

Summer 2023

“Around and About the Garden with Annette”



University of Kentucky
College of Agriculture,
Food and Environment
Cooperative Extension Service

**Cooperative
Extension Service**
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Tips From Annette

Enjoy the coming bounty of the vegetable garden. Don't forget a hat and sunscreen!

- Avoid applying nitrogen fertilizer to woody plants after July 1 in order to encourage these plants to slow down growth and prepare for winter.
- Consider planting a season extended garden by planting more vegetables for fall harvest. Plant more:
 - Green beans by August 1
 - Summer squash by August 15
 - Lettuce and spinach in mid-August
 - Transplants of cole crops such as cabbage and broccoli by August 15
- The best time to renovate or establish a new lawn is mid-August through September. More lawn care information is available at <https://ukturf.ca.uky.edu/tips-and-recommendations-maintaining-home-lawns>
- Conduct soil tests from the lawn to determine nutrients needed to apply in the fall. Soil tests are currently free for Daviess County residents.
- Remove weeds as soon as possible to avoid letting them go to seed.

Upcoming Events

Tuesday, August 22, 2023—“Best Time for Lawn Care: Gardening Program” at Daviess County Public Library and through Facebook Live at 2:00 p.m.

Master Gardener

The Extension Master Gardener program recruits and trains volunteers to assist county Extension Agents in expanding science-based gardening knowledge within the community. The training on horticultural-related topics is scheduled for every Friday from 9:00 a.m. to noon, except for the day after Thanksgiving, for 14 weeks from September 8 through December 15. The training will be held in Owensboro at the Daviess County Cooperative Extension Service Office at 4800A New Hartford Road, located on the Owensboro Community and Technical College Campus.

Participants are required to take part in a 40-hour internship to Extension Service programs in return for the education. After the first year, 20 hours of volunteer time and 10 hours of continuing education are required to be an active Extension Master Gardener.

The fee for the training and materials is \$85. Competitive scholarships for partial fee coverage are being offered by the Green River Area Extension Master Gardener Association.

Applications for the program and scholarship can be requested from the Daviess County Cooperative Extension Service Office. Scholarship applications are due by July 28. Notification of awards will be complete by August 2. Payment and program applications are due by August 4.

Upcoming Events

Tuesday, August 29, 2023—“All About Succulents and Their Care.” Guest speaker, Pat Wheatly will present at Daviess County Cooperative Extension Service Office at 6:00 p.m.

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Disabilities
accommodated
with prior notification.

Heat Safety

By Tony Edwards, National Weather Service Charleston, WV

While it's been a relatively cool start to summer across the Bluegrass State, heat and humidity more typical of summer are bound to arrive sooner rather than later. Heat is one of the leading weather-related killers in the U.S., resulting in hundreds of fatalities each year. During extremely hot and humid weather, your body's ability to cool itself is challenged. A body heating too rapidly, or losing too much fluid or salt through dehydration or sweating, can result in death or permanent injury. While everyone can be vulnerable to heat, some are more vulnerable than others. Infants, children, the elderly, chronically ill, and pregnant women are especially vulnerable.

During excessive heat, avoid heavy activity and direct sunlight. Stay hydrated, find a cool indoor place, and check on children, the elderly, and pets. Protect yourself outside by wearing light, loose-fitting clothes, stay hydrated, and spend time in the shade. Also, never leave anyone (or pets) alone in a locked car, even in the winter, as death can occur in as little as 10 minutes.

The Centers for Disease Control and Prevention (CDC) provides a list of warning signs and symptoms of heat illness, and recommended first aid steps.

Heat Cramps

Heat cramps may be the first sign of heat-related illness, and may lead to heat exhaustion or stroke. Symptoms include painful muscle cramps and spasms, usually in legs and abdomen, and heavy sweating. First aid for someone experiencing heat cramps includes applying firm pressure on cramping muscles or gently massage to relieve the spasms. Give sips of water unless the person complains of nausea. Seek immediate medical attention if cramps last longer than 1 hour.

