



Sun-Smart Gardening

With the hot, humid temperatures of the South, preventing sun damage and heat-related illness is a top priority. Today I am going to mention ways you can be sun-smart while gardening.

Plan outdoor activities prior to 10 AM or after 4 PM. Severe illnesses can occur when the heat index is 100 °F or more, which takes place when the temperature is above 90°F and the humidity is above 60 percent. Stay up to date with information related to temperature, humidity, and UV exposure. Break large projects into smaller, more manageable ones. Doing this allows you to set consistent break goals and avoid over-exertion. Having a buddy system with another gardener also helps ensure safety.



When gardening, make sure you are dressed appropriately. Wear a light weight, long sleeve shirt and a wide brimmed hat to minimize sunburn. You can also purchase sunglasses that provide 100 percent protection from UV rays.

Apply sunscreen with a sun protection factor (SPF) of at least 30. It is important to follow manufacturer guidelines on how often the sunscreen should be reapplied. Some products require reapplication in as little as every 30 minutes. Sunscreen is only effective for 1 to 2 years. Make sure to write the purchase date on the sunscreen and purchase new sunscreen every year.

Stay hydrated by drinking lots of water and avoiding the intake of alcohol or sugary drinks. A rule of thumb is to drink at least 8 ounces of water for every 15 minutes of heat exposure. Don't forget to drink sports drinks or other sources of electrolytes to replace what is lost through sweating.

Some signs of heat exhaustion include heavy sweating, dizziness, nausea, headaches, and muscle cramps. If you experience any of these symptoms, it is best to take a break and cool off. Avoiding the use of appliances that give off heat is another way to reduce heat exposure.

The ill effects of the sun are almost completely preventable. Sun exposure happens every day, so think about protection from UV every day. While taking precautions may feel unnecessary at the time, the effort is worth it in the long run. For more information on how to be sun-smart while gardening, see Extension Publication P3840, *Sun Sense*.



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American beautyberry

I have noticed that more gardeners than ever are interested in having native plants in their landscapes.

This trend just makes sense. Native plants occur naturally in a region without being introduced by humans. They are adapted to their region and do not require a lot of maintenance or upkeep.

One native plant you might like to include in your landscape is the American beautyberry.

The deciduous, native American beautyberry shrub, known scientifically as *Callicarpa americana*, is the variety most gardeners know about. *Callicarpa* comes from two Greek words meaning beautiful and fruit, giving us the common name “beautyberry.”

This plant makes quite a statement in the landscape with its gorgeous display of bright purple fruits in the fall.

Beautyberries grow well in partial shade to full sun. They typically grow up to 4 feet tall and wide and have a loose, open habit. Under favorable growing conditions, I have seen beautyberries reach 8 to 10 feet tall.

You can find inconspicuous white or light pink flowers on new growth from June to July. The beautyberry produces these small clusters of flowers near the stems, and soon after, fruit clusters form.

As summer winds down, these small, green fruits turn a gorgeous purple that looks especially appealing against the backdrop of lovely green leaves. The beautiful, metallic purple fruits are bright and shiny, arranged in clusters at the leaf nodes, and held tightly along the arching branches.

Best fruit production comes from having multiple plants in full sun with consistent soil moisture.

In late fall, the leaves fall off the plants, but the fruit remains and may last through early winter. Beautyberry fruit is a good food source for songbirds and small mammals.

If you're looking for natural decorations in the fall, the long-lasting beautyberry branches can make colorful additions to flower arrangements.

In the landscape, beautyberry can be used as a backdrop for fall-blooming plants. It also makes a great addition to a wildlife or pollinator garden.

Late winter or early spring is a great time to prune beautyberry because flowers are produced on new growth. Pruning can maintain the height and shape of the shrub. Severe pruning of large, vigorously growing plants will result in rounded shrubs with many long shoots that flower heavily and produce an abundance of fruit clusters.

