



The Master Gardening Bench

The Manatee County Master Gardener Newsletter
January 2016 - Volume 15 – Issue 1



Photo credit: www.pbs.org

Tomato Diseases

By Nancy Hammer, Master Gardener 2014

Growing tomatoes for the Florida backyard gardener is both rewarding and challenging. There are a number of diseases that can plague tomato leaves, stems, fruits, and roots including fungal, bacterial and viral diseases. As a general rule, viral diseases are untreatable. Here are some of the most common diseases found in Manatee County tomato gardens.

Bacterial spot (*Xanthomonas vesicatoria* or *X. perforans*) can be a particular problem in warm, rainy weather. It is mostly evident on the foliage. Brown spots are seen on both the top and bottom of leaves, may appear wet or greasy, and have yellow halos. The leaves may eventually fall.

Like most bacterial diseases, bacterial spot is difficult to control once established. The best option is to avoid overhead irrigation, buy seed or transplants from reputable sources, and avoid purchasing plants with leaf spots. If started early, copper-containing fungicide (bactericide) plus mancozeb sprays may help.

Target spot (*Corynespora cassiicola*) is a fungal disease which is becoming more of a problem in backyard tomato gardens. If you live near commercial tomato growing fields, it is more likely to be an issue, as the fungal spores are dispersed by wind.

On the leaves, the first sign of disease is small spots with light brown centers and dark brown edges. Yellow halos around the spots may also be present. It can be difficult to distinguish from bacterial spot in the early stages. Fruit lesions start as small sunken areas which may enlarge, and the fruit will look unappealing. There have been reports that target spot has exploded in some areas, and that the disease has damaged the lower portion of plants and infected fruits. A fungicide may be helpful in the very early stage.

Late blight (*Phytophthora infestans*) is more prevalent during cool weather. This fungal disease is evidenced by light brown or purplish spots. It may include white fungal growth on the bottom of the leaves. The fruit can also be infected with purplish to dark brown ring-like lesions.

As with other diseases, purchase healthy looking plants, and provide sufficient growing room for good air circulation. If late blight is a repeated problem, fungicide sprays as a preventative may help.

Early blight (*Alternaria solani*) is yet another fungal disease of leaves, stems, and fruit. The spores are carried primarily by the wind. The disease starts on the oldest leaves as small dark spots which become

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Bacterial spot symptoms



Early blight



Late blight on tomato fruit



Target spot on tomato fruit

larger and develop rings that look like bullseyes. The area around the bullseye may turn yellow, as may eventually the whole leaf. Proper nitrogen fertilization is important in preventing early blight. Early use of a fungicide may help.

Bacterial wilt (*Ralstonia solanacearum*) is found in the soil, and infects roots and stems at the soil line. Wilting starts in the upper leaves with recovery overnight. The leaves remain green, but eventually there will be full wilting. It is difficult to control. Therefore, look for disease-free plants, do not over irrigate, and use crop rotation.

Tomato yellow leaf curl virus (TYLCV) is more prevalent in areas where there are commercial tomato fields. It is transmitted by the silverleaf whitefly. Symptoms are particularly significant on young plants. These include stunting of the plant and leaves turned upwards with areas of dark green and light green. Fruit set is severely impacted. If this is a problem in your area, purchase TYLCV resistant plants. Susceptible varieties can be tried if three- to five-month tomato-free periods are used to break the infection cycle.

Fusarium wilt (*Fusarium oxysporum* f. sp. lycopersici) is difficult to control because it can persist in garden soil for many years. It is a fungus that attacks through the roots, and causes persistent wilting which cannot be remedied by watering. Older and heirloom varieties are more susceptible. Fusarium wilt resistant varieties are readily available. Look for labels that say "VFN."

Tobacco mosaic virus symptoms include leaves that are both light and dark, as well as wrinkled. The fruit is spotted or streaked. The virus can be spread to plants inadvertently by gardeners after smoking, and by chewing insects. There are no controls for this disease, so affected plants and plant debris should be removed.

The best advice for minimizing tomato plant disease is starting with healthy, disease-free, resistant plants; practicing crop rotation; removing plant debris immediately after harvest; not handling wet plants; ensuring proper nutrition and watering; weeding, using of mulch to minimize splash back; and spacing plants for good air circulation. For more information and photos of symptoms, go to:

<https://edis.ifas.ufl.edu/pp121>,

<http://www.extension.umn.edu/garden/yard-garden/vegetables/tomato-tmv-disease/>

or contact the Master Gardeners at the Manatee County Agriculture and Extension office at 941-722-4524.

