

# BY THE YARD

## HORTICULTURE NEWSLETTER



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Happy July Garden friends!

These last few weeks of June have done wonders for my garden, but despite the cooler temperatures and increased rainfall we're still abnormally dry for the year. Keep watch over the forecast and water appropriately to ensure your garden plants are getting enough water.

While on the topic of rainfall, our current weather patterns have been very favorable for foliar diseases to develop on a wide range of garden plants from turfgrass, vegetables, and flowers. We've included an article on powdery mildew of cucumbers but keep a watch out for other fungal diseases to pop up around the garden. It's important to remember that once we see signs of a disease, it's often too late to treat for it. Removing leaves or other infected material when they first show symptoms can be helpful, as can avoiding wetting the leaves of your plants during the evening. But sometimes there is little we can do when mother nature plays her hand.

I don't know about you all, but I have encountered plenty of ticks and mosquitos this year. While some species of ticks like the blacklegged deer tick are active year-round. Others like the American dog tick and lone-star tick are particularly abundant during the summer months. The best defense against tick bites is to properly prepare with insect repellents and suitable clothing while in tick favorable habitats. These same protections against ticks also help protect you from other troublesome pests like chiggers and mosquitos.

Stay safe outside and happy growing!

Thank you,  
Jamie Dockery, Fayette County Extension Agent for Horticulture,  
[jamie.dockery@uky.edu](mailto:jamie.dockery@uky.edu)

### July 2023 Gardener's Toolbox Classes:

**Native Sunflowers ~ Thursday, July 13th at 6:00pm:** Everyone instantly recognizes the giant annual sunflower, but many are unaware we have numerous perennial sunflowers with many being native. They are very easy to grow and are popular with pollinators and songbirds. We will discuss several perennial sunflower varieties and send you home with a plant for your garden. Cost: \$10.00

**Asters ~ Thursday, July 20th at 6:00pm:** After a long hot summer with few flowers, asters offer a breath of fresh color in the fall. Their blue or white flowers also provide great benefit to pollinators. We will provide an aster tutorial with an emphasis on our native species. These often overlap the bright yellow goldenrods - a match made in heaven. Take home a couple of plants for your little autumn oasis. Cost: \$10.00



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## Cucurbit Powdery Mildew

Powdery mildew is a common disease of all cucurbits, such as cucumbers, squashes, pumpkins, and watermelons. This disease can occur in greenhouses, high tunnels, commercial fields, and home gardens. Cultural management practices can reduce losses from this disease.

### Cucurbit Powdery Mildew Facts

- Leaf symptoms first appear as spots with a white, powdery appearance on upper or lower leaf surfaces (Figure 1). Over time, spots expand to cover large portions or entire leaf surfaces. Severely infected leaves may become yellow or necrotic. As the disease progresses, affected leaves may die, and defoliation can occur. Note that some cucurbit cultivars may have an appearance that can be easily confused with powdery mildew.
- Stems and leaf petioles can also be infected. Specifically, the stem where pumpkins attach to plants (“handles”) can become infected, resulting in reduced marketability as carving pumpkins.
- Cucurbit powdery mildew does not infect fruit. However, fruit quality and yield may be impacted as a result of insufficient leaf material.
- Disease is favored by high humidity, but does not require high levels of moisture for infection.
- The powdery mildew pathogen infects during the reproductive stage of plant growth. Thus, flowering plants are at the greatest risk of disease.
- Caused by the fungus *Podosphaera xanthii*.
- The pathogen survives winter on infected plant debris.

### Management Options

#### Cultural disease management

- Utilize powdery mildew resistant cultivars.
- Plant in sunny areas with good airflow.
- Use recommended plant spacing to facilitate air movement and leaf drying.
- Apply a layer of mulch to reduce direct contact with soil surface.
- Remove weeds that may serve as alternate hosts.
- Remove and destroy infected plants.
- Clean-up plant debris at the end of the growing season.
- Rotate crops.

#### Chemical disease management

Application of fungicides before disease arrives (preventative fungicide) provides the greatest level of disease protection. When applying chemicals, it is important to always read and follow all label instructions.

- Commercial growers should consult the publication [Vegetable Production Guide for Commercial Growers \(ID-36\)](#) or the [Southeastern US Vegetable Crop Handbook \(SEVEW\)](#). Contact a county Extension agent regarding specific recommendations for cucurbit downy mildew management. Growers should take steps, such as fungicide rotations or tank mixing, to reduce the risk of fungicide resistance. When selecting fungicides, be sure to note pre-harvest interval restrictions.
- Home gardeners should consult the publication [Home Vegetable Gardening \(ID-128\)](#) for fungicide information. Contact a county Extension agent for additional information and recommendations regarding fungicides.

