

Bourbon County Horticulture News

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Cooperative Extension Service

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How to help a drought-stressed lawn

Kentucky's been pretty dry the past few weeks. Even if we get a heavy rainfall in the near future, it won't completely alleviate drought symptoms.

When a lawn becomes excessively dry, the soil surface develops some water repellency that prevents water from soaking in during a quick, hard rain event.

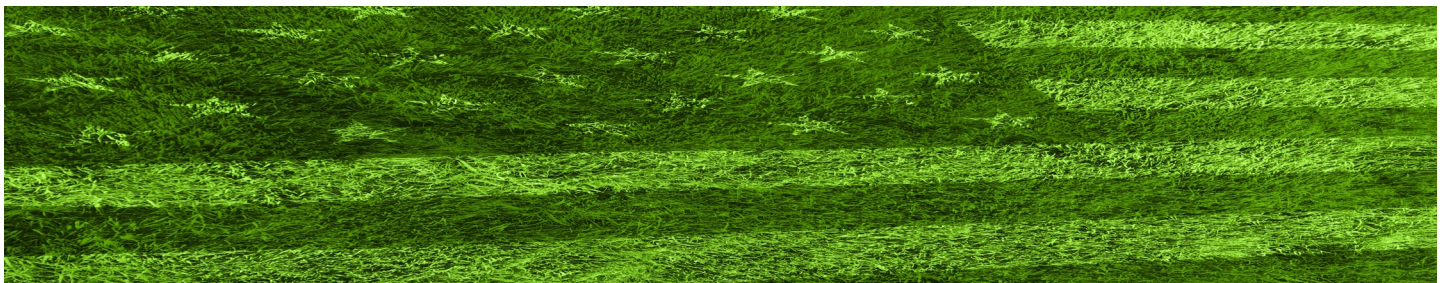
Here are some things you can do to help your thirsty grass and hopefully avoid having to completely reseed your lawn.

1. Water every other day or every third day until good, soaking rains begin.
2. Apply about two-thirds of an inch of water each time. You can check this by probing the soil with a knife or screwdriver to determine if the soil is wet 2 to 3 inches deep.
3. Water in the early morning to help reduce diseases, remove dew and reduce evaporative water loss.
4. Water areas that have the earliest browning first. These are often on southern or western-facing slopes or areas with heavy clay soils, very compacted soil or rocks near the surface.
5. If possible, don't mow a drought-stricken yard until you can water it or you know a soaking rain is on the way. Weeds are still growing and flowering during summer droughts. Wait for the rain, then mow off the weeds.
6. Don't apply herbicides during a summer drought. They won't work when weeds are suffering and can damage drought-stressed grass more than weeds.

Wait for a soaking rain before applying nitrogen to the lawn in the fall. Nitrogen can greatly improve a lawn's drought recovery.

For more information on caring for your lawn, contact the Bourbon Cooperative Extension Service.

Source: Kenneth Clayton, plant and soil sciences extension associate professor



JULY VEGETABLE GARDENING

Fresh vegetables usually abound in July and August. Whether you pick them from your own garden, or buy them from a local farmer's market or roadside stand, be sure to enjoy some fresh Kentucky produce this summer. Here are some tips if you have your own garden and want the freshest produce possible.

Once vegetables are picked, they do not increase in quality. One way to maintain quality is to keep the produce cool. The conversion of sugar to starch tends to be favored by warm temperatures. So pick produce in the cool of the morning and refrigerate as soon as possible. If immediate refrigeration is not possible, move produce to the shade or cover with a damp cloth. As water evaporates from the cloth it will cool the vegetables beneath. The damp cloth will also increase the relative humidity around the vegetables and decrease the chance of wilting.