Snow in Florida??

Article and Photographs by Norma Kisida, Master Gardener 2012



If you see what looks like a dusting of snow here in the fall and early winter you aren't dreaming of a more northern climate. Our version of the white stuff is often called "Florida snow" and is actually **largeflower pusley (*Richardia grandiflora*)** or **largeflower Mexican clover**, an herbaceous flowering perennial in the Rubiaceae family.

Although native to South America, it has found a comfortable home here in Florida in our lawns and open areas. It is not classified as invasive and is actually a showy ground cover which attracts butterflies and bees during its heaviest flowering period September through January.

The flowers are white, blue, pink, or violet and remain closed on cloudy days, looking like small balloons. While embraced by some, others prefer not to have it in their turf but are likely in for a difficult battle since it tolerates our coldest temperatures, is drought tolerant, seeds profusely, roots at the nodes, and the low creeping growth lets it escape the mower. Also, any

pieces of the taproot left in the ground will resprout.

Other types of pusley that may be found growing along with largeflower pusley include **Florida pusley (*R. scabra*)** and **tropical Mexican clover (*R. brasiliensis*)**. Florida pusley is a native summer annual with a smaller cluster of all white flowers and the hairy seed capsules.

Tropical Mexican clover, an introduced species from South America, may be an annual or perennial which grows from a deep root and has branching stems up to 40 centimeters long either lying prostrate or growing upright. The flowers are also all white and smaller than the large flowered pusley.

For a video, photographs, and more information including control methods visit:

<https://www.youtube.com/watch?v=srscVpv6cJI&feature=youtu.be>

<http://okeechobee.ifas.ufl.edu/News%20columns/Snowweed.htm>



Photo SGH/Shutterstock.com

Maintaining Your Garden Tools

By John Dawson, Master Gardener 2007

"If you take care of your tools they'll take care of you," is an old and proven saying. The secret to having garden tools you can count on year after year is to buy the best quality tools you can afford and then maintain them. If you do those two things, your children and grandchildren will be using your garden tools long after you've stopped gardening.

The main enemies of all garden tools are moisture (causes rust), improper use, and poor or inadequate maintenance. To keep your gardening tools around for a long time:

- Clean your tools after each use and put them away where they belong.
- Store your tools off the ground in a dry place.
- Remove any rust that forms on a tool and coat with oil.
- Keep wooden handles smooth by sanding and oiling them.
- Spray fiberglass handles with a clear enamel to prevent fraying.
- Keep cutting edges sharp and moving points oiled.
- Use the right tool for the job. Use the tool as it was intended.
- Replace/repair badly damaged tools.

All tools must be clean before sharpening. Knock off all dirt, wash, rinse, and wipe dry. Use steel wool, a wire brush/wheel, SOS soap pads, or light sandpaper to scour blades of rust. Scissors, snips, shears, mower blades, pruners, and loppers are all sharpened the same way. If possible, disassemble the blades and secure in a vise.

Once removed, the cutting blade edge can be sharpened using a flat bastard file, whetstone, or even a kitchen knife sharpener. Always file in one direction away from you. Adjust your angle as needed to file the entire edge evenly on the factory bevel; usually 10 strokes will expose clean metal over the entire edge.

Then do the same with the other blade, and never use small jerky strokes because it will cause you to lose the factory edge. The flat edge, where the blades come together, should be filed or sanded to remove any burrs. Using 300 wet/dry sandpaper or a honing stone, keep the blade flat and file/sand in a circular motion and check for burrs. When burrs are smoothed out, lightly oil all surfaces of the blades, and reassemble the tool.

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When sharpening a shovel (yes, it is a cutting tool) you only need to sharpen the upper edge of the shovel. A straightforward way to do this is to fasten the shovel into a large vise with the head near the vise and facing up.

Start at one side of the shovel base and holding a bastard file at a 45-degree angle to the edge of the shovel and pointing inwards towards the center, make four or five even strokes inward and upward. Step your file an inch or two towards the tip and repeat the motions until you get to the tip of the shovel. Repeat for the other side.

