

BY THE YARD

HORTICULTURE NEWSLETTER



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The Fayette County Extension Office will be closed on Monday, July 4, 2022 in observance of Independence Day!



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Happy July folks!

Summer is in full swing, and the Dog Days of summer have arrived. June was a hot one and if July is anything like it, you will want to keep an eye out for water and heat stress in your garden. Newly planted trees and shrubs do not have established root systems and are particularly susceptible to water stress in summer conditions. Your plants are not the only thing that can suffer from heat stress, so be sure to keep hydrated and protect yourself from the sun while working in the yard or garden. This is also the time of year we frequently see strong storms pop up. Remember that it doesn't have to be actively storming for lightning to strike. If you hear thunder take shelter and remain under cover for at least 30-minutes after you hear the last rumble. As always, if you see anything unusual or have any questions or concerns, please do not hesitate to reach out!

Stay cool and happy growing!

Watering Trees and Shrubs

Check soil moisture of newly planted trees and shrubs at least once a week.

Soil that is moist or damp to the touch is fine. If the soil begins to dry out, water the plant thoroughly. However, do not overwater; you can easily drown newly planted trees and shrubs through too much tender loving care with the hose.

When to water

- Learn the specific water requirements of your plants and water accordingly. Watering depends on the type of plant, the soil texture, if it is an established or a newly installed plant, and weather conditions.
- Evergreens (tree or shrub having needles or leaves that remain green on the plant through the winter and into the next growing season) should be deeply watered in the fall before the ground freezes. Evergreens continue to lose water during the winter, especially when the temperature is above 40°F. and on sunny, windy days. If the soil is dry, the plants may become desiccated, turn brown, and die.

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Watering Trees and Shrubs (continued)

- Newly installed plants require regular watering, especially when the weather is warm and dry. Water when the soil below the mulch and in the root ball feels dry. However, be careful not to overwater. Many people have inadvertently drowned newly planted trees by watering them too often.
- Observe how quickly your soil dries out after a rain or watering. Clay soil drains slowly, porous sandy soil quickly. Adding organic matter to the soil will improve drainage in clay soil and increase water retention in sandy soil.
- Check your soil 4-6 inches deep with a trowel or a screwdriver and water when soil is dry at that depth.
- Water in the morning. Watering during the heat of the day increases the amount of water lost to evaporation by as much as 40%. Late day, over-head watering increases the chances of some plants being infected by diseases.

Watering priorities, including newly planted trees and shrubs

- Extended periods of drought can negatively affect most plants. Large, mature shade trees and shrubs can be left alone unless the drought is severe, the trees begin to wilt, or the root systems have been recently disturbed.
- Water newly installed plants immediately after planting. For the next 2 weeks check the soil moisture daily and water deeply as needed. Direct the water to the roots and not the leaves of the plant.
- Water newly planted trees and shrubs until the roots become established. Typically, this is a 2-year period.
- During the hottest, driest part of the summer water new plants at least once a week or as needed.

How to water plants

- Water deeply so the water penetrates the top 4-6 inches of soil.
- Deep and infrequent watering encourages a deep root system and makes plants more tolerant of future droughts. Frequent, light watering encourages shallow root growth and thirstier plants.



Credit: University of Illinois Extension

- Apply enough water to thoroughly wet the root zone. The larger the plant the larger the root zone. The root zones of trees and shrubs extend out from the trunk at a distance at least equal to the height of the plant.
- Apply water overhead with sprinklers or hoses or apply water directly to the soil (the most efficient way to water) with soaker hoses, running a hose at a slow trickle around the roots, or drip irrigation.
- Overhead sprinklers apply water rapidly to a patterned area. However, overhead watering can increase disease problems especially if the water sits on the leaves for a prolonged period of time. For example, overhead watering promotes black spot disease on roses.

