THE GARDEN BENCH

The Manatee County Master Gardener E-Newsletter

July/August 2021 - Volume 20 - Issue7

PC: Amy Boohaker

Sizzling Summer Vegetables

By Nancy Hammer, Master Gardener Volunteer

If you are from up North, you know late spring is when vegetable gardeners joyfully plant tomato seedlings, and look forward to flavourful slicing tomatoes as summer unfolds. Experienced Florida veggie gardeners know that dog won't hunt in our state; however, with correct plant selection, summer vegetable gardening in Florida can be very fruitful.

Here are some vegetables that can thrive in our heat and humidity:

Okra
Clemson Spineless, Emerald, Annie Oakley II, Cajun Delights.
Plant through the summer until September.

Sweet Potato
Centennial, Beauregard, Vardaman, Jewel. Plant through summer until September.

Peas
Southern peas (field peas, cow peas, crowder peas) California Blackeye No. 5, Pinkeye Purple Hull, Texas Cream. Plant through the summer until October.

Seminole Pumpkins
(Curcurbita muschata) Plant until September.

Yard Long Beans
Plant throughout summer.

Okinawa spinach
(Gynura crepioides) Plant through October.

Malabar spinach
(Basella rubra) Plant through October.

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If you currently have cherry tomatoes, peppers or eggplants, and they are still healthy, they may continue to produce fruit into the summer months. If you are the adventurous sort, consider trying varieties from Southeast Asia, the Caribbean, Israeli varieties, and Southern heirlooms. Sources for seeds include Southern Exposure Seed Exchange, Seed Savers Exchange and ECHO. Detailed information on Florida vegetable gardening, including a table of planting dates can be found online in the EDIS, Florida Vegetable Gardening Guide. http://edis.ifas.ufl.edu/vh021.

Malabar Spinach
PC: UF/IFAS Extension

Should you decide to take a break for the summer, take advantage of the heat, and solarize the soil to kill harmful nematodes, other insect pests, and weed seeds. Look online at UF/IFAS Gardening Solutions, Soil Solarization, for how-to information.

Alternatively, consider cover crops for the summer to prevent erosion during heavy summer rains, discourage weed growth, add nutrients and organic matter, improve soil texture and interrupt insect and disease cycles. More information, including suggested cover crop plants can be found online at UF/IFAS Gardening Solutions, Cover Crops. https://gardeningsolutions.ifas.ufl.edu/care/fertilizer/organic-matter.html

Finally, we have reopened to the public, and invite you to tour our educational gardens at the Manatee County Extension offices in Palmetto. Call 941-722-4524 and ask for the Plant Clinic to set up a time. We have examples of how to successfully grow vegetables and herbs in a raised bed, a variety of containers, and salad tables.

Okra
PC: UF/IFAS

Seminole Pumpkin
PC: Miranda Castro Edible Project

See also:

https://gardeningsolutions.ifas.ufl.edu/plants/edibles/vegetables/vegetable-gardening-in-florida.html
https://gardeningsolutions.ifas.ufl.edu/plants/edibles/vegetables/heat-tolerant-vegetables.html

Irrigation System Maintenance

By John Dawson,
Master Gardener Volunteer

Performing regular irrigation system checks will save you money in water bills, repair bills and replacing lost plants/lawns. Your system should be set up to operate while you are asleep, coming on in the wee hours and shutting down before 8:00 A.M. So how do you know if it is working properly?

The only way, is to perform a system check on one of your scheduled watering days. Pick a time when the wind is not blowing hard and operate each watering zone manually. This requires that you know how your irrigation controller works and where it is located.

First, check pop-ups (the ones that pop up but do not rotate). The spray should be uniform and pointed at the targeted area. They can be adjusted by moving the base with channel lock pliers or the upper screw on head. Dribblers and non-uniform sprays usually indicate clogged filters. The filters can be removed by unscrewing the pop-up head, just lift out, clean and replace.

Next come the rotors; adjust each one as needed by using the adjustment screws atop each rotor or adjusting the base. The spray should cover only the surface that needs water. One screw adjusts how much/far it sprays and the other controls the sweep. Rotors and pop-ups are mechanical devices that breakdown.

PC: UF/IFAS Blogs

PC: UF/IFAS Blogs

Next, check the micro irrigation system. The spray heads have tiny holes that clog easily. Remove the spray head and clean it with an old toothbrush. For drip feed irrigation this step is not necessary; they have filters in the tubing.