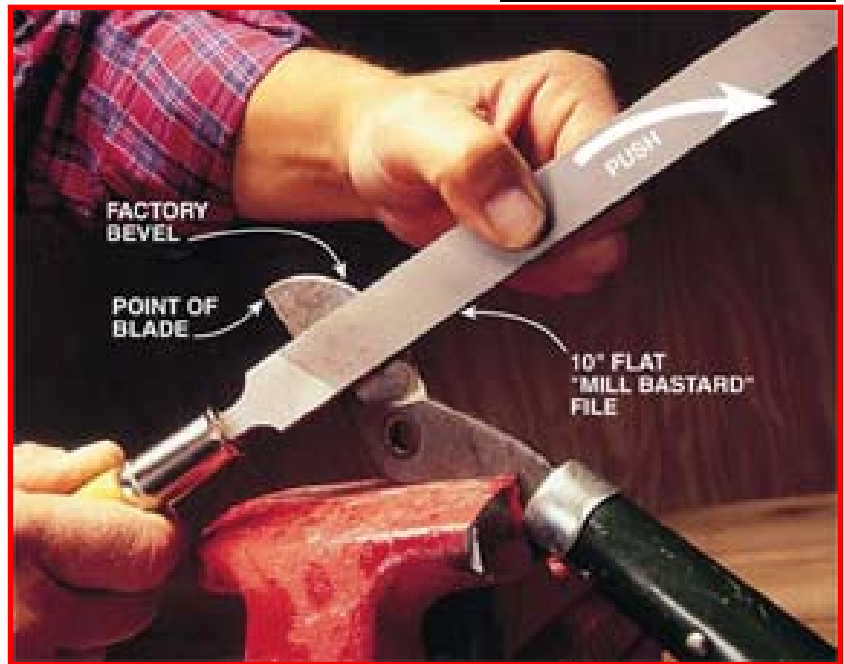
Sharpen hoes the same way. Hatchets and axes need to have both sides of the blade sharpened at a 45-degree angle. Saws, chain saws, and powered hedge trimmer blades require special handling and different files to maintain a factory bevel and the technique is too complicated for this article.

All metal tools should be cleaned and oiled before storage. I prefer to use WD-40; not only does it penetrate and lubricate, it also displaces water. The WD actually stands for Water Displacement.

The wooden handles of rakes, hoes, picks, axes, and shovels need maintenance as well. Over time, the wood will dry out and begin to splinter. Sand the handles with medium grade sandpaper (100-180 grit) and then rub with linseed oil. The linseed oil keeps the handles from drying out and splintering.

Replace any handles that are cracked or badly splintered. Fiberglass handles wear out as well. They fray and leave tiny glass splinters (another good reason to wear gloves). Lightly sand with a fine grade sandpaper (300 grit), wipe with a damp cloth, and then spray with a clear enamel.

Photo credit: <http://www.familyhandyman.com>



Proper Sharpening Technique



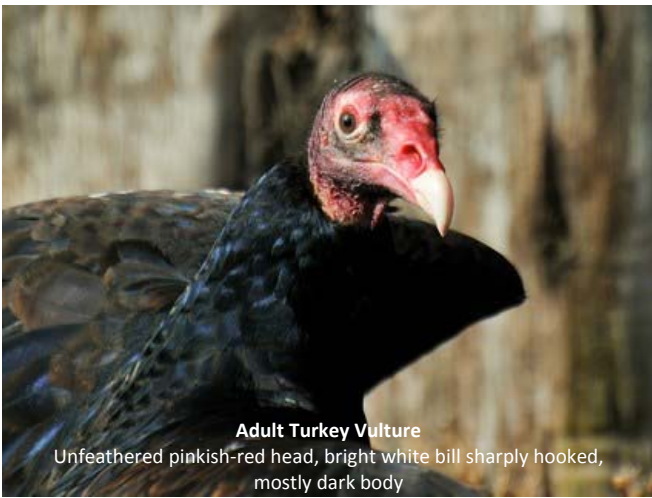
Photo credit: <https://hort.uwex.edu>

Properly clean your tools after each use.

They're Ba-a-ack!

Turkey Vultures Arrive for the Season

By Dan Charvat, Master Gardener 2010



Adult Turkey Vulture
Unfeathered pinkish-red head, bright white bill sharply hooked, mostly dark body



Immature Turkey Vulture
Immature has dark gray unfeathered head, dark throughout with golden-brown edges on wings, sharply hooked bill



Adult sunning - wings often held open when perched, long, broad wings, bare, reddish-pink head, mostly black and dark brown



Adult in flight - Long, broad wings, wings two-toned white and black underneath. In flight, wings often bent and held up at "v"-shaped angle, pinkish-red, unfeathered head with white bill.