Heat Exhaustion

Symptoms include heavy sweating; weakness or tiredness; cool, pale, clammy skin; fast, weak pulse; muscle cramps; dizziness; nausea or vomiting; headache; and fainting. If you suspect someone is suffering from heat exhaustion, move the person to a cooler location, preferably an air conditioned room. Loosen clothing. Apply cool, wet cloths or have the person sit in a cool bath. Offer sips of water. Seek immediate medical attention if the person vomits, symptoms worsen, or last longer than 1 hour.

Heat Stroke

Symptoms include a throbbing headache; confusion; nausea; dizziness; body temperature above 103°F; hot, red, dry or damp skin; rapid and strong pulse; fainting; and loss of consciousness. Call 911 or get the victim to a hospital immediately as heat stroke is a severe medical emergency. Move the victim to a cooler, preferably air-conditioned, environment. Reduce body temperature with cool cloths or a cool bath. Use a fan if heat index temperatures are below the high 90s. A fan can make you hotter at higher temperatures. Do NOT give fluids.

The infographic is divided into two main sections: Heat Exhaustion (orange background) and Heat Stroke (red background). In the center is a stylized human figure with a thermometer in its head, a question mark, and a bottle of water, representing the transition from exhaustion to stroke. Below the figure, it states 'Heat exhaustion can lead to heat stroke.' and 'Heat stroke can cause death or permanent disability if emergency treatment is not given.'

Heat Exhaustion	Heat Stroke
ACT FAST <ul style="list-style-type: none">Move to a cooler areaLoosen clothingSip cool waterSeek medical help if symptoms don't improve	ACT FAST CALL 911 <ul style="list-style-type: none">Move person to a cooler areaLoosen clothing and remove extra layersCool with water or ice
Dizziness Thirst Heavy Sweating Nausea Weakness	Confusion Dizziness Becomes Unconscious

Logos for CDC and NIOSH are present at the bottom left. The slogan 'Stay Cool, Stay Hydrated, Stay Informed!' is at the bottom center, with a small graphic of a person in a hat on the right.

Box Tree Moth on Our Border

By Jonathan L. Larson, Entomology Extension Specialist

Source: Kentucky Pest News, June 2023

Back in 2021, the box tree moth, a new problem for boxwoods, was accidentally shipped from Canada to the United States. This caterpillar pest had been established in Ontario, Canada but over the last couple of years, established populations were found in New York and Michigan here in the U.S. In the 2021 incident, Michigan, Connecticut, and South Carolina received infested materials. At the time, Kentucky seemed to be in the clear regarding this pest. However, this month, a sample of this pest was trapped in the Hamilton County, OH area. This puts it much closer to Kentucky, and that means an increased need to recognize this pest and be on the look-out for it.

What is the box tree moth?

Box tree moth is an invasive species originally from Asia (specifically China, Japan, Korea, and Eastern Russia) and it has been creating extensive damage in over 25 European nations since first appearing in Germany in the mid-2000s.

In its final instar, the box tree moth caterpillar is about a half inch long. It is primarily yellow green in color, with black and white stripes that run vertically down the body on each side (Figure 1). On each abdominal segment there is a pair of black dots.



The adult moth is broadly fan shaped. Most adults will have brown exterior margins on their wings and an inner white triangle that spans the wings and body. Some adults may be completely brown. The box tree moth superficially resembles the melonworm moth in coloration and the patterns on their wings. The box tree moth has white comma-like markings near the wing margins that the melonworm lacks.

Figure 1: The damaging caterpillar stage of box tree moth is a mixture of yellow, green, and black. It has stripes and dots that run along the side of the body. (Photo: Matteo Maspero and Andrea Tantardini, Centro MiRT - Fondazione Minoprio).

Why is it an issue?

This pest will be an issue for the many boxwoods grown in production in Kentucky, as well as the ones already in place as a landscape plant. So far, they have only been observed to feed on boxwood plants in the genus *Buxus*, other landscape plants should be safe from their hungry mouths.



Figure 2: The adult box tree moth usually has brown margins on the wings with a white interior and white "commas" along the edge. (Photo: Szabolcs Sáfián, University of West Hungary, Bugwood.org).

