do one last planting of beets, lettuce, or spinach. If you have empty space later in the season, you could also consider planting a cover crop in the fall.

As you're busy weeding, watering, and harvesting, don't forget to document this year's garden results. You may think you'll remember but odds are you won't remember all the details year after year. Observation and data about your gardening experiences can be two of your best gardening tools.

Preserve your harvest with fermentation

If you're looking for an easy, relatively inexpensive way to preserve some of your produce, you may want to consider fermentation. For example, to make sauerkraut all you need is cabbage, salt and time. Other vegetables can also be fermented. Fermentation is driven by microorganisms that break down the carbohydrates and other organisms in the absence of oxygen.

If you're new to this type of food preservation, making cabbage into sauerkraut is an easy way to get started. Here's the basic process. Slice a fresh cabbage, mix it with canning salt, and massage it. Then let it rest. Put it into a non-reactive container, pressing firmly with a wooden spoon. Cover with a weight to keep the cabbage submerged. If there's not enough liquid, you can add brine. Cover with a lid to keep oxygen out. It should be ready in 3 to 4 weeks. You can buy crocks or special lids and weights meant to make fermenting easier. Be sure to follow directions carefully. The right amount of salt is critical.

After the sauerkraut is finished, it can be stored in the refrigerator. You could also can it for longer term storage, but to me that kind of defeats the purpose of it being a simple process.

After you master the basic art/science of making sauerkraut, you may want to try fermenting other produce. For instance, I find it's a great way to preserve jalapeno peppers.

Many vegetables can easily be fermented in wide mouth canning jars. The cabbages and peppers in these jars are weighted down with special glass weights made specifically for this purpose. The lids are also made for fermenting. They help keep oxygen from entering the fermenting container.

Fermenting cayenne peppers, cabbage, and jalapeno peppers

Photo: M. Sample, NJAES

This article has information about fermenting and a fairly simple sauerkraut recipe:
https://www.umassmed.edu/nutrition/blog/blog-posts/2022/7/make-your-own-fermented-vegetables/

Of course, there are many other ways to preserve your produce; each with their own benefits and challenges. It's always best to start with fresh, good-quality produce at the proper maturity. Be sure to follow USDA guidelines for processing food to ensure food safety. For information on preserving foods safely, a good place to start is: National Center for Home Food Preservation (uga.edu).

This web page has an interesting video overview of food preservation techniques: https://extension.rutgers.edu/food-safety/home-food-preservation

A little bit of effort now could keep you eating "from your garden" well into the cold weather.

Protect Your Garden in Hot Weather

The dog days of August are upon us and with them come temperatures that make flowers faint and vegetables wilt. We can't bring our vegetable gardens into air-conditioned comfort, but we can help them stay cool and hydrated. How can we protect them when the days are hot, long, and sunny? Here are a few things we can do.

- Water early in the day (before 9 a.m.), deeply, and at the base of the plants. While this is always good practice, it's even more important in hot weather when heat stresses plants.
- Add mulch. This helps the soil retain moisture and shades the soil to keep the roots cooler. Avoid plastic mulch which can trap the heat in the soil and overheat roots.
- Make sure your plants have the proper nutrients. A healthy plant can better withstand the heat. And don't fertilize when it's hot. It can stress plants.
- Plant tender fall crops along a shade border. Place plants like broccoli, cauliflower, and cabbage in areas partially shaded by taller vegetables or temporary barriers to keep them cool in the midday sun.
- Use row covers, shade cloths, or screens. Putting up some sort of shade cover helps the soil and plants stay cooler while reducing moisture loss. Monitor carefully and be sure to ventilate in extreme heat to avoid trapping heat or moisture under the cover.
- Harvest during cooler times of the day. It's good for the gardener and for the plants!