Next, check to make sure the irrigation shut off rain sensor is working; it's designed to make sure your system does not operate after enough rainwater has fallen to supply your landscape. If you tried to conduct your irrigation system check after a heavy rain and none of your zones operate, it's working.

However, the system failure default is to allow your system to operate, even in a heavy downpour. Turn on a zone in visual sight of the sensor and then continuously spray my sensor with a water hose. If working properly, the sensor should shut off the irrigation system in less than 5 minutes. No need to replace the entire sensor.

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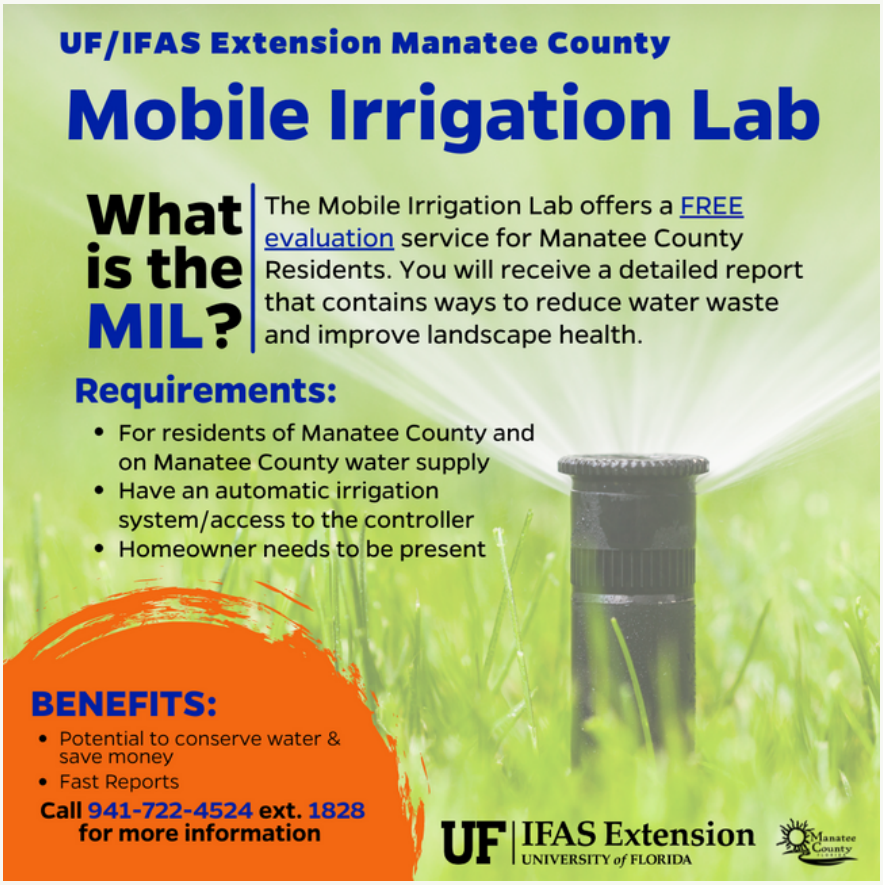
If you're lucky, all of your controllers are in one place, if not, you need to know where they are located. This is really important in an emergency, where a geyser shoots up in your front lawn, a zone that does not shut off or a part of your yard gets soft, wet and mushy when everything else is dry. Step one in any of these situations is to turn the water off, do you know how? Controllers are also suspect when a single zone does not turn on.

Lastly, check the meter on the reclaim irrigation supply line. If your irrigation system is on municipal water, you will need to shut off the water to your home first. With the system on, you should see or hear an indication that water is flowing. With the system off, you may not hear, but you may see that there is a small amount of water still running, indicating a leak in the system. This more often means one of your zone control valves is not working properly, but which one?

For more information:

Operating Controllers
https://edis.ifas.ufl.edu/publication/ae220

Callibrating your System
https://sfyl.ifas.ufl.edu/media/sfylifasufledu/broward/docs/pdfs/urban-hort/How-to-calibrate-your-Sprinkler-systemLH02600.pdf
https://www.youtube.com/watch?v=W_wn-hwLNtg



A calibrated system ensures you have the right amount of water you need where you need it. Call (941) 722-4524 ext. 1828, to contact the Mobile Irrigation Lab or visit: https://sfyl.ifas.ufl.edu/manatee/lawn--garden/mobile-irrigation-lab/

Ask a Master Gardener Volunteer

DEAR ASK A MASTER GARDENER VOLUNTEER:

Q: We are having issues with these agaves (see picture). Can you identify the problem and suggest any remedies for this problem?