As for the damage they create, tree moth larvae feed on the leaves and the bark of boxwood plants. The initial caterpillar stages after emerging from their egg will feed on the undersides of leaves, creating a papery or peeling appearance. Older larvae eat entire leaves, leaving behind only the midrib. As the plant runs out of foliage, the larvae will move lower on the shrub to feed on the bark. This will induce girdling and may possibly kill the plant. The older larvae also produce webbed structures (similar to what you see with tent caterpillars and webworms), which are messy, filled with dead leaves and shed skins. In Europe, there has been widespread devastation of boxwoods in infested areas.

Box Tree Moth on Our Border

continued

What to do now?

For now, nursery owners and those who own boxwoods in their landscape (essentially almost everyone in Kentucky) should monitor their plants for the distinct symptoms created by this pest.

Boxwoods are also hosts to boxwood leafminers and boxwood psyllids that may leave behind damage. Box tree moth is the only caterpillar pest of boxwoods, and their damage is different in comparison to our other pests. Boxwood leafminers cause the leaves to appear blistered as they feed from the inside. There is also an orange or bronzed color caused by their damage, which is focused on the newest growth. Similarly, boxwood psyllid prefers to attack the newest foliage, but they cause the leaves to cup inward on themselves. Winter damage can also superficially resemble the symptoms of box tree moth. None of these issues would include the webbing associated with box tree moth.



Figure 3. Boxwoods infested with box tree moth will initially have symptoms such as thin papery leaves. As the larvae mature, they will consume more of the leaf tissue, leaving only the midrib as seen here. (Photo: Ferenc Lakatos, University of Sopron, Bugwood.org).



Figure 4. Box tree moth is not the only pest of boxwoods, though their damage looks different than the symptoms left behind by boxwood leafminer and boxwood psyllid. Leafminers create blistered, bronze, leaves in the newer growth while psyllids cause the newest growth to become cupped. (Photos: Ferenc Lakatos, University of Sopron Bruce Watt, University of Maine, and Penn State Department of Plant Pathology & Environmental Microbiology Archives, Bugwood.org in order)

In clockwise motion from the above image; box tree moth damage, boxwood leafminer damage, and boxwood psyllid damage.



If you believe you have encountered this pest or that your plant has been damaged by it, UK Entomologists appreciate you submitting a photo or sample in order to confirm or deny this. Samples can be submitted directly to the Office of the State Entomologist/Department of Entomology by emailing reportapest@uky.edu.

Bacterial Wilt of Cucurbits

By Kim Leonberger, Plant Pathology Extension Associate and
Nicole Gauthier, Plant Pathology Extension Specialist

Source: Kentucky Pest News, June 2023

Bacterial wilt of cucurbit crops is a common issue for homeowners and commercial producers in Kentucky. Cucumbers and muskmelon (cantaloupe) are highly susceptible to bacterial wilt, while squash and pumpkin are less susceptible. Watermelon is known to be resistant to bacterial wilt. Infected plants quickly collapse, resulting in crop loss. Preventative practices are critical for avoiding yield loss.

Bacterial Wilt Facts

- Symptoms often first appear as dull green, wilted leaves or groups of leaves (Figure 1). Over time, wilting becomes prominent throughout the plant; collapsed foliage and vines turn brown, shrivel, and die (Figure 2).



Figure 1:
Initial symptoms include dull green, wilted leaves. (Photo: William Nesmith, UK)



Figure 2:
Infected plants eventually collapse with vines becoming brown and shriveled. (Photo: Edward Sikora, Auburn University, Bugwood.org)

- Field diagnosis can be conducted using a simple “bacterial ooze test.” For cucumber and muskmelon, select a wilted vine (not dead), and using a sharp knife, make a cut through the vine. Touch the cut ends together for 3 to 5 seconds and then slowly pull them apart, looking for fine thread-like strands of bacterial ooze connecting the two parts (Figure 3). To diagnose bacterial wilt in all cucurbits, including squash and pumpkin, place cut pieces of affected vines into a clear glass container filled with water. When disease is present, a cloudy string or mass of bacterial ooze will flow into the water from cut stem pieces (Figure 4).