The only drawback to beautyberry is its relatively short lifespan, which can be as few as 10 years. However, it readily spreads by self-sown seeds, providing future generations of plants.

I have read that the crushed leaves of beautyberry produce a chemical that can repel mosquitos, ticks and fire ants. Be cautious about trying this because it might cause an allergic reaction on your skin.

I love the American beautyberry in my landscape and recommend you plant one in yours, too.



Garden Calendar: September

Get Ready

- ◆ Make sure you've ordered daffodils and other spring bulbs for October planting.
- ◆ Build or buy compost bin in anticipation of autumn leaves.



Plant

- ◆ Plant cool season leafy root vegetables: Carrots, Beets, Turnips, Lettuce, and Spinach.
- ◆ Sow hardy annuals: Sweet Alyssum, Calendula, Annual Pinks, Snapdragon, and Sweet Peas.
- ◆ Sow rye grass seed in winter lawns.

Fertilize

- ◆ Stop feeding mums when the buds start showing color.
- ◆ Acidify Azaleas and Camelias.



Water

- ◆ Slow down watering of Azaleas and Hydrangea to allow them to harden against winter freezes.
- ◆ Spray foliage of Camelias in anticipation of their bloom.
- ◆ Water potted plants and hanging baskets frequently.

Prune

- ◆ Disbud Camellias, Dahlias, and Chrysanthemums to produce specimen blooms. It is generally not a good idea to prune this late in the year, because new growth will be more susceptible to winter freezes.

Miscellaneous

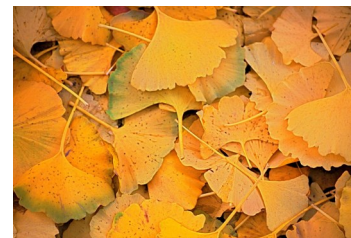
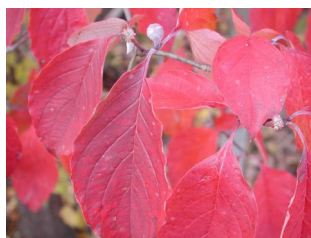
- ◆ Turn compost pile.
- ◆ Propagate by layering. Scrape underside of a strong branch, bend down to ground, cover with soil and weigh down with a brick. Water from time to time and end of branch will put out new growth; becoming a new plant.
- ◆ Pick flowers in bloom and dry for future arrangements. Bundle flowers together and hang upside down in a dry, sheltered area.
- ◆ Repot houseplants. Prune away damaged foliage and give a good dose of food.

In Bloom

- ◆ Canna, Cosmos, Copper Plant, Marigolds, Periwinkle, Plumbago, Crape Myrtle, Althea, Four-o'clocks, Salvia, Ageratum, Coleus, Lycoris, Aster, Begonia, Celosia, Chrysanthemum, Coral Vine, Ginger Lily, Gladiolus, Jacobina, Liriope, Morning Glory, Petunia, Phlox, Rattle Box, Rose, Spider Lily, Torenia, Vinca, White Zephyranthes Lily, Zinnia, Buddleia, Franklin Tree.

Fall Color

- ◆ Flowering Dogwood with showy, drooping red leaves.
- ◆ Ginkgo leaves turn pure yellow.





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Dollar Spot

As we head into Fall, we will begin to see fungal issues in many lawns due to the cooler temperatures and heavier dew patterns. One that has been popping up lately, due to the ideal temperature and extended period of leaf wetness, is dollarspot.

While most common in Bermuda and zoysiagrass, this fungal problem can occur in most warm season turfs. Initial symptoms on leaves will be chlorotic spots that turn to straw-colored areas with a reddish margin. When looking at the lawn these infected areas will look like small, circular spots that are a light straw color. The disease can sometimes cause an hour-glass shaped chlorotic spot in middle of the leaf and can cause the area to appear “sunken” due to the leaf folding over at this chlorotic point. With the drought we’ve been experiencing this summer through now, this can be somewhat tough to identify as a lot of our turf is now brown due to drought stress.