References:

- Penn State: https://extension.psu.edu/heat-proofing-your-vegetable-garden
- Iowa State: https://yardandgarden.extension.iastate.edu/how-to/managing-garden-extreme-heat
- South Dakota State: https://extension.sdstate.edu/protecting-plants-heat-stress

REPORT ON NEW PROBLEMS

Problem: Bean Yellow Mosaic Virus ***(Potyviridae family)***	**Where: Denville Home Garden 7/26**

Description: Bean Yellow Mosaic Virus (BV-2 or BYMV) was detected on plant's leaves. Leaves on several plants presented with mottled yellow and green coloration. Some older plant leaves were completely mottled. Plant vigor was noted to be weak, plant growth appeared slightly stunted. Pods were unaffected. This virus can also infect soybeans, peanuts, gladioli, canna, peas, clover, violet, and pumpkin. Aphids spread the virus, for which there is no cure.

Another bean virus that looks similar is Bean Common Mosaic Virus (BV-1 or BCMC). It also has no cure and is spread by aphids; however, disease transmission is non-persistent, meaning the aphids will readily acquire the virus by feeding on infected plants but will only continue to transmit it for a few days to a week. Beans and other legumes, including clover, can be affected. This disease often stunts the plants and reduces yield. Leaves may exhibit a mottled pattern of light yellow and green or a band of darker green may follow the leaf veins, while the rest of the leaf remains green. Leaves may become puckered or malformed and often exhibit a downward cupping of the entire leaflet.

Although both viruses are spread by aphids, only the Bean Common Mosaic Virus **is** carried by seed. The virus can survive for up to 30 years on the seed. The Bean Yellow Mosaic Virus **is not** carried by bean seeds.

Yellow green mottled bean leaf.
Cull and destroy diseased plants to stop the spread of virus in your plot and overall garden.
Photo: M. Sample, NJAES

Older completely mottled bean leaves will struggle and eventually succumb to the virus.
This plant will not recover, as there is no cure for this virus.
Photo: M. Olin, NJAES

Management:

- Destroy diseased plants to help stop the spread.
- Aphid control early in the season may help reduce the spread of disease.
- Avoid planting beans near other legumes, clover, and *Gladiolus sp.*
- Support top aphid predators, lady beetles and green lacewings, by providing plants with pollen and nectar from the *Umbelliferae*, or carrot family (Queen Anne's Lace, Cilantro, Fennel, Dill, Parsley) and *Compositae*, or aster family (Zinnia, Marigold, Calendula, Echinacea, Sunflowers, Yarrow)
- Try foil/reflective mulch to repel aphids.

References:

- Cornell University: https://www.vegetables.cornell.edu/pest-management/disease-factsheets/virus-diseases-of-snap-and-dry-beans/
- Washington State University: https://hortsense.cahnrs.wsu.edu/fact-sheet/bean-common-and-yellow-mosaics/
- University of Connecticut: https://ipm.cahnr.uconn.edu/bean-viruses/
- Cornell University: https://www.vegetables.cornell.edu/pest-management/disease-factsheets/disease-resistant-vegetable-varieties/disease-resistant-bean-varieties/

Problem: Catfacing and Cracking on Tomato Fruit	Where: Randolph Community Garden (7/21)

Description: Catfacing is a physiological tomato disorder which presents with crevices and cracks that result in distorted, misshapen fruit at the blossom end. Cool temperatures can reduce pollination. Indeterminate varieties are more at risk when they are significantly pruned. Heavy pruning reduces the plants' hormone auxin. Heirloom varieties with large fruits are inclined to encounter problems with catfacing.

Fruit cracking appears as either concentric cracks around the stem end of the fruit or as radial cracks radiating from the stem scar. Cracking usually occurs after a heavy rainfall following dry conditions.

Cracked tomato fruit
Photo: M. Sample, NJAES

A variety of tomatoes with minor cracks and crevices.
Catfaced tomatoes are safe to eat. Simply trim off lightly blemished area but avoid heavily damaged fruits.
Photo: P. Nitzsche, NJAES

Management:

- Avoid cooler temperatures, refrain from setting transplants out too early.
- Avoid heavy pruning of plants.
- Plant less prone varieties.
- Cull severely damaged fruit. It burdens the plants' vigor and detracts from developing fruits.