#### Additional Information

- [Foliar Diseases of Cucurbits \(PPFS-VG-10\)](#)
- [IPM Scouting Guide for Common Problems 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 \(ID-36\)](#)
- [Southeastern US Vegetable Crop Handbook \(SEVEW\)](#)

Source: Kim Leonberger, Plant Pathology Extension Associate and Nicole Gauthier, Extension Plant Pathology Specialist, Kentucky Pest News



Figure 1: Cucurbit powdery mildew symptoms begin as white, powdery spots on upper or lower leaf surfaces. (Photo: Kenny Seebold, University of Kentucky)

## The Dog Tick Days of Summer

While black legged ticks and Lyme disease get all of the headlines, it is important to remember that there are other tick species that call Kentucky home. Two of those species, the American dog tick and the lone star tick, are prevalent as adults right now. While neither are competent vectors for Lyme disease, they do each come equipped with their own suite of problems that we need to be concerned with as well!

### American Dog Tick

#### Identification

This is one of the larger tick species in the state, and they have a distinctly seed-shaped profile when viewed from above. Adult dog ticks are known for the ornate patterns on their scutums. A scutum is a hardened shield that covers all of a male tick's back while it only covers a portion of a female's back. For dog ticks, that means the males have an ink blot pattern on their back and females appear to be wearing a lace collar (Figure 1). American dog ticks also have a mouthpart that is shorter when compared to a lone star tick.

#### Where you can encounter them

Most commonly, dog ticks are found near trails and landscape edges. They will be in meadows and fields; basically anywhere with overgrown vegetation. This species will "quest" at the tips of branches or blades of grass, with their front arms outstretched waiting to catch hold of a potential host.

#### Issues associated with dog ticks

Dog ticks are considered the primary vector for Rocky Mountain Spotted Fever (RMSF), which is the most commonly contracted tickborne illness in the state. Left untreated, RMSF can have about a 30% mortality rate. In Kentucky, there has been a 258% increase in cases of RMSF between 2008 and 2018. When properly treated with antibiotics, you can overcome this illness. Dog ticks may also vector Tularemia. As the name implies, these ticks will feed on dogs, as well as people.

### Lone Star Tick

#### Identification

Lone star ticks are rounder than most other species. When viewed from above they look almost circular, like a hockey puck. They have longer mouthparts, particularly when compared with dog ticks. The adults have a reddish-brown body color and females have one white dot on their dorsal side, which gives the species their common name (Figure 2). Adult males lack the dot but do have smaller white markings along the posterior end of their body.

#### Where you can encounter them

Lone star ticks can be found in woodland areas, near trails, forest, open grassy habitat, and other locations. They will actively quest for a host, meaning they may not just sit and wait but will sort of chase you down to bite you.



Figure 1: The "lace collar" scutum of a female American dog tick helps to set them apart from other species that may bite humans or pets. (Photo: Gary Alpert, Harvard University, Bugwood.org)



Figure 2: The white dot on the back of a female lonestar tick gives the species its name and helps with identification. The mouthparts are also longer in comparison to other species. (Photo: Susan Ellis, USDA APHIS PPQ, Bugwood.org)

## The Dog Tick Days of Summer (continued)

### Issues associated with lone star ticks

According to the ongoing Kentucky Tick Survey Project, this is likely the most common tick in the state. Of the over 6,000 samples received in the last two years, 94% were lonestar ticks. They are aggressive biters and have the longest list of possible pathogens they may vector including: Bourbon Virus, Ehrlichiosis, Heartland Virus, Rocky Mountain Spotted Fever, Southern Tick-associated Rash Illness (STARI), and Tularemia. They are also well known as the primary “vector” for alpha-gal red meat allergy.

### How can you protect yourself?

Because tick-borne illnesses are transmitted through the bite of an infected tick, the first step in prevention is to avoid ticks. Avoid “ticky” areas like forests, grasslands, and other types of overgrown habitats, and practice precaution when working or recreating in these areas. Use repellents with 20% or 30% DEET or permethrin, check yourself for ticks regularly when outside, and be sure to check any children and pets that are with you. If your home has pets that go outside, provide them with safe tick prevention medicines by talking with your veterinarian.