Watering Trees and Shrubs (continued)

- Sprinklers can be portable and moved around the landscape as needed or they can be permanently installed systems. Uniformity of watering depends on the type of sprinklers used, water pressure, and wind conditions. Closely monitor watering patterns to make sure targeted plants receive adequate water and to check the water is not running-off especially near hard surfaces.
- Trickle or drip irrigation is one of the most effective and water-efficient methods of watering. The system discharges small quantities of water on a regular basis directly to the root zone under a tree or shrub. Very little water is lost to the air through evaporation.
- After watering, check the moisture level 4-6 inches deep by probing the soil in several locations using a hand trowel, screwdriver, or spade.
- Mulch plantings (no deeper than 3 inches) to reduce the need for watering during dry spells. Mulches keep soils cool and reduce water loss through evaporation.
- Tree watering bags placed at the base of newly planted trees and shrubs provide a slow method of delivering water to root balls. They are often used by commercial landscapers but are available to retail customers.

How much water

- In order to wet the soil at least 6-inches deep, 1- to 2-inches of surface water (65-130 gallons water per 100 square feet) is required. The amount of water depends on soil type, weather, and types of plants growing.
- Check the amount of water a sprinkler is providing to a group of plants by placing a tin can in the range of the sprinkler. When 1-inch of water accumulates in the can, 1-inch of water has been distributed in the soil. This is enough to penetrate 6- inches of soil.

Source: *University of Maryland Extension*

Early Blight & Septoria Leaf Spot of Tomato Disease Management for Residential Growers

Early Blight and Septoria leaf spot are the most common fungal diseases of tomato in Kentucky gardens. Both diseases affect leaves when weather becomes warm and wet, often beginning in early summer and extending through the season. Frequently occurring together, they can significantly reduce yields during seasons with warm, wet weather.

Fast Facts

- Early blight begins as small, brown-black, circular-to elliptical spots (lesions) on older foliage, especially on leaves that are close to the ground. Concentric rings within the spots give them a target-like appearance (Photo 1).
- Early Blight can also infect the stems and fruit of the plant creating the same brown-black lesions which develop the distinct target-like rings with age.



Photo 1: Early Blight lesion with characteristic concentric rings. Source: Kimberly Leonberger - University of Kentucky

Early Blight & Septoria Leaf Spot of Tomato Disease Management for Residential Growers (continued)

- Severe infestations will cause affected leaves to wither, die, and drop, giving plants a blighted appearance.
- Septoria leaf spot begins as circular to semi-circular spots with tan-to-gray centers and dark margins (Photo 2), which first develop on lower foliage.
- Septoria can also affect stem tissue but will rarely infect the fruit.
- Septoria can be distinguished from early blight by the size of the spots. With Septoria individual lesions remain smaller than 1/3 inch in diameter, whereas the early blight lesions will continually grow outward as they age.
- Other diagnostic differences between the two are as follows: Septoria lesions are typically grey with a dark margin, early blight will have dark brown-black lesions with concentric rings, Septoria lesions will also have small black dots (fungal fruiting bodies) in the middle of the lesions where Early blight will not.
- It is possible and common to see an infestation of both diseases on the same plant.
- Infection can occur from overwintered spores in the soil, infected plant debris, and reused garden materials (like tomato cages).
- Infections typically start on the lower foliage and progress upward through the canopy as the spores get splashed around via rain or irrigation.
- Both pathogens exhibit the most activity in warm (60° to 80°F) wet weather.



Photo 2: Septoria leaf spot develops circular lesions with darkened borders and tan-brown centers on stems, petioles, and leaves. (Source: Kenny Seebold - University of Kentucky)

Disease Management

Similar management practices can be followed for both early blight and Septoria leaf spot.

Cultural practices

- Do not plant tomatoes in the same growing site for at least 2 years. In the case of early blight, also avoid planting potato or eggplant during the 2-year crop rotation as they are also hosts.
- Plant tomato varieties with tolerance to these diseases. Generally, cherry or grape types and hybrid varieties tend to be more tolerant than slicer or heirloom cultivars. Several cultivars are available with resistance to early blight; resistance to Septoria leaf spot is also available but less common. Disease resistance is usually referenced on seed packets and plant labels.
- Manage weeds that may serve as secondary hosts for the pathogens. Weeds can also reduce air circulation and result in increased humidity within plantings, thus promoting disease development.
- Provide conditions that will facilitate leaf drying and minimize a favorable environment for disease.