References:

- Rutgers University: https://njaes.rutgers.edu/fs678/
- University of Maryland: https://extension.umd.edu/resource/catfacing-problems-tomato

Problem: Mexican bean beetle larvae, pupae, and eggs (Adults were seen earlier in the season) ***(Epilachna varivestis)***	**Where: Denville Home Garden: Larvae (7/24), Pupae (7/31), and eggs (8/3)**

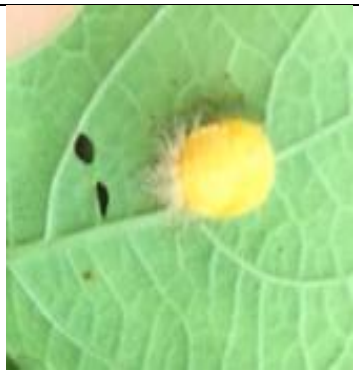
Description: Mexican bean beetle (MBB) adults are round-to-oval, hard-bodied insects, about 1/3 inch in length, yellow to coppery brown, with 16 black spots. Females lay clusters of yellow eggs on the undersides of leaves. The adults and eggs resemble lady bird beetles (also known as ladybug) adults and eggs. Mexican bean beetles are, in fact, in the same family. Mexican bean beetle larvae are yellow, cylindrical but tapered towards the rear, with branched spines. Pupae are also yellow and are on the undersides of leaves. These beetles and their larvae remove leaf tissue between the veins, resulting in a skeleton-like or lacy appearance. Severe defoliation may affect the harvest.

Mexican bean beetle adults are 1/3 inch in length and yellow to coppery brown with 16 black spots.
Photo: M. Albright, NJAES

Mexican bean beetle eggs on the underside of a leaf.
Photo: M. Sample, NJAES

Newly hatched Mexican bean beetle larvae.
Photo: M. Albright, NJAES

Mexican bean beetle larvae feeding on the undersides of leaves.
Photo: M. Albright, NJAES



Mexican bean beetle pupa.
Photo: M. Albright, NJAES

Extensive leaf damage from Mexican bean beetle feeding.
Photo: M. Sample, NJAES

Management:

- Inspect plants and handpick adults, eggs, larvae and pupae. The eggs, larvae, and pupae are usually found on the undersides of leaves. Handpicking is effective but time consuming.
- The New Jersey Department of Agriculture (NJDA) has a program to breed a tiny beneficial wasp that is helpful in the control of MBBs. The adult wasps or their mummies are available to farmers and the public for release in fields where MBBs are a problem. The adults are 2 - 3.5 mm in size and do not bite or sting humans or other animals. This parasitic wasp lays its eggs in MBB larvae. Wasp larvae feed inside the MBB larvae, kill it, and pupate inside it. forming a case called a mummy. More information can be found: The Mexican Bean Beetle Outreach Project (nj.gov)
- Insecticides (*Beauvaria bassiana*, neem, pyrethrins) can be used. Be sure to target both the tops and bottoms of leaves. The first application should be made when eggs begin to hatch because small Mexican bean beetle larvae are easier to control with pesticides than large larvae or adults.
- Clean up and remove all plant debris after harvest.
- Try growing fast maturing varieties of beans.

References:

- Rutgers University: https://njaes.rutgers.edu/pubs/publication.php?pid=FS227
- Rutgers University: https://njaes.rutgers.edu/fs1123/

Problem: Anthracnose on Tomato and Pepper Fruit (genus *Colletotrichum*)	**Where: Morris Township home garden (7/24)**

Description: Anthracnose fruit rot is a soil-borne disease that affects ripe tomato and pepper fruit. Infections go unnoticed on green fruit and as fruit ripens depressed circular water-soaked spots appear on red fruit. These spots may slowly enlarge and produce black fungal structures (microsclerotia) in the center of the lesion just below the skin surface. Symptoms can show up on harvested fruit some days after they have been picked and not be seen in the garden. Microsclerotia can overwinter in the soil and infect tomatoes in the next growing season.