This large bird ranges from Canada to the southern tip of South America. It is considered a New World vulture (and not a "buzzard") since they are found only in the Americas. Old World vultures are found outside the Americas in places such as Africa and Asia.

The turkey vulture (*Cathartes aura*) is a year-round resident in much of Florida, but its numbers swell with the arrival of northern visitors in search of easier and more abundant food sources. The bird is a scavenger, living off carrion. It rarely kills live prey.

It is a large bird weighing 2–4 ½ pounds with a wingspan of 5 ½ to 6 ½ feet. Turkey vultures have no voice box so they cannot sing or call. Instead they use hisses or grunts to communicate with each other. Though they appear black when seen from the ground, they are really dark brown in color with some white on the underside of the wings. They have a keen sense of smell as their nasal passages are large and open at both ends. Their red-skinned heads are featherless. This is to facilitate their need to keep clean when reaching into the cavities of dead animals. Since they cannot sweat, they pee down their legs and the evaporation of the urine cools them, a process called urohydroses. The urine also contains an acid that kills most bacteria that may have picked up from carrion they have been feeding on.

This bird does not build nests, instead it lays one to three eggs in a depression in the ground or in the underbrush. The eggs are white with red or brown spots on them and hatch quickly. The young are white and fluffy but lose their fluffiness soon and in 30 to 40 days they begin trying to learn to fly; within 50 to 60 days they are on their own. During the fledging period, they are fed by the parents' regurgitation. And NO, they cannot throw their regurgitation to ward off predators. What they do is regurgitate and the smell of the rotting food repels the predator.

When flying, they hold their wings in a slight "V" formation and ride thermals in the sky looking for some activity on the ground, coming down to smell for carrion. They have long feathers on their wing tips called fingers and have long tail feathers that reach beyond their feet.

These garbage men of the bird world make the area cleaner of carrion and the smell easier on others. Turkey vultures can be nuisances, however, since they enjoy tearing up window screens, chewing on shingles and windshield wiper blades, and roosting on rooftops in large groups, defecating at will. It is unlawful to shoot or harass these birds, so try to enjoy their beautiful soaring flight instead. For more information, visit these websites:

https://www.allaboutbirds.org/guide/Turkey_Vulture/lifehistory , or <http://myfwc.com/wildlifehabitats/profiles/birds/raptors-and-vultures/vultures/>.

Manatee County Fair Celebrates 100 Years in January

By Amy L. Stripe, Master Gardener 2008



"Fair of the Century" is the theme for this year's Manatee County Fair to be held January 14th through 24th at the Manatee County Fairgrounds in Palmetto.

Beginning with a Board of Trade (later the Chamber of Commerce) group of interested citizens and businesspeople, the first county fair was held on February 28th, 1916 in the area around today's McKechnie Field in Bradenton (then Bradentown").

The Great Depression of the early 1930s put an end to crucial sponsorships for the fair, causing a hiatus which didn't end until 35 Palmetto citizens applied for a charter to re-start the fair later in the decade. Because the original fair organizers in Bradenton still held a charter in the name of "Manatee County Fair Association," the new applicants adopted the name "Manatee River Fair Association, Inc." which it holds to this day.

From that point on, the Manatee County Fair was held yearly in Palmetto until 1942, stopping during the years of World War II, and then resuming in 1951.

An average of 100,000 people attend the annual

eleven-day fair, which is wildly popular for livestock shows and auctions, the midway, live entertainment, food booths, and arts and crafts competitions, including quilting, cooking, fine arts, and other crafts.

Pageants include county fair queens and her court, and a baby contest. Other popular events: hay bale decorating contest, whip popping contest, a BBQ cook-off, and cheerleading competition.

As a person with rural roots, I personally love the livestock part of the fair (goats, rabbits, horses, steers, dairy cattle, swine, and poultry) but cannot turn down a fabu burger from a certain food stand nor the thrill of the midway.

Master Gardeners will be showing off their educational gardens and giving free annual plants to visitors during the fair. Our hours are limited (we are volunteers, after all!) Come before the garden gates close at 7 p.m.

For fair information visit www.ManateeCountyFair.com. Can't wait to see you there!