If you do find a tick attached, it's important to remove it safely so that there is no increased risk for pathogen transmission. Avoid doing anything to irritate the tick while it's attached, including setting it on fire, dousing it in alcohol, and twisting and/or jerking it around. Instead, take a pair of tweezers and grab the tick as close to your skin as you can, then pull up in one steady motion. When ticks attach to feed, they produce a sort of cement with their saliva to prevent detaching easily, and backwards facing teeth help to hold them in place. Because of this, the tick may not come off immediately and can take a few seconds to detach from your skin.

Once you've removed the tick, keep it in a baggie or small container in case you develop any symptoms of illness. Being able to identify what type of tick bit you is very helpful in determining what diseases should be of concern.

### More Information

You can learn more about ticks with the recently updated Ticks and Diseases in Kentucky ([ENTFact-618](#)) fact sheet.

*Source: Anna Pasternak, Entomology Graduate Student and Tick Researcher, and Jonathan L. Larson, Entomology Extension Specialist, Kentucky Pest News*

#### QUICK TIP:

"Wearing Permethrin treated clothes is a great way to protect against ticks while out in tick appropriate habitat. You can buy pre-treated clothing or treat your clothes yourself. Just be sure to follow all label directions if you decide to treat your clothing with Permethrin."

# Using Insect Repellents Safely and Effectively

## Ensuring Safety

Remember these important points to use repellents safely:

### Applying the Product

- Read and follow the label directions to ensure proper use; be sure you understand how much to apply.
- Apply repellents only to exposed skin and/or clothing. Do not use under clothing.
- Do not apply near eyes and mouth, and apply sparingly around ears.
- When using sprays, do not spray directly into face; spray on hands first and then apply to face.
- Never use repellents over cuts, wounds, or irritated skin.
- Do not spray in enclosed areas.
- Avoid breathing a spray product.
- Do not use it near food.



### Other Safety Tips

- Check the label to see if there are warnings about flammability. If so, do not use around open flames or lit cigarettes.
- After returning indoors, wash treated skin and clothes with soap and water.
- Do not use any product on pets or other animals unless the label clearly states it is for animals.
- Most insect repellents do not work against lice or fleas.
- Store insect repellents safely out of the reach of children, in a locked utility cabinet or garden shed.
- Use other preventive actions to avoid getting bitten by: Mosquitos and Ticks

### Repellents and Children

We advise consumers to always read and follow label directions in using any pesticide product, including insect repellents.

Because children frequently put their hands in their eyes and mouths, EPA recommends that all repellent products have the following precautionary statements related to children on their labels:

- Do not allow children to handle this product, and do not apply to children's hands. When using on children, apply to your own hands and then put it on the child.
- After returning indoors, wash your child's treated skin and clothes with soap and water or bathe.

According to the label, **oil of lemon eucalyptus products should not be used on children under the age of three.** Other ingredients do not have an age restriction.

Questions often arise about the use of DEET on children. DEET is approved for use on children with no age restriction. Also, there is no restriction on the percentage of DEET in the product for use on children, since data do not show any difference in effects between young animals and adult animals in tests done for product registration. There also are no data showing incidents that would lead us to believe there is a need to restrict the use of DEET.

Always store insect repellents safely out of the reach of children.

If you are concerned about using repellent products on children you may wish to consult a health care provider for advice or contact the National Pesticide Information Center (NPIC) or through their toll-free number, 1-800-858-7378.

### Maximizing Effectiveness

Apply and re-apply a repellent according to the label instructions. Don't overuse the products, but be sure to apply the amount of repellent indicated by the label. If you don't follow the label directions, the product may not be as effective as you expect. The label on the insect repellent product is your guide to using these products safely and effectively. The effectiveness of the product can vary due to conditions such as:

- Physical activity/perspiration.
- Water exposure.
- Air temperature.
- How attractive you are to mosquitoes and ticks; every person is different.

Look for an EPA registration number (EPA Reg. No.) on the insect repellent product label. This registration number means the company provided EPA with technical information on the effectiveness of the product. The Centers for Disease Control and Prevention (CDC) recommends the use of products registered by EPA.

Source: United States Environmental Protection Agency

## Plant Spotlight: Bee Balms

A summer flower garden would be incomplete without the fireworks of our native bee balms. These beautiful members of the mint family all belong to the genus *Monarda* and have been cultivated for ornamental and culinary use for centuries. Bee balms are endemic to North America but humans around the world grow them for their fragrant foliage and beautiful flowers.