Figure 3: *In cucumber and muskmelon, diagnosis in the field can be conducted by cutting an symptomatic vine, touching the two end together, pulling them apart, and looking for the presence of thread-link strands connecting the pieces. (Photo: Gerald Holmes, California Polytechnic State University at San Luis Obispo, Bugwood.org)*

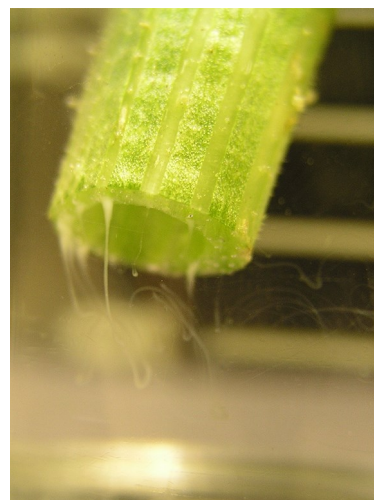


Figure 4: *Diagnosis of bacterial wilt in cucurbits, including squash and pumpkins can be achieved by placing a cut stem in water inside of a glass jar. The appearance of a cloudy mass or string indicates presence of bacteria. (Photo: Bruce Watt, University of Maine, Bugwood.org)*

Bacterial Wilt of Cucurbits

Continued

- Striped and spotted cucumber beetles transmit the bacterial pathogen during feeding (Figure 5). The pathogen overwinters in the gut of these vectors.



Figure 5: *Striped (right) and spotted (left) cucumber beetles transmit bacterial wilt during feeding. (Photo: Ric Bessin, UK)*

- Spring temperatures above 55°F promote growth of cucurbit seedlings, as well as striped and spotted cucumber beetle feeding on all plant parts.
- Bacterial wilt is caused by the bacterial pathogen *Erwinia tracheiphila*.

Management

Once plants become infected with bacterial wilt, no disease management practices are effective. Preventative strategies should be used to limit introductions and spread of disease.

- Select resistant or tolerant cultivars.
- Rotate crops away from cucurbits for a minimum of 2 years.
- Manage weeds.
- An insecticide management program should be implemented as soon as seedlings emerge or after transplanting. An effective program should include one or more of the following.
 - Contact or systemic insecticides
 - Trap cropping
 - Physical barriers and mulches
- Remove and destroy infected plants

Commercial growers can find information on insecticides in the [Vegetable Production Guide for Commercial Growers \(ID-36\)](#) and the [Southeast U.S. Vegetable Crop Handbook](#). Homeowners should consult [Home Vegetable Gardening \(ID-128\)](#) for insecticide information or contact a county Extension agent for additional information and recommendations regarding insecticides.

Additional Resources

- Bacterial Wilt of Cucurbits (PPFS-VG-11)
- Cucumber Beetles (ENTFACT-311)
- IPM Scouting Guide for Common Pests of Cucurbit Crops in Kentucky (ID-91)
- Sustainable Disease Management of Cucurbit Crops in the Home Garden (PPFS-VG-19)
- Home Vegetable Gardening (ID-128)
- Vegetable Production Guide for Commercial Growers (ID-36)

Identifying and Taming Poison Ivy

By: Shawn Wright, UK Extension Specialist

Poison ivy is a common perennial plant notorious for causing itchy rashes and allergic reactions in humans. It can be challenging to control due to its ability to spread rapidly and its resilience in various environments. With proper knowledge and effective strategies, you can manage and control poison ivy.

Learn how to identify poison ivy. It is a deciduous vine, shrub, and ground cover that typically grows in clusters of three leaflets, although leaf count may vary. Its leaves are glossy, oval-shaped, and may have serrated or smooth edges. The plant's color ranges from light green to reddish orange, depending on age and time of year.. Birds love the white, waxy poison ivy berries.

The pesky plant poses health risks through its oily resin called urushiol, which causes allergic reactions. Direct contact with any part of the plant—leaves, stems, roots or even the smoke from burning it—can trigger a rash, accompanied by itching, redness, swelling and blisters. The oil can remain on clothing, pets, or tools that touch it.. Avoid unprotected contact with poison ivy and take necessary precautions when attempting to control it. Responses may range from mild to severe depending on the person, the amount of oil contacted, the method of contact (touching, inhalation from burning, etc.) and the time of year.