Managing dollar spot can be done by maintaining soil moisture and soil nutrition. Watering to maintain soil moisture should be done in a way that does not prolong wet periods, such as early morning or late afternoon. Maintaining adequate soil nutrition is particularly important, particularly nitrogen levels, so that the grass can outgrow the fungus. Taking a soil test and following instructions are important because overapplication of nutrients can lead to other issues. Making sure you avoid thatch buildup and removing clippings regularly will also help with this disease.

Fungicides can help manage this disease, but this can be difficult due to various resistances that the fungus may have. Make sure to rotate between fungicides if you decide to use them to avoid these problems. Fungicides that have been shown to help include fluxapyroxad (Xzemplar or similar). Make sure you read and follow all instructions to avoid plant damage. Myclobutanil or Propiconazole, for example, should not be applied when temperatures are over 85 degrees due to potential for suppressed growth and burning. Applications are most beneficial when applied every 14-28 days preventatively. Trying to eliminate an established problem will take higher application rates more often and may not work.

More information on dollar spot fungus can be found on Publication 3750 or Publication 1322 at extension.msstate.edu.





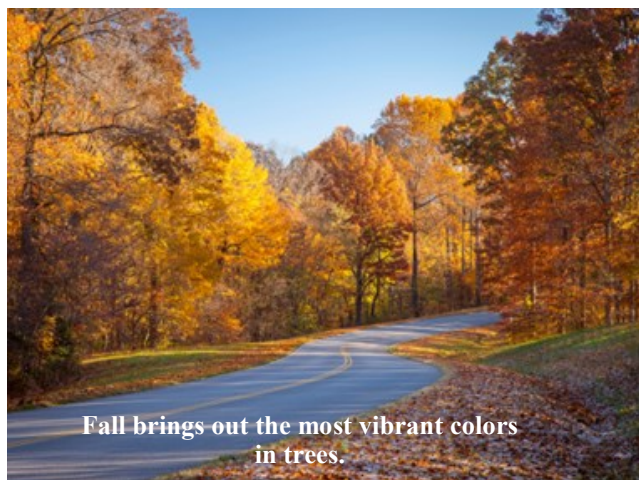
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The Beauty of Tree Foliage in the Fall

Every fall we see a mixture of red, purple, orange and yellow leaves. This is the result of chemical processes that takes place in the tree as the seasons change from summer to winter. During the spring and summer, the leaves serve as food manufacturers necessary for the tree's growth. This food-making process takes place in the leaf in numerous cells containing chlorophyll, which gives the leaf its green color. Chlorophyll absorbs the energy from sunlight that is used in transforming carbon dioxide and water to carbohydrates, such as sugars and starch. This is the process we know as photosynthesis.

But in the fall, the leaves stop their food-making process and the leaves' work ends. This is because of changes in the length of daylight and changes in temperature. The chlorophyll breaks down, the green color disappears, and the yellow to orange colors become visible. Often there is too much sugar in leaves to transfer back to the tree. In this situation, the chemical combination of these sugars with other substances produces many color shades. Some mixtures of various amounts of chlorophyll and other pigments produce the brilliant red of the dogwood to the darker red-browns of oaks or the yellows and purples of sweetgum, while others give the sugar maple its brilliant orange.

While the leaf is changing, other important processes are taking place. At the point where the stem of a leaf is attached, a special layer of cells develops and gradually cuts tissues supporting the leaf. The leaf falls leaving a scar where it grew on the twig. Shedding leaves is another provision for winter. After broadleaf trees shed their leaves, branches can more easily support snow and ice accumulations which is particularly useful in areas more north.



or. Rainy and/or overcast days tend to increase the intensity of fall colors. The best time to enjoy fall color would be on a clear, dry, and cool day. So, enjoy it while it lasts, even for such a short time.