The first of August is not too late to make a last planting of vegetables. The cooler nights experienced later in the year as these vegetables mature may increase the sugar content of many crops and thus increase their quality. Late July or early August would be the time to make a last planting of bush beans, carrots, sweet corn, kale, collards, Bibb lettuce, turnips, and cole crops such as kohlrabi, Chinese cabbage, Brussels sprouts, cabbage, cauliflower, and broccoli. For late August and into September try planting mustard greens, spinach greens, radishes, turnip greens, and leaf lettuce. Before planting, remove any existing debris including crops and weeds to the compost bin and cultivate the soil. If the previous crop was well fertilized and grew vigorously you may need to add little if any additional fertilizer, otherwise apply about 2-3 pounds of a complete fertilizer such as 5-10-10 or 6-12-12 per 100 square feet of planting area. Remember to keep fall gardens well watered as this tends to be a fairly dry time in Kentucky. A weekly irrigation sufficient to wet the soil to 6 or 8 inches should be adequate. This is more or less equivalent to a weekly one-inch rain.

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Southern Blight of Vegetables

Southern blight, also known as basal stem rot, is a common disease of vegetables, as well as other agronomic and specialty crops. While this fungal disease is capable of infecting a wide range of hosts, the most common vegetables affected include beans, cabbages, cucumbers, peppers, and tomatoes. Plants infected with the southern blight pathogen ultimately die, resulting in yield losses. Use of cultural practices and fungicides can limit damage.

FACTS

- Symptoms are often first observed as the wilting of foliage. Over time, leaves yellow and stems and branches turn brown (Figure 1). Decay of stems and crowns ultimately results in rapid plant death. Infected stems and crowns may exhibit a fuzzy, white growth (mycelia), which is the fungal body of the casual organism. Small, fungal reproductive structures (sclerotia) develop in mycelia. Sclerotia are initially white, but later become tan to brown in color (Figure 2).
- Pathogen structures overwinter in plant debris and infested soil as sclerotia. These structures may survive for up to 5 years.
- Disease development is favored by high temperatures and periods of high humidity.
- Southern blight is caused by the fungal pathogen, *Athelia rolfsii* (formerly *Sclerotium rolfsii*).

MANAGEMENT

- Avoid planting in fields with a history of southern blight.
 - Deep till fields and high tunnels with a history of disease.
 - Solarize soil in fields and high tunnels.
 - Rotate away from susceptible crops.
 - Remove and destroy infected plants or plant parts.
 - Clean and sanitize tools, pots, and equipment.
 - Avoid moving infested soil to clean beds or gardens.
- Remove and destroy plant debris at the end of the season.



Heat, Drought and Blossom End Rot

Normally, a hot dry year would favor vegetable production as long as growers have adequate irrigation. However, when daytime temperatures inch up over 100 degrees Fahrenheit like we've seen several days this year, we begin to see problems with many vegetable crops.

Pollen begins to die and that affects fruit set and several disorders become apparent. One thing growers might see is blossom end rot, which is simply a rot at the blossom end of a fruit. Tomatoes usually suffer most, but eggplant, cucurbits and peppers can all succumb to the problem. It is technically caused by a calcium deficiency in the plant or the fruit. But in many cases, it's not a lack of calcium in the soil, but rather an environmental factor that stops the plant from taking up calcium. Plants take up calcium via their transpiration system. As plants move water through the roots to the leaves and out the stomata, calcium moves into the plant. But in areas of severe drought, blossom end rot will appear because there is no water to move the calcium to the plant. To make matters worse, calcium is immobile in the plant, meaning it can't move from an area of low demand to an area of high demand, so even temporary deficiencies can cause permanent damage.

When temperatures exceed 100 degrees, many plants will close stomata to conserve water, thus closing the path for calcium to get inside. So don't be surprised if you are seeing blossom end rot on your tomatoes that were developing during the most recent heat wave.

Unfortunately, there's nothing you can do to correct the problem; once blossom end rot appears it can't be reversed. The fruit is safe to eat, just cut off the bottom part and remember you are not able to commercially sell them.

Since summer is only two-thirds over, meteorologically speaking, there are some things you can do to prevent future occurrences of blossom end rot. If we see high temperatures again, try to minimize them for the plants by providing some kind of shade and giving them adequate water.

For more information about how extreme weather can impact your vegetables, contact the Bourbon County Cooperative Extension Service.

PREVENT ROSE DISEASES

Spectacular blooms and diverse types and varieties make roses a favorite of many Kentucky gardeners. However, our warm, humid growing conditions create an ideal environment for serious problems each year with black spot and powdery mildew.