Here are some effective strategies for controlling poison ivy growth:

1. Wear protective clothing. When dealing with poison ivy, wear long sleeves, long pants, gloves and closed-toe shoes to minimize skin exposure. Eye protection and a hat may be necessary. Use disposable gloves and turn them inside out when removing them. You may need to use disposable garment such as those used by pesticide applicators, or make sure to wash clothing separately from other items to prevent urushiol transfer.
2. You can manually remove small infestations of poison ivy by digging up the roots with a garden trowel or gloved hands. Ensure you remove the entire plant, including the roots, to prevent regrowth.
3. For larger infestations or difficult-to-reach areas, you may find herbicides effective. These herbicides can be selective to broadleaf plants, or a non-selective herbicide such as those containing glyphosate. The use of glyphosate-based herbicide is recommended in late summer through fall when the plant is preparing for winter and sending reserves to the roots and the chemical is transported with it to kill the root. Carefully read and follow the instructions on the product label and consider using a targeted application method like a paintbrush to minimize damage to desirable plants in the same area.
4. Smothering it with a barrier. Try using layers of newspaper or cardboard covered with mulch or soil to block sunlight and prevent the plant from growing. Regularly monitor the covered area for any new sprouts. Unfortunately, poison ivy can travel as a vine for a considerable distance so this method will not usually be very effective.
5. Don't be afraid to call in a professional. In severe cases, or if you are unsure about dealing with poison ivy yourself, consider seeking professional help from landscapers or pest control services experienced in poison ivy removal.

Identifying and Taming Poison Ivy

Continued

Now that you've removed the pest, you want to prevent it from regrowing. Remain vigilant with a few preventative measures:

1. Regularly inspect your property for new poison ivy growth, especially in areas where it is known to thrive, such as fence lines, wooded areas, neglected corners, and areas where birds roost.
2. When you spot new poison ivy plants, promptly remove them using the methods mentioned earlier to prevent their spread.
3. Educate yourself and others about poison ivy identification and precautions to avoid contact. Knowledge will empower you to take proactive measures and prevent accidental exposure.

Controlling poison ivy requires a combination of identification, protective measures, and effective removal strategies. By understanding the plant's characteristics and using appropriate methods, you can minimize the risks associated with poison ivy and regain control over your environment. Remember to prioritize safety and, when in doubt, seek professional assistance to ensure effective and long-lasting control.

For more information about poison ivy and other topics, contact the Daviess County Cooperative Extension Service.

Three poison ivy leaflets



Poison ivy leaves are arranged alternately up the stem



The Risk of Lightning and How to Stay Safe

By Scherri Evans in association with National Weather Service Paducah, KY

While fascinating to watch, lightning poses a threat to societies whether it be fires or getting struck. There are millions of lightning flashes each year in the United States alone and in the last 30 years, lightning strikes have caused numerous fatalities as well as life-long injuries. Understanding the dangers of lightning is essential to safeguarding yourself against the potential threat.

How do storms develop and produce lightning?

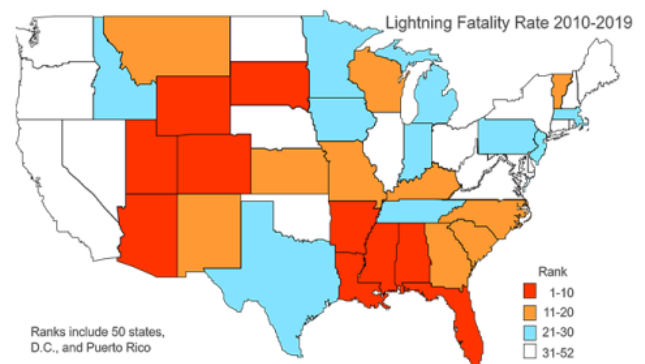
All storms go through differing stages of growth and development, but mainly form in the early parts of the day when the sun heats the surface and pockets of air start rising. When they reach a certain point in the atmosphere, cumulus clouds begin to develop. As condensation takes place, ice crystals begin to form and drop in the layers of the atmosphere as they get heavier. The movement of these ice crystals allows them to develop electrification and as the heavier crystals drop, they become negatively charged in the middle and lower part of the clouds. Beneath the clouds, a positive charge develops on the ground creating a connection to the negative charges. Lightning forms as the electrification of the negative and positive charges becomes greater, causing a large spark of electricity to be released that is as hot as 50,000 degrees Fahrenheit.