Temperature, light, and water supply have an influence on the degree and the duration of fall color. Low temperatures above freezing will favor the bright reds in maples. However, early frost will weaken the brilliant red col-





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Fall Webworms



A common question I have been receiving recently is, “webworms are killing my trees what can I do?” Fall webworms are seen all over South Mississippi this time of year. They will feed on many different trees but pecan and persimmon are their favorite. These caterpillars normally feed inside the web where they are protected from birds and other predators during the day but at night they will venture outside the webs.

Some years populations can reach high numbers and cause severe defoliation. In these cases the nut crop can be affected that year and the following year. Treating large trees can be difficult for people who do not have access to large air blast sprayers. Using an Air blast sprayer a commercial grower can easily control webworms. For many of us the trees are in a home lawn and we don’t have access to this type of equipment, in these cases the common thing to do is nothing. These mature trees, even if severely defoliated, will be able to survive without any long term problems other than the reduced nut crop for that year and the following year.

If a tree is small enough to be sprayed with a handheld sprayer you can use Spinosad, bifenthrin, permethrin, cyfluthrin, and zeta-cypermethrin, to control the webworms. Make sure and spray the webs thoroughly to get good penetration. Another option is to use a long pole to tear apart the webs exposing the caterpillars to predators.



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Sod Webworms

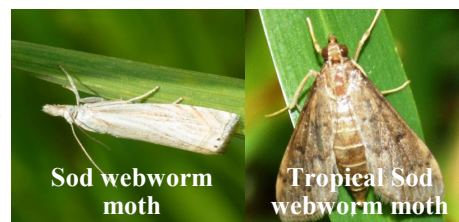
There are several species of caterpillars that occasionally damage turfgrass in Mississippi including fall armyworms, cutworms, and sod webworms. Fall armyworms are the primary pest we see in pasture and rangeland almost annually, but in home lawns we often see the both the sod webworm and tropical sod webworm in our lawns on the coast.

Sod webworm moths are often noticed before damage is observed, usually around August, with large numbers of low-flying, small, whitish or brown moths being flushed up from the lawn and surrounding ornamental shrubs, or being attracted to lights at night. Because these insects do not survive freezing weather, they are more common in the coastal counties.

Heavy outbreaks are sporadic and can cause severe, short-term damage, with turf having a dead, ragged appearance, with trails of webbing present among the grass blades. In heavy infestations, small brown patches of affected turf may run together forming irregular, brown patches.

Sod webworms will damage all types of turf grass but especially favor St. Augustine, bermuda, and centipede so careful, frequent scouting is necessary to detect a developing infestation before it causes damage. There may be two or three generations per year so several applications may be necessary in a growing season.

There are many foliar and granular products found locally for control of sod webworms. Please read and follow all label directions.



Private Applicator Certification Training

The Mississippi Pesticide Safety Education Program has updated its online and face-to-face certification programs to meet this demand. The new mandated training and competency requirements from the U.S. Environmental Protection Agency are for applicators who use restricted use pesticides on farmland and need to renew or obtain certification.

The new trainings are designed to provide increased public health and safety benefits by raising safety standards to be consistent with commercial applicators. Trainings consist of video modules covering new safety, environmental protection and application procedures. These modules prepare applicators for the 55-question competency exam, which requires a score of at least 70%.

Mississippi's online and face-to-face certification programs are developed and delivered by the Mississippi State University Extension Service. For private pesticide applicator online training, visit <http://msuext.ms/dkp8h>. To learn about upcoming in-person trainings, visit <https://extension.msstate.edu/calendar> or contact your local Extension office. The new trainings cost \$60 per applicant.

The online private applicator training consists of video modules and an online proctored exam. While the video modules are accessible on mobile devices, the online exam will require a laptop or desktop computer, a webcam, adequate internet connection and valid photo identification. The online test will be proctored by the online proctoring system Honorlock. Alternatively, the private applicator exam can be taken either online or as a paper test at a local MSU Extension office.