- A.G., Bradenton

Dear A.G:

A: Your pictures show blisters on the agave leaf. This condition is called edema. Edema happens when the plant roots take up more water than the plant can use and isn't able to transpire the excess. Transpiration is the release of water vapor through the leaf surface. Just like a blister on your skin, the water causes the upper skin surface to separate from the underlying tissue.

Once that edema goes away, the separated, dead tissue dries, then cracks, and eventually flakes away. That leaves the scars that you see on your agave. This condition can happen during hot, dry times of the year and may be avoided by watering in the early morning or evening and by not applying irrigation during the hottest part of the day. Edema isn't a disease but unfortunately, the scars left by edema will remain on the agave leaves.

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Send a photo or gardening problem via e-mail to the Master Gardener Volunteers at ManateeMG@gmail.com or visit them at the County Extension Office
Monday - Friday 9:00 a.m. to 4:00 p.m.; Closed on Wednesdays

What's This

By Joy Derksen, Master Gardener Volunteer

Papaya black spot is a relatively new problem in Florida. The black spots, caused by the fungus Asperisporium caricae, starts on the top of older papaya leaves as pale brown spots then continue to the undersides of the leaves. There the spots turn dark and produce spores. The spores are spread by wind and rain. Heavily Infected leaves die and fall off which limits fruit production. Infected fruit can be eaten, although young fruit frequently falls before it is edible.

To manage, remove infected leaves. If you wish, you can spray the rest of the plant leaves (especially the underside of the leaves) with a protective and preventative copper fungicide. This will only prevent infections, it will not cure leaves or fruit that already have black spot. For information, visit: http://blogs.ifas.ufl.edu/stlucieco/2020/05/14/black-spot-of-papaya-how-to-recognize-and-manage-it/

Pictured: Black spot on leaf
PC: UF/IFAS Blogs

Amazing Radishes

by Maureen Hirthler, Master Gardener Volunteer

It's time to plan your fall garden! Lettuces, kale, chard, collards–the greens will be thriving, and you'll have plenty of salad fixings. And, to bring spice and color to your greens, try growing radishes.

Radishes (Raphanus raphanistrum) are root vegetables related to cabbages and mustard, with high levels of calcium, vitamin K, manganese, and fiber and are low in calories. Most people are familiar with the small, red round radishes that appear in grocery stores and restaurant salads. Many find the taste too strong. But radishes come in many other colors and flavors and are perfect for a fall Florida garden.

The daikon, or white radish, is a mild-tasting long radish. You can use all parts of it, and it can be eaten raw or cooked in stir-fry or soup. It has a light and spicy flavor, and the flesh is very crunchy and juicy.

Daikon Radish
PC: UF/IFAS

Green radishes are quite long with a mild taste. They can be used like carrots in soup and look beautiful in salads.

The black radish has a more pungent flavor and can be 3-4 inches in diameter. One way to use it is sautéing in a bit of oil (skin and all) until tender. It also is a good component in a slaw.

Watermelon radishes are related to the daikon radish, and the flesh looks just like the melon. It's versatile and can be eaten raw, pickled, or cooked.

Watermelon Radish
PC: UF/IFAS

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All of these radishes can be roasted like a turnip or rutabaga or mashed into a tasty side dish. Radishes require very little work, and your salads will look fantastic and taste great, too.

Red Radish
PC: UF/IFAS

Radishes are a fall crop here in Florida. Most grow rapidly; you can do successive plantings 8-10 days apart to have them all season.

Big seed companies have many of these varieties for purchase. Radishes can grow in the sun or partial shade and require loose soil. Plant seeds in a ½ inch furrow and then place the seeds ½ deep, one inch apart, and cover with loose soil. Pull every other seedling. Water weekly if it doesn't rain, and fertilize once with a 10-10-10 vegetable fertilizer. Pests and diseases are rare because of the rapid plant growth. Neem oil works quite well for pests and copper for fungus. Harvest in 4-5 weeks while young and tender, when the root is a few inches out of the ground for long radishes and less for smaller types.

For more information:

https://edis.ifas.ufl.edu/publication/hs1370

https://agrilifeextension.tamu.edu/browse/featured-solutions/gardening-landscaping/radishes/

https://cals.arizona.edu/fps/sites/cals.arizona.edu.fps/files/cotw/Radish.pdf

Scouting for Pests

By Jim Haupt, Master Gardener Volunteer

Florida's mild climate affords us the opportunity to work in our landscapes throughout the year. However, especially during the summer, lawns and landscapes become vulnerable to the vagaries of extreme heat, drought, gusty conditions, and drenching rain. These conditions cause stress, making plants vulnerable to pests and diseases. Frequent and regular scouting gives us the opportunity to spot these conditions early before they worsen.