Anthracnose on tomato fruit.
Photo: P. Nitzsche, NJAES

Advanced anthracnose on tomato fruit
Photo: M. Sample, NJAES

Anthracnose on pepper fruit,
Photo: M. Albright, NJAES

Management:

- Remove old plant debris, including fruits on the ground, since fungal spores can overwinter in infected plant material.
- At the end of the growing season remove and discard all tomato and pepper refuse.
- Each year plant tomatoes and peppers in a new location away from areas where tomatoes, eggplant, potatoes or peppers were grown in the past three years.
- Make sure plants have good air circulation to dry the leaves. Staking or caging tomatoes brings the plants up off the soil and allows more rapid drying of the plant.
- Mulch to create a barrier between the pathogen in the soil and plants.
- Control weeds and volunteer tomato and/or pepper plants.
- Water at the base of plants to keep leaves from getting wet.

References:

- Rutgers University: FS547: Diagnosing and Controlling Fungal Diseases of Tomato in the Home Garden (Rutgers NJAES)
- Cornell University: Anthracnose on tomatoes | Vegetable Pathology – Long Island Horticultural Research & Extension Center (cornell.edu)
- NC State: https://content.ces.ncsu.edu/anthracnose-of-pepper

Problem: Eggplant lace bug (*Gargaphia solani)*	**Where: Morris County Park Commission Community Garden: Nymphs and adults (8/4)**

Description: The eggplant lace bug is tiny and it is difficult to see any details using only the naked eye. Adults 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. The mother bug remains with her eggs and nymphs to protect them from predators. Since they are so tiny, this can be a helpful tool when attempting to diagnose their presence.

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 coarsely circular areas of a whitened discoloration. The insects will be found on the underside of these discolored areas. Adults overwinter among plant debris. They emerge to lay eggs in mid to late May with up to six generations per year.

Eggplant lace bug adults and nymphs feeding on eggplant leaf.
Photo: M. Olin, NJAES

Adult eggplant lace bug (greatly magnified)

Photo: North Carolina Cooperative Extension

Example of damage caused by eggplant lace bug feeding.

Photo: University of Maryland

Management:

- Encourage natural predators which include Lady beetle adults and larvae, spiders and shield-shaped soldier bugs.
- 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.

References:

- Virginia State University: https://www.pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/3104/3104-1548/ENTO-415.pdf
- University of Maryland: https://extension.umd.edu/resource/eggplant-lace-bugs-vegetables

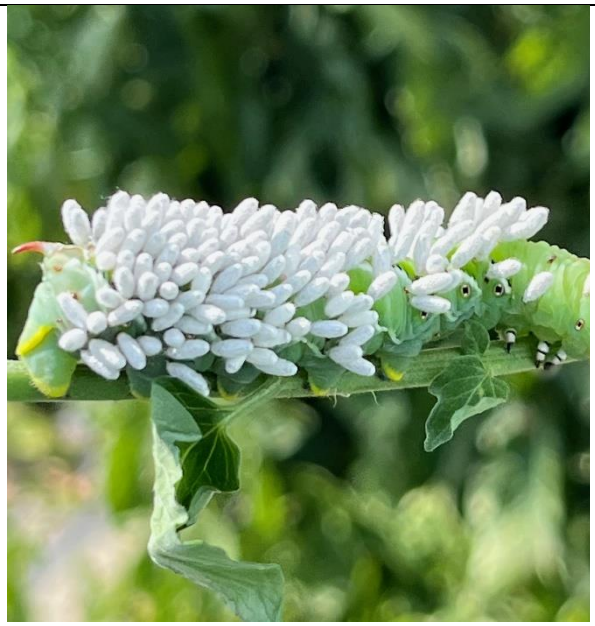
Problem: Tomato/Tobacco Hornworms (*Manduca quinquemaculata/Manduca sexta*)	**Where: Boonton Township Home Garden (8/2)**

Description: Tomato hornworm and tobacco hornworm are foliage and fruit eaters and can be found on the Solanaceae family – tomatoes, peppers, potatoes, and eggplant. Adults are gray moths with a 4-5 inch wingspan, aka hawk moths, that emerge in early summer and feed on flower nectar at dusk. Females lay eggs, singly, on the underside of leaves. Eggs usually hatch in a week, and the larvae then voraciously feed for a month. They burrow within the soil to pupate. There can be two generations a year.