As a member of the mint family, bee balms possess strong aromatic oils that are released when the plants are brushed or damaged. The aroma and the intensity of the oils vary by species with some of the more notable being wild bergamot (*Monarda fistulosa*) and scarlet bee balm (*Monarda didyma*) which both possess a powerful aroma reminiscent of bergamot citrus. Due to their aromatic volatile oils, these plants have long been used by indigenous people for medicinal purposes. One of the primary components of the volatile oils is a compound known as Thymol. This compound is a natural antiseptic and is still used today as the active ingredient in some commercial mouthwashes. Additionally, bee balms were and still are frequently used to make herbal teas.

Bee balms, like other mints, are a fantastic resource for pollinators because of ample nectar productions and long bloom time. Their large tube-shaped flowers are frequently visited by large butterflies, hummingbirds, predatory wasps, and long-tongued bees.

There are around 20 or so species of bee balms and 8 of those species naturally occur in Kentucky. Some of the most important species from a gardening perspective are the aforementioned wild bergamot and scarlet bee balm. These two species perform very well as garden plants and are prized for their ornamental flowers. Other lesser-known garden worth species are Bradbury's beebalm (*Monarda bradburiana*) and spotted beebalm (*Monarda punctata*). However, you are much more likely to encounter hybrids derived from one or more of these species, rather than the straight species itself. This is because bee balms are greatly impacted by a fungal disease called powdery mildew. Modern breeding programs have been built to select for and improve both resistance to powdery mildew and increase the ornamental characteristic of the plants in gardens.



Wild bergamot (*Monarda fistulosa*) flower head with bumble bee. Photo credit: Elmer Verhasselt, Bugwood.org

The Mt. Cuba Center, a botanical garden and research center located in Hockessin, Delaware, has been one of the leading institutions evaluating the performance of native plants and their cultivars in garden settings. From 2014 to 2016 they evaluated over 40 varieties to determine which are the best performers in garden conditions. Some of the top performers of their trial are:

- *Monarda fistulosa* 'Claire Grace'
- *Monarda* 'Judith's Fancy Fuchsia'
- *Monarda* 'Dark Ponticum'
- *Monarda* 'Purple Rooster'
- *Monarda* 'Violet Queen'
- *Monarda* 'Gardenview Scarlet'

These cultivars were selected for superior powdery mildew resistance and exceptional performance in the garden regarding bloom period, flower color and the growth habit of the plant. Any one of these or the other top-rated cultivars from the *Monarda* trials would be an excellent addition to the home garden in Kentucky.

If you don't already have a bee balm in your garden, consider adding one for an incredible pop or color and a fantastic pollinator resource. I promise you won't regret it!

## 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.

## Recipe of the Month



### Sweet and Savory Cucumber Salad

<b>2</b> medium cucumbers	<b>1 teaspoon</b> minced garlic	<b>1 teaspoon</b> white wine vinegar
<b>2 tablespoons</b> coarse kosher salt	<b>20</b> seedless grapes	Sodium-free seasoning blend, to taste
<b>¼ cup</b> slivered, blanched almonds	<b>1 cup</b> fresh blueberries	
	<b>2 tablespoons</b> olive oil	

**Preheat** oven to 400 degrees F. **Wash** cucumbers. **Cut** the ends off the cucumbers; remove peel if it is tough or bitter. **Slice** the cucumbers lengthwise; use a spoon to **remove** any large seeds; **cut** into ¼ inch slices. **Place** the sliced cucumbers in a colander; **sprinkle** with kosher salt and stir. Let stand for 25 minutes. **Spread** the slivered almonds on a baking sheet and **bake** with the rack in the top position, at 400 degrees F until lightly browned — about 5 minutes (use a timer to prevent overbrowning); **remove** from oven and **cool**. **Slice** grapes in half lengthwise and place in a large bowl.

**Add** blueberries. **Rinse** the salt from the cucumber slices and turn out onto several paper towels. **Place** a paper towel over the top and **press dry**. **Add** cucumbers to the bowl with the other fresh ingredients. **Drizzle** the olive oil and vinegar over the salad; **add** the garlic and sodium-free seasoning to taste; **toss**. **Sprinkle** the toasted almonds over the top and serve.

**Yield:** 4, 1 cup servings

**Nutritional Analysis:** 170 calories, 11 g fat, 1 g saturated fat, 0 mg cholesterol, 580 mg sodium, 16 g carbohydrate, 4 g fiber, 11 g sugars, 4 g protein.