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This means getting out into your gardens on a regular basis, at least once or twice a week. Become familiar with the kind of turf and plants in your landscape. This helps in determining what's normal and abnormal. Before we can determine that something is wrong, we must first understand what is normal. Once something out of the ordinary is observed, we can be more accurate in deciding the best course of action.

While scouting there are several inexpensive tests that help detect pests. A soap flush can be done by pouring a mixture of soap and water onto an area in your lawn that appears abnormal. This will likely draw insects to the surface. If none appear, the problem might be non-insect related (such as irrigation issues or fungal pathogens.)

Sticky Traps

Place a sheet of white paper below branches of trees and shrubs that show signs of damage. By shaking the branches, any insects that are present will likely drop on the paper. Sticky traps can be useful in trapping spider mites, lacewings, aphids, whiteflies, spider mites, and other piercing / sucking insects (but also lizards, so be warned!). Many pests cling to the underside of the leaf, so when scouting, inspect all areas of the plant. Monitor your plants and look for symptoms such as curled or distorted leaves, yellowing chlorotic spots, wilting, and black sooty mold. (http://blogs.ifas.ufl.edu/hillsboroughco/2020/12/31/identifying-lawn-problems/)

It is also important to consider the various life stages of insects. Some insects can complete their life cycles in a week. When scouting for pests on tomato plants, for example, leaf miner larvae and whitefly nymphs tend to move up the plant as it grows. Most larvae and nymphs are found on leaves 6 to 10 when counting from the top of a plant.

Once conditions get to the point that your threshold of tolerance has been reached, you can then determine the appropriate corrective measures. Begin with control methods that have the least environmental impact. Early stages of infestations can be corrected by simply removing insects by hand. For bagworms, pick them off in late fall and early spring and place them in a bucket of soapy water. Biorational pesticides such as insecticidal soaps are effective against soft-bodied pests like aphids, soft scales, psyllids, whiteflies, mealybugs, thrips, and spider mites. When used safely and according to directions, horticultural oils can help manage many piercing-sucking insects and mites. Bt (Bacillus thurungiensis), a natural bacteria found in soil, is a safe pesticide that only impacts caterpillars.

Mole Crickets

Thrips

Look for both harmful and helpful insects. There are parasitic wasps, minute pirate bugs (Orius insidosus), lacewings (Ceraeochrysa cubana), and others that are good to have on your side. Florida is home to about one hundred species of lady beetles. A single lady beetle, during its lifespan, can devour as many as 5,000 aphids. Remember that 99 percent of all insects are beneficial or harmless. Field guides and a hand lens will help you identify and differentiate the thugs and the ones that work on your behalf. (blogs.ifas.ufl.edu/sarasotaco/2019/08/19/for-the-love-of-bugs)

Regular scouting helps us make better decisions about whether we need to treat a problem immediately or wait and see if conditions get better or worse. For more information on insect management, go to:

https://edis.ifas.ufl.edu/publication/VH036

https://edis.ifas.ufl.edu/publication/IN1248

Bad News for Fire Ants: Heads Are Rolling!

By Robert Hinz, Master Gardener Volunteer

Parasitoid flies in the genus Pseudacteon have a life cycle that includes decapitation of fire ants! Their common names include phorid flies, scuttle flies, and hump-backed flies. Currently, there are seventy-two known species worldwide with about twenty-three to thirty species in the Western Hemisphere.

Phorid fly larvae feed on different species of fire ants (Solenopsis spp.), including the red imported fire ant, and other insects. It is said that the phorid flies look like dust particles hovering over the fire ant nest.

A mated female fly lays one torpedo-shaped egg onto the thorax of a worker fire ant with a needle-like ovipositor in a rapid aerial attack. It can infect up to three hundred workers. After hatching from the egg, the larva moves into the ant while digesting its fluids. During three larval instars (stages), it migrates from the thorax to the head. Pupation occurs in the head and the adult fly emerges from the ant's mouth. Development takes four to twelve weeks depending on temperature and humidity.