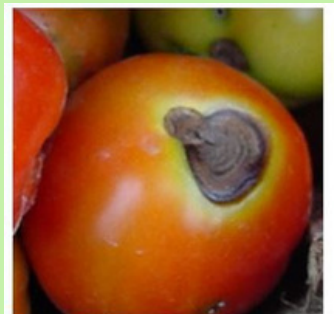


Photo 3: Fruit affected by early blight develop dark-brown lesions with concentric rings. (Source: University of Kentucky Vegetable IPM Scouting Guide Team, UK)

Early Blight & Septoria Leaf Spot of Tomato Disease Management for Residential Growers (continued)

- Provide conditions that will facilitate leaf drying and minimize a favorable environment for disease.
 - Choose a planting site in full sun with good air circulation.
 - Consider the size of plants at maturity when planting and provide sufficient spacing.
 - Avoid use of overhead irrigation
- Use mulch under plants to reduce contact between foliage and the soil, as well as rain splash of fungal spores.
- Follow good sanitation practices in order to lessen the amount of overwintering inoculum (e.g., fungal spores) for the following season. This includes cleaning equipment and tools after use and removing/burying all plant debris at the end of the season.

Fungicides

Are not typically recommended for use in the home garden. A rigorous spray schedule must be followed, and all leaf and stem surfaces must be completely covered for maximum efficacy. If you insist on using a fungicide, make an application at the first indication of disease. Be sure that the target disease and crop is listed on the label. Contact a local Extension office for current fungicide recommendations

Additional Information

Early Blight & Septoria Leaf Spot of Tomato Disease Management for Residential Growers (PPFS-VG-26)

University of Kentucky Plant Pathology Extension Publications (Website)

Source: Erica Fealko, Plant Pathology Graduate Research Assistant; Nicole Gauthier, Plant Pathology Extension Specialist; and Heather Graham, County Extension Agent, University of Kentucky

Plant Spotlight: Perennial Sedums

Perennial sedums are a diverse group of cold hardy succulents formerly grouped under the genus *Sedum*. Many of the perennial sedums have a trailing habit and function as attractive evergreen groundcovers. Others are more upright like the showy stonecrops (now reclassified as *Hylotelephium* spp.) which are planted for their ornamental flowers.

Perennial sedums are incredibly tough plants. Thriving in the hottest driest parts of the garden. Their succulent leaves store water making them incredibly drought resistant. Sedums require excellent drainage and are susceptible to root rot in wet soils. This can make them slightly challenging here in Fayette Co. where our heavy clay soil tends to sit wet over the winter. However, when properly sited these plants can be a real stunner with their unusual textures and bold flower colors.



Woodland Stonecrop (*Sedum ternatum*) Source: Mt. Cuba Center

Plant Spotlight: Perennial Sedums (continued)

We even have a species of sedum native to Kentucky, the woodland stonecrop (*Sedum ternatum*). It can commonly be found on shaded rock outcroppings or growing along the exposed rocks of a streambank. Unlike other sedums, this plant does best in partial shade. This species has a delicate, light green, coin-shaped foliage and small white flowers when in bloom. The leaves will also sometimes blush a bronzy pink during the winter.

The showy stonecrops (*Hylotelephium* spp.) are quite common in the nursery industry. This group is often referred to as the showy stonecrops due to their boldly colored flowers which last from late summer up until frost. You might even recognize a few of the standout cultivars like 'Autumn Joy' and 'Neon.' Aside from their beauty, the flowers are often visited by bees and other pollinators.

Perennial sedums are seeing an increase in popularity as more people are planting water smart gardens. A lot of breeding and selection has been performed on the group and new varieties are released regularly. If you would like to learn more about these new perennial sedums, be sure to sign up for our New and Exciting Perennial Sedums Gardener's Toolbox class on Thursday, July 14th at 6pm. You will even get to take a couple of plants home with you at the end of the class.

Don't Lose Sleep over Fall Armyworms

Last year, Kentucky was one of the many states impacted by a historic outbreak of fall armyworms. Much of the eastern U.S. was eaten up by these hungry, hungry caterpillars with lawns and fields on the menu. While things eventually settled down and areas have been renovated, you can sense tension in the air this year with many wondering if it will happen again. The short answer is that we (UK entomologists) do not anticipate 2022 featuring the same level of pest pressure as last year. That being said, there are reasons to keep your eyes and ears open to see if things change.