Tomato and tobacco hornworms are nearly identical. Differences between them are that the tobacco hornworm has seven white diagonal stripes and a red "horn" on its tail, whereas the tomato hornworm has eight stripes and a green "horn." Regardless, they both devour the foliage.

Although they are large caterpillars, hornworms often escape notice because their coloration blends in well with the foliage they are consuming. Gardeners often overlook them until evidence of attack by predatory wasps becomes apparent. The wasp lays its eggs on the caterpillar and, upon hatching, the wasp larvae burrow into the caterpillar and consume it from the inside. When ready to pupate, they form cocoons resembling grains of white rice on the caterpillar's back as seen in the photo below.

Tobacco Hornworm
Photo: J. Basile, NJAES



Hornworm with wasp cocoons
Photo: S. Brighouse, NJAES

Management:

- Scout plants for hornworms throughout the season. Because they are wonderfully camouflaged, sometimes the telltale sign is simply finding your foliage is missing.
- Carefully handpick and destroy only those without cocoons.
- In the fall, clear all plant debris and till to destroy any pupae that may be in the soil.
- Practice a three-year crop rotation plan.

References:

- Rutgers University FS226: https://njaes.rutgers.edu/pubs/publication.php?pid=FS226

Problem: Tomato Fruitworm AKA Corn Earworm (*Helicoverpa zea*)	**Where: Denville home garden (8/2)**

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.

References:

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

BENEFICIAL SPOTLIGHT

Parasitoid Wasps aka Parasitic Wasps
(Families: Braconidae, Ichneumonidae, etc.)

Description: Parasitoid wasps are a large group that spend their early stages of life completely dependent on other species of insects and arthropods. Like little aliens, they slowly consume their host from the inside. That host will lose its life as the wasp pupates into an adult. Some of these hosts are considered destructive in the garden and so those specialized parasitoid wasps are considered beneficial.

There are over forty families of parasitoid wasps and thousands of species. Size varies greatly. A wasp that parasitizes an egg can be measured in microns while those hosting large grubs can be an inch or more. However, many are very small, ½" and less, with a similar appearance making them hard to see and tell apart. These little ones are often brown or black, with long antennae, and slender waisted bodies. A few may show clues of their presence like those below, but mostly they go unnoticed.

Aphidius sp. inserting egg into an aphid where it will develop inside the host as it slowly eats it. There are many species of parasitoid wasps that use aphids as their host.
Photo: J. Kelly Clark, University of California

Aphid mummies, typically brown, gray or black, are the telltale sign of an infected aphid. The bloated, papery, miscolored mummies are the pupa stage of the parasitoid wasp. Note some mummies have circular exit holes from the adult wasp.
Photo: S. K. Rettke, NJAES

Freshly emerged *Cotesia glomerata* with pupae,
Host: Imported cabbage worm and other Pierid butterflies.
Photo: J. Ogrodnick, Cornell University

Cotesia glomerata pupa attached to a paralyzed but still living imported cabbage worm.
Photo: L. Terraneo, NJAES

Cotesia congregate with pupae
Host: Both tomato and tobacco hornworms, *Manduca* species.
Photo: D. Caeppert, University of Maryland

Cotesia congregate silken cocoons covering paralyzed tobacco hornworm on a tomato plant.
Photo: L. Terraneo, NJAES

As adults, parasitoid wasps will do some pollinating as they eat nectar, pollen, and/or honeydew. Some species may eat their host insect.

They do not have a stinger. Instead, they have a long ovipositor. Once the female finds the correct host for her species, she will use it to lay eggs in or on the doomed insect or arthropod. Along with the egg, the ovipositor can deliver venom and in certain families of wasp, a special type of virus known as a polydnavirus. These will weaken the immune system of the host, affecting its development, protecting the egg and creating conditions that favor the larva. The host may become temporarily or permanently paralyzed or it may be able to continue eating and molting. Even so, it may be visibly smaller than its unaffected siblings. The host will live just long enough for the wasp to pupate and hatch as an adult.

Scolia dubia
Blue-winged Scoliid Wasp is one parasitoid wasp you may have seen in your New Jersey garden. They lay their eggs on grubs including Japanese Beetles and June Bugs.