An adult Phorid fly emerges from ant
PC: Sanford D. Porter, USDA-ARS

While its head contents are being devoured, the ant will leave the nest in a "zombified" state and find leaf litter to hide in until its head falls off. The term "Zombie Ants" was coined from this behavior. An enzyme dissolves the exoskeleton of the ant which causes the head to drop off.

The head size of the ant determines the sex of the fly. A small ant head produces a male, while the larger ant head produces a female. The adult fly is a generalist and feeds on honeydew, plant sap nectar, and dead insects. The fly and ant life cycles could be deemed a true-life horror tale.

PC: Sanford D. Porter, USDA-ARS
A decapitated ant

It seems that different species of Pseudacteon flies are very particular in attacking fire ants, which includes variables of host size, season, time of day, and mode of attack. The fly species are fussy eaters, each preferring only one species of ant.

The ants are aware of the flies and a single fly can greatly inhibit foraging of hundreds of workers. This disruption of foraging can result in starvation of the queen. Most of the time, however, even though hundreds of fire ants die, the loss is still small, and the queen is not directly impacted nor is the nest. Also, fire ant colonies may have one queen or up to 100 queens per mound, depending on the species. During dry times, the colony buries deep within the ground, as far as 4 feet. When this happens, the flies are unable to parasitize the ants.

A female phorid fly
PC: Sanford D. Porter, USDA-ARS

Phorid fly attacking fire ant
PC: Dr. Larry Gilbert

Multiple problems with fire ants in the United States still exist. Fire ants cost $6-8 billion dollars every year in chemical control measures. However, agents of biological control like phorid flies used over decades and in large ranges may be more economical and safer in reducing fire ant populations.

California and Florida are now working together to release biological controls of invasive imported fire ants that include other parasitoids and pathogens such as fungi, and viruses. Infecting phorid flies with pathogens before releasing them has shown some success. Much more research and experimentation will be necessary. "No single phorid species will be a magic bullet," says Gilbert, a University of Texas entomologist and researcher.

References:

http://web.biosci.utexas.edu/fireant/FAQ%20Answers.html

https://entnemdept.ufl.edu/creatures/beneficial/flies/ant_decapitating_phorids.htm

https://edis.ifas.ufl.edu/pdf/IN/IN117400.pdf

PC: Amy Boohaker

July/August
Calendar of Events

Date	Time	Description
Wednesday 07/28/2021	10:30AM	Rain Barrels for the Rainy Days of Summer: The massive summer rains we experience can cause a lot of headaches in the form of stormwater runoff. Learn more about the issue and how you can help to manage stormwater runoff in your own yard by incorporating rain barrels to use for landscape irrigation. https://ufl.zoom.us/webinar/register/WN_Mj9faZlaRnKXvz8atBiyNw
Friday 08/06/2021	12PM	Mangrove Considerations: Join UF/IFAS Extension's Alyssa Vinson for a discussion of one of our most valuable coastal resources: Mangroves. Learn the ins and outs of living with these valuable and irreplaceable tree species. Topics covered will include; identification and ecology, rules and regulations and best practices for trimming. https://ufl.zoom.us/webinar/register/WN_kKQy-kBKRja5NSdovpf3bQ
Thursday 08/26/2021	10:30AM	Rain Gardens: Rain Gardens are an important part of Florida-Friendly Landscaping™and serve multiple functions. This class will provide you with the information to help you design, install and maintain your very own rain garden. https://ufl.zoom.us/webinar/register/WN_oh6MwZN_QZ6Q0LWopB5uBQ
Wednesday 09/08/2021	11AM	Organic Gardening-Getting Started with Kathy Oliver: Focusing on vegetable gardening, this series kicks off with a look at organic methods and materials, soil building, fertilizing, and sourcing plants and seeds. https://ufl.zoom.us/webinar/register/WN_Bl1QphMnRWONE9S4ln3aHQ
Wednesday 09/15/2021	11AM	Organic Gardening-Pest & Disease Management with Mack Lessig: Keep on top of insects, diseases, and weeds using scouting, Integrated Pest Management, and environmentally-friendly products. https://ufl.zoom.us/webinar/register/WN_MpDKGuWGQ_elo3nXdNuh5A
Wednesday 09/22/2021	11AM	Organic Gardening-Veggie/Herbs for Health with Angela Fritz: Organic produce contains important vitamins, minerals, antioxidants, and fiber. Learn the benefits of incorporating vegetables and herbs into your diet for a healthy lifestyle. https://ufl.zoom.us/webinar/register/WN_HG_UcF6vT7Ov8c6DMFSoxQ