January

CALENDAR OF EVENTS



Date	Time	Event
2 nd & 4 th Saturday	10:00 a.m.-1:00 p.m.	Ask a Master Gardener – Rocky Bluff Library – 6750 US Highway 301 N., Ellenton. Visit the Extension Master Gardener information table and get answers to your gardening questions.
Saturday January 9	9:00-11:00 a.m.	Extension Master Gardener Plant ID Tour – Emerson Point Preserve - Stroll through Emerson Point Preserve to learn more about Florida's native plants and inhabitants of a coastal habitat. Suitable for all ages. Tour begins in tower parking area at 5801 17 th Street West, Palmetto. Call the Extension Master Gardeners at (941) 722-4524 to register.
Saturday January 9	9:00-11:00 a.m.	Extension Master Gardener Plant ID Tour – DeSoto/Riverview Pointe Preserve - Stroll through DeSoto National Memorial and Riverview Pointe Preserve to learn more about Florida's native plants and inhabitants of a coastal habitat. Suitable for all ages. The hike begins in the parking area of the DeSoto National Memorial Park and enters into the Riverview Preserve at 8250 DeSoto Memorial Highway, Bradenton. Call the Extension Master Gardeners to register (941) 722-4524.
Sunday January 17	9:00-11:00 a.m.	Extension Master Gardener Plant ID Tour – Robinson Preserve - Stroll through the Robinson Preserve's salt marshes to learn more about Florida's native plants and inhabitants of a coastal habitat. Suitable for all ages. Tour begins in parking area by main entrance at 1704 99 th Street Northwest, Bradenton. Call the Extension Master Gardeners at (941) 722-4524 to register.

Upland Systems Module - Learn about Florida's ecosystems, the Upland habitats, through presentations, field trips, and hands-on activities. This six-day module will provide instruction about the flora and fauna within the habitat, the impacts on the habitat, and conservation issues. Classes begin January 7 (8am-5pm) and continue on January 14, 21, 28 and February 11, 18, and 23. The cost for the course is \$230 which includes all field trips, 40 contact hours of instruction, and a comprehensive student reference workbook. Register at www.MasterNaturalist.org, click on current course offerings, then Upland Systems, then Manatee. Contact Lisa Hickey at (941) 722-4524 or lisa.hickey@ufl.edu, for more information.

Saturday January 9	9:00-a.m.-2:00 p.m.	<p>Project WILD - We're getting wild at the University of Florida/Manatee County Agriculture and Extension Service! Project WILD is a wildlife-focused, conservation education program for K-12 educators and their students and fosters responsible action towards wildlife and natural resources. If you are in the Sierra or Audubon Club, a Cub or a Brownie, or a Boy or Girl Scout leader or volunteer, public or homeschool teacher, or a local church volunteer looking for educational activities to help youth understand our environment, then this program is for you.</p> <p>The first 20 paid, registered attendees will receive the Environmental Awareness teacher's manual containing 96 environmentally-related activities for pre-kindergarten to eighth grade. Walk-ins are welcome and will receive the manual after the registered attendees receive their workbook. Attendance fee of \$5.00 (cash or check only, made payable to Friends of Extension) is due prior to date of class. Please bring your brown-bag lunch as this workshop includes a working lunch. Register online at http://manatee.ifas.ufl.edu or contact Lisa Hickey, at (941) 722-4524 or lisa.hickey@ufl.edu</p>
Tuesday January 26	3-5pm	<p>Taking The Mystery Out of Micro-Irrigation - This class satisfies the irrigation educational requirement for the Manatee County Outdoor Water Conservation Rebate Program. Tom Funari, Irrigation Technician, will introduce you to micro-irrigation. Learn how to select, install, and operate your own water-saving irrigation system, the pros and cons, parts and pieces, and how to put it all together. He will discuss why it is important to water shrubs and other landscape plants separately from your lawn. Location: South Manatee Library – 6081 26th St. W., Bradenton. Register online at http://manatee.ifas.ufl.edu or call Joann at (941) 722-4524.</p>
Thursday January 28	3-5pm	<p>Ground Covers – Plants That Work - This class satisfies the irrigation educational requirement for the Manatee County Outdoor Water Conservation Rebate Program. Valrie Massey, Horticulture Program Assistant, will present how landscaping with low-growing ground cover plants has become a popular trend in landscape practices because once they are established, these plants need little or no water. Learn noteworthy plants, site considerations, and management of these plants. Location: South Manatee Library – 6081 26th St. W., Bradenton. Register online at http://manatee.ifas.ufl.edu or call Joann at (941) 722-4524.</p>



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