Fall Armyworm & Kentucky

Fall armyworm does not overwinter in this state. Its usual winter hangouts are in southern Florida and southern Texas. These spots stay warm enough for them to persist and then mate to start the generations that will migrate northward. They usually move from these areas into states like Mississippi and Alabama in April and May, arriving next in Tennessee by May or June. Typically, they start to appear in Kentucky by June.



Figure 1: Historically, fall armyworm migration starts in the deep southern tips of Florida and Texas. By late June successive generations will have migrated to Kentucky. (Graphic adapted from: Sparks, A. 1979. A Review of the Biology of the Fall Armyworm. *Fla. Entomol.* 62(2):82-87)

Don't Lose Sleep over Fall Armyworms (continued)

UK entomologists trap for pests like the fall armyworm using pheromone traps in Princeton and Lexington to help us track their arrival. In 2020 the first captures occurred June 14. In 2021, our first indicator that something would be amiss was that adults were first captured May 7, over a month earlier than usual. As of June 7, 2022, we have not yet captured migrating adult fall armyworms in Princeton or Lexington.

So, there won't be any problems?

Because of the lack of adults here, we feel that this year should be more normal when compared to last year. We checked in with Dr. Katelyn Kesheimer of Auburn University about fall armyworm pressure there and she shared a photo of an egg mass taken last week (June 7), which lines up with our more normal timeline of events. She did share that numbers seemed above average but that they were nowhere near what she recorded in 2021.

With all of that in mind, we are holding off on sounding any alarm bells.

Alfalfa growers and other agricultural managers that deal with this pest on an annual basis should prepare and act as they normally do.

Turf managers on the other hand should not worry about the same level of damage occurring to lawns, sports fields, parks, and golf courses that we saw in 2021. If turf managers have used chlorantraniliprole (sold as Acelepryn or Scott's GrubEx most often) for grub control, their turf will be protected from possible fall armyworm problems as well. If an imidacloprid or clothianidin application was made for grubs instead, then keep your eyes peeled for information coming out in the next month about moth arrival in Kentucky and the anticipated caterpillar pressure. Depending on the next sequence of events, a treatment with cyfluthrin, lambda-cyhalothrin, or bifenthrin could limit caterpillar problems. But, to prevent pesticide waste and a crunch on your budget, don't treat now for a pest we may not deal with.

Source: Jonathan L. Larson, Entomology Extension Specialist: Kentucky Pest News




Figure 2: Figure 2: Adult fall armyworms have not yet been captured in Kentucky. This tracks more with our usual sequence of events than last year's outbreak year when they arrived over a month earlier than usual. Check back here with KPN for continued 2022 Insect Trap Counts. (Photo by Robert J. Bauernfeind, Kansas State University, Bugwood.org)



July Quick Tips

- Now is the time to plan and plant a fall garden. Most plants with shorter growing seasons can be grown in the fall and often produce better results. Allow a little more time to mature than the seed package says as cooler nights will slow growth somewhat.
- Clean and replenish hummingbird feeders regularly. The nectar will readily spoil in hot weather.
- Check on newly planted trees and shrubs often. Plants can take a minimum of two years or more to establish into the landscape. Water as needed to assist with transplant shock.
- When watering, try to avoid wetting foliage or watering late in the evening as both can promote disease.
- Garden ponds will need to be topped off regularly in the heat. Make sure to use a de-chlorinator every time to protect your fish.
- Water lilies will benefit from regular feeding. If you aren't getting many blooms feeding may help.
- Do not spray chemicals in the heat of the day. Many plants can be damaged. Spray in the early morning or late evening when temperatures are cooler.
- Monitor evergreens for spider mite damage. Drought stressed plants are particularly at risk. If you see signs of browning shake the branch over a white surface, if you see tiny moving red specks, you likely have mites. Minor infestations can be treated with a daily spray from the hose. Larger problems may need chemical control.
- Remove spent blooms from flowering annuals and perennials to promote more bloom.
- If your late blooming perennials (Asters, Goldenrod, Butterfly bush, Mums, etc.) are already tall and threatening to flop, prune them back to 1' in height. This will result in a fuller, sturdier plant that will bloom slightly later than normal.