Photo: L. Terraneo, NJAES

Parasitoids are highly sensitive to insecticides so to conserve these beneficials, limit use of chemical sprays. Improperly applied pesticides destroy parasitoid populations. To attract parasitoids and keep them in your garden, there should be some host presence for the larva and a nectar source for the adults.

References:

- Rutgers University: https://njaes.rutgers.edu/pubs/publication.php?pid=FS295
- Rutgers University: https://plant-pest-advisory.rutgers.edu/parasitoids-the-hidden-backyard-beneficials/
- University of Maryland: https://extension.umd.edu/resource/parasitoid-wasps/

WEED SPOTLIGHT

Common lambsquarters
(Chenopodium album)

Description: Common lambsquarters is a fast-growing summer annual that is found across North America. White goosefoot, fat-hen, mealweed, frostbite are some other common names for lambsquarters. This member of the Chenopodiaceae family grows erect with branching, maroon-tinged stems and can reach a height of five feet. Its alternately arranged leaves are triangular in shape. New leaves have a distinctive white mealy coating giving the leaves, especially the undersides, a silvery-white cast. Flowers are inconspicuous, appearing densely on spikes at the end of branches and stems. Flowering occurs from June through September.

Lambsquarters propagates through seed. A single mature plant can produce as many as 100,000 seeds. The small seeds fall close to the parent plant, can remain viable for decades and germinate close to the soil surface. Although common lambsquarters can emerge all summer long, the greatest emergence occurs in early spring. This plant will grow in all types of soils and many pH levels, but does best in fertile, fine-textured soil.

The gardener can control this weed by hand pulling or hoeing, using a two-inch layer of organic mulch (such as straw) to reduce germination, and avoiding deep cultivation of the garden bed as this can bring seeds up to the soil surface.

Small common lambsquarters plant
Photo: J. Carlson, NJAES

Note the silvery-white cast of the new leaves in the center of the picture.
Photo: J. Carlson, NJAES

Lambsquarters flower spike
Photo: S. Morris, Cornell University

References:

- Cornell University: Common lambsquarters | CALS

Carolina horsenettle
(Solanum carolinense)

Description: These are some of the common names for Carolina horsenettle and indicate how noxious this weed is: Apple of Sodom, Devil's Potato, Devil's Tomato, Thorn Apple, and Poisonous Potato. All parts of this plant are poisonous to humans if ingested. This weed can be an alternate host to diseases and pests affecting your garden produce such as tomato leafspot, potato and tomato mosaic virus, eggplant flea beetle, and Colorado potato beetle.

Horsenettle, a nightshade, is a native, warm season perennial spread by rhizomes and seed. Its shallow lobed, alternately arranged leaves are 2 to 5 inches long and about half as wide. This plant has an erect or sprawling growth habit and can reach a height of four feet. Both the leaves and stems sport sharp yellowish-white prickles. Flower clusters of white to light lavender star-shaped blossoms with yellow centers appear in the summer and continue until frost. The fruits are smooth, green berries that turn yellow/orange and wrinkle as the fruit ripens. Fruiting occurs in the fall. This weed likes full sun, a variety of soil types, and tolerates dry spells.

The community or home gardener can control this weed by diligently pulling the plant out by the stem. Protective gloves should be worn when doing this to avoid being scratched by the sharp prickles. Bag and dispose of this plant in trash bags.

Common horsenettle plant in a community garden plot in July
Photo: J. Carlson, NJAES

Closeup of horsenettle flower
Photo: Ohio State University

Detail of sharp prickles on horsenettle leaves
Photo: J. Carlson, NJAES

References:

- North Carolina State Extension: Solanum carolinense (Apple of Sodom, Bull Nettle, Carolina Horse-Nettle, Devil's Potato, Devil's Tomato, Horsenettle, Horse Nettle, Poisonous Potato, Thorn Apple, Wild Tomato) | North Carolina Extension Gardener Plant Toolbox
- Cornell University: Horsenettle | Cornell Weed Identification
- Ohio State University: Ohio Weedguide

RESOURCES

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

Beneficial Spotlight: Loretta Terraneo and Donna Tyson
Weed Spotlight: Jody Carlson
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