MISSISSIPPI STATE UNIVERSITY
EXTENSION

Private Applicator

TRAINING AND TESTING ONLINE

Watch the training modules, pass the exam, and receive your private applicator certification from MDAC Bureau of Plant Industry.

\$60 COST

Visit <http://msuext.ms/agmes> or contact your local MSU Extension office for info on how to register

Calendar of Upcoming Events

Date	Event
	PINE BELT BEEKEEPERS ASSOCIATION MEETING
Sept 5th	The Pine Belt Beekeepers Association meeting will be held at the Lamar County Extension office beginning at 6 PM.
	BEEF QUALITY ASSURANCE TRAINING
Sept 26th	A Beef Quality Assurance Training will be held at Southeast MS Livestock located at 7677 Hwy 49 in Hattiesburg beginning at 6 PM. RSVP is required by September 20th by calling 601-794-3910.
	PINE BELT MASTER GARDENERS FALL GARDEN DAY
Sept 27th	The Pine Belt Master Gardeners will host the Pine Belt Master Gardener Fall Garden Day at the Forrest County Extension Office beginning at 9 AM. No preregistration required.
	COUNTY FORESTRY ASSOCIATION FIELD DAY
Sept 28th	The Jones/Marion/Forrest/Lamar CFAs will host a Fall Field Day located at the Rocky Branch Community Center in Sumrall, MS beginning at 8 AM. The Field Day will include a tour of the ArborGen Research Variety plot. Registration is required by September 20th and includes a \$10 registration fee. Contact Ross Overstreet at 601-794-3910 to register or for more information.



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Fall Armyworms

Fall armyworms are extremely damaging insect pests of Mississippi hayfields and, pastures and in Bermuda turfgrass settings. These caterpillars feed on lush, tender grass/ plant leaves, primarily Bermuda grass, crabgrass, and sorghum / sudan type grasses in our area. Producers and landowners should look for fall armyworms throughout the growing season and to be ready to treat quickly when damaging infestations occur.

Fall armyworms are unpredictable pests. Some years, high populations do not occur until early fall. Other years, damaging infestations appear as early as June. I have observed army worms from May – December at various times over the past few years in South Mississippi.

Fall armyworm caterpillars vary in color depending on their stage of development and diet. Most are green or tan, but some can be dark brown to almost black, especially late in the year when numbers are high. The body is punctuated with dark spots, and mature caterpillars are about 1 1/2 inch long. Fall armyworm moths are about three-fourths of an inch long when resting with their wings folded. The forewings are gray to dark brown, but the underwings are white. You will not often see the moths unless you go out at night with a spotlight to look for them or happen to flush one from its daytime resting place.

Fall armyworm moths lay their eggs in clusters, eggs hatch in 2–5 days, and the newly emerged larvae scatter out and begin feeding. They usually begin by feeding on the underside of the leaf blade. Their feeding habits result in tiny, white “windowpanes” in the leaf blades or a white frizzing of the leaf tips. Experienced producers watch for this white frosting or frizzing of the leaf tips as an early warning of fall armyworm infestation.

Caterpillars take about 14 days to complete their larval development, and it takes about a month to complete a generation. About 80 percent of total leaf consumption occurs in the last 2–3 days of the caterpillar stage. This is why fall armyworm damage can occur so quickly; grass that looked fine Friday morning can be nothing but stems by Monday afternoon.

There are several options for effective management of fall army worms. To find what best suits your situation please check out the following MSU Extension Publications: Fall Armyworms in Hayfields and Pastures; p2331, Control Insect Pests in and around the Home Lawn; p1858. Inside the Fall Armyworms publication you will find a list of products labeled for control of fall armyworms. Read and follow all label directions! You may also contact your local MSU Extension Office to discuss treatment options with your agent.



Like most caterpillars, fall armyworms eat 80 to 90% of the total leaf area they will consume in their final two or three days as caterpillars.