How do I stay safe during a thunderstorm? Here are a few tips to keep in mind:

If you hear thunder, you are likely in an area that will allow you to be struck by lightning. The saying, “When Thunder Roars, Go Indoors” applies to all situations. The delayed reaction of not reaching cover is a catalyst for injuries and even fatalities. If you somehow find yourself in a situation where you cannot reach cover in a vehicle or covered shelter, the following tips apply:

1. Avoid open fields, the top of a hill or a ridge top.
2. Stay away from tall, isolated trees or other tall objects. If you are in a forest, stay near a lower stand of trees.
3. If you are in a group, spread out to avoid the current traveling between group members.
4. If you are camping in an open area, set up camp in a valley, ravine or other low area. Remember, a tent offers NO protection from lightning.
5. Stay away from water, wet items, such as ropes, and metal objects, such as fences and poles. Water and metal do not attract lightning, but they are excellent conductors of electricity. The current from a lightning flash will easily travel for long distances.

Make sure to follow your daily forecasts so you know what to expect for the weather each day. Whether you are working, playing sports, or having fun with family outside, be sure to take precautions and take action as soon as possible to avoid being struck by lightning.



Lightning fatality rate from 2010-2019 U.S.A. ranking

By National Weather Service

Tomato Zucchini Herb Bake

Yield: 6 1.5 cup servings

Ingredients:

- 2 tablespoons olive oil
- 1 small sweet onion, diced
- 1 1/2 pounds zucchini, cubed
- 1 clove garlic, minced
- 2 tomatoes, seeded and chopped
- 1/2 teaspoon dried basil
- 1/2 teaspoon paprika
- 1/2 teaspoon dried oregano
- 1/2 teaspoon salt
- 1/2 teaspoon ground black pepper
- 1 cup cooked long grain brown rice
- 2 cups shredded mozzarella cheese, divided

Directions:

1. Preheat oven to 350 degrees F.
2. Lightly grease a shallow 1 1/2-quart casserole dish.
3. Heat oil in a large skillet or pot over medium heat.
4. Sauté onion for 3 minutes until slightly softened.
5. Add the zucchini and garlic and cook for 5 to 7 minutes, or until slightly tender.
6. Add tomatoes and allow to heat through, about 2 minutes.
7. Add basil, paprika, oregano, salt, pepper, and rice and stir to combine.
8. Turn off heat, and fold in 1 cup of cheese.
9. Transfer to the prepared casserole dish, and top with the remaining cheese.
10. Bake uncovered for 20 minutes, or until cheese is melted and bubbly.

Nutritional Analysis:

220 Calories	17 g carbohydrate
12 g fat	3 g fiber
5 g saturated fat	4 g sugars
20 mg cholesterol	0 g added sugars
450 mg sodium	12 g protein



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

Plant of the Month

Lobelia cardinalis



Common Name: cardinal flower

Type: Herbaceous perennial

Family: Campanulaceae

Zone: 3 to 9

Height: 2.00 to 4.00 feet

Spread: 1.00 to 2.00 feet

Bloom Time: July to September

Bloom Description: Scarlet red, white, or rose

Sun: Full sun to part shade

Water: Medium to wet

Maintenance: Low

Flower: Showy

Attracts: Hummingbirds, butterflies

Tolerate: Rabbit, deer, wet soil

Source: Missouri Botanical Garden

Please “like” the Daviess County Cooperative Extension Facebook page at:

www.facebook.com/daviesscountyextension/

We have daily posts related to all areas of Cooperative Extension.

For exclusive gardening information and how-to videos, also visit and “like” the Facebook of the Green River Area Extension Master Gardener

Association at

www.facebook.com/graemga/

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