Gardeners can nip these fungal diseases in the bud by planting resistant or tolerant varieties and creating an unfavorable environment for disease development. It may be necessary to use fungicides throughout the summer, especially on susceptible varieties.

The Bourbon County Cooperative Extension Service has materials on resistant and tolerant varieties. Nursery catalogues also publish this information.

To reduce foliar diseases, try to avoid conditions where rose leaves remain wet for an extended period of time. Do not wet foliage when watering plants and allow sufficient time for leaves to dry before nighttime. Prune out shading vegetation from overhanging trees and provide space between rose bushes to improve ventilation and sunlight penetration.

Sanitation also is important for managing rose diseases. If you have not already removed and destroyed old leaves, winter-damaged canes and debris, do it as soon as possible. These items are a source of disease-causing organisms.

Many fungicides are labeled to control rose diseases. Always check the label to be sure the product controls black spot and powdery mildew, and read and follow application instructions. To maintain disease suppression, repeat fungicide applications at 10 to 14-day intervals throughout the growing season.

Black spot produces dark, circular spots with fringed borders on the top or bottom side of leaves. Infected leaves often turn yellow and drop, reducing flower numbers and quality.

White, powdery fungal growth is a sign of powdery mildew. It is easy to locate on such plant surfaces as leaves, stems and flower buds. Infected leaves may be small and deformed.

Two other important, but less common, foliar diseases of roses are downy mildew and rust. Downy mildew produces lesions that are an off-color, later turning purplish brown. It leads to defoliation. Rust-colored spots on leaves and stems indicate the disease, rust. Severely infected leaves may shrivel and turn brown.

Another summertime disease is rose rosette, which affects roses throughout Kentucky. It is not a fungal disease.

This disease is spread by a microscopic mite. The primary host is multi-flora rose, a thorny plant native to the Orient and introduced into the United States as a conservation plant and “living fence.” The disease also affects cultivated roses.

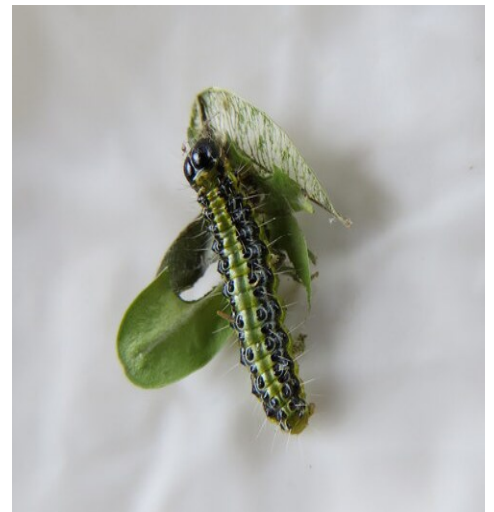
Early symptoms are increased growth of shoots, which appear more succulent than normal and develop excessive thorns, and distorted, dwarfed leaves. The affected shoots are not winter hardy and produce few blooms. Rose plants eventually die.

Early disease detection is essential to keep rose rosette from spreading. Remove and destroy any infected roses to keep the disease from spreading. Remove and destroy any infected roses to keep the disease from healthy plants that are nearby. Carefully remove diseased plants to avoid scattering disease-carrying mites to other plants. Since multi-flora roses might be a disease reservoir, remove and destroy any located within one-eighth of a mile from the rose bed.



Box Tree Moth on Our Border

[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.



The green caterpillar of the box tree moth with black stripes, shiny black head, and white stripes and hairs. Photo by Mujezinovic Osman, Faculty of Forestry, Bugwood.org.

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.

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.

Featured Plant:

You have probably observed this month's featured plant growing here in Kentucky in a variety of places. Queen Anne's lace, also known as wild carrot, is a white-flowered plant that belongs to the carrot family (Apiaceae). It is native to Europe and Asia but has naturalized widely in many parts of the United States, where it is sometimes considered an invasive weed. Others however find it quite desirable and attractive. Queen Anne's lace is a biennial plant, which means it grows a rosette of leaves and a taproot in its first year, and a flowering stalk in its second year. The flowers are flat clusters of tiny blossoms, sometimes with a dark purple spot in the center. The root resembles a pale carrot and has a carrot-like scent.