Summertime Sensation Casserole

4 strips turkey bacon	½ teaspoon salt	2 cups tomatoes, chopped
½ cup minced onion	½ teaspoon black pepper	½ cup reduced fat shredded cheddar cheese
3 tablespoons diced green pepper	1 teaspoon dried sweet basil	
4 ears fresh sweet corn		

1. In a large skillet, **cook** turkey bacon until crisp.
2. **Drain** turkey bacon on paper towel, **chop** and put aside. Do not drain pan. **Cook** onion and green pepper in bacon drippings over medium heat until tender.
3. **Cut** corn from cob and add to onion and green pepper mixture in skillet.
4. **Pour** skillet contents into a greased 1-1/2 quart casserole dish.
5. **Top** with shredded cheddar cheese.
6. **Bake** at 350°F for 30 minutes, or until cheese is melted and bubbling.

Yield: 5, ½ cup servings.
Nutrition Analysis: 160 calories, 7 g fat, 2.5 g sat. fat, 25 mg cholesterol, 680 mg sodium, 19 g carbohydrate, 3 g fiber, 7 g sugar, 8 g protein.

Buying Kentucky Proud is easy. Look for the label at your grocery store, farmers' market, or roadside stand.





Plate it up!

For More Plate It Up Recipes, Visit: <http://fcs-hes.ca.uky.edu/content/plate-it-kentucky-proud>



MYTH: Lightning never strikes the same place twice.

FACT: Lightning often strikes the same place repeatedly, especially if it's a tall, pointy, isolated object. The Empire State Building is hit nearly 100 times a year.

MYTH: If it's not raining or there aren't clouds overhead, you're safe from lightning.

FACT: Lightning often strikes more than 3 miles from the center of the thunderstorm, far outside the rain or thunderstorm cloud. "Bolts from the blue" can strike 10 to 15 miles from the thunderstorm.

MYTH: Rubber tires on a car protect you from lightning by insulating you from the ground.

FACT: Most cars are safe from lightning, but it is the metal roof and metal sides that protect you, NOT the rubber tires. Remember, convertibles, motorcycles, bicycles, open-shelled outdoor recreational vehicles and cars with fiberglass shells offer no protection from lightning. When lightning strikes a vehicle, it goes through the metal frame into the ground. Don't lean on car doors during a thunderstorm.

MYTH: When a lightning victim is electrified, you will get electrocuted if you touch them.

FACT: The human body does not store electricity. It is perfectly safe to touch a lightning victim to give them first aid. This is the most chilling of lightning myths. Imagine if someone died because people were afraid to give CPR.

MYTH: If you are outside in a thunderstorm, you should seek shelter under a tree to stay dry.

FACT: Being underneath a tree is the second leading cause of lightning casualties. Better to get wet than to get fried.

MYTH: If you are in a house, you are 100 percent safe from lightning.

FACT: A house is a safe place to be during a thunderstorm as long as you avoid anything that conducts electricity. This means staying off corded phones, electrical appliances, wires, TV cables, computers, plumbing, metal doors and windows. Windows are hazardous for two reasons: wind generated during a thunderstorm can blow objects into the window, breaking it and causing glass to shatter and second, in older homes, in rare instances, lightning can come in cracks in the sides of windows.

MYTH: If thunderstorms threaten while you are outside playing a game, it is okay to finish it before seeking shelter.

FACT: Many lightning casualties occur because people do not seek shelter soon enough. No game is worth death or lifelong injuries. Seek proper shelter immediately if you hear thunder. Adults are responsible for the safety of children.

MYTH: Structures with metal or metal on the body (jewelry, cell phones, MP3 players, watches, etc.) attract lightning.

FACT: Height, pointy shape and isolation are the dominant factors controlling where a lightning bolt will strike. The presence of metal makes absolutely no difference on where lightning strikes. Mountains are made of stone but get struck by lightning many times a year. When lightning threatens, take proper protective action immediately by seeking a safe shelter, don't waste time removing metal. While metal does not attract lightning, it does conduct it so stay away from metal fences, railing, bleachers, etc.

MYTH: If I'm trapped outside and lightning is about to strike, I should lie flat on the ground.

FACT: Lying flat increases your chance of being affected by potentially deadly ground current. If you are caught outside in a thunderstorm, keep moving toward a safe shelter.



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