MISSISSIPPI STATE UNIVERSITY™ EXTENSION

County Gardeners Extension Express

MULTI COUNTY

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Tung Tree

The tung tree, Vernicia fordii, is native to southern China, Burma, and Vietnam. In their native environment these trees can grow as tall as 60 feet. In South Mississippi, these trees are often seen along roadsides and in home landscapes and tend to grow no taller than 40 feet. Tung trees have simple leaves that may be either heart-shaped or have three maple-like lobes. They can be easily identified by a pair of red glands where the leaf meets the petiole.

Tung tree leaves and blossoms.

Flowers of the tung tree are just over an inch across and pale pink with streaks of darker red at the base of the petals. The flowers bloom in early spring and due to the attractiveness of the flower and the early bloom they were frequently planted as ornamentals. Tung trees produce a large woody, pear-shaped berry which is initially green but turns dull brown as it ripens. Though the tree is very attractive, all parts of the plant are toxic and should not be eaten. Leaves of the tree can also cause irritation resulting in a rash similar to poison ivy. The nuts of the tung tree are able to last a significant time on the ground making them very successful at spreading.

Tung trees were introduced into Mississippi in the early 20th Century with the intention of establishing their production as a sustainable industry. Oil from tung trees has been used to waterproof wood, in paints and varnishes, making adhesives, as well as in insulators for electric wires. Tung oil is also used as a drying agent for inks and after processing, as a motor fuel. Tung oil trees were once referred to as the most profitable cash crop grown in its climactic area and a godsend for Gulf Coast farmers seeking a replacement crop for large areas of cut-over pine.

Tung nut.

Commercial production of tung oil trees in the United States began in the early 1900's with the center of production being the panhandle of Florida and between Poplarville and Picayune, Mississippi. Production of tung oil trees remained important for Coastal Mississippi through the late 1960s. Hurricane Camille in August of 1969 resulted in the destruction of as much as 40,000 acres of tung trees. This, combined with increased labor costs and competition from importers, led to the end of large scale tung tree production. Tung trees were grown in Stone County in the mid-1990s but the largest orchard, located near Lumberton, MS was destroyed by Hurricane Katrina in 2005. At the time that orchard produced 20 percent of the domestic supply of tung oil.

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Soil Solarization

Gardeners are always looking for ways to grow healthier plants while reducing the need for chemical controls. One natural technique that can help manage many common garden problems is soil solarization. This process uses the sun's energy to heat the soil and reduce populations of soilborne pests, diseases, weeds, and other problems before planting.

Soil solarization works by covering moist soil with clear plastic, trapping the sun's radiant energy and raising soil temperatures. Under the right conditions, soil temperatures can reach as high as 140°F, creating an environment that helps control many unwanted organisms, including weeds, fungi, bacteria, insects, and nematodes. In addition to pest control, solarization can improve nutrient availability, especially nitrogen, helping create a better growing environment for plants. Since no chemical residues are left behind, this method can be used in everything from small home gardens to large agricultural fields.

Solarization can help manage several common soil diseases, including Verticillium wilt, Fusarium wilt, damping off, and Phytophthora root rot. It is also useful in reducing nematode populations, although control is greatest in the upper 12 inches of soil. Because nematodes can move deeper into the soil, plants with deep root systems may still experience some damage.

Many annual and perennial weeds can also be controlled through solarization. Annual weeds are usually easier to manage than established perennial weeds.

To begin solarizing a garden bed, prepare the area by smoothing the soil surface and removing large clods, plant debris, and other materials that could prevent the plastic from making close contact with the soil. Moisture is essential because wet soil transfers heat more effectively. The soil should be watered thoroughly to a depth of at least 12 inches before covering. In raised beds, drip irrigation can help maintain the moisture needed during the solarization process.

Clear plastic is the best choice because it allows sunlight to pass through and become trapped beneath the covering. Thin plastic, around 1 millimeter thick, provides excellent heating but is more likely to tear. Slightly thicker plastic, around 2 millimeters, may be a better option in windy areas.

When installing the plastic, the goal is to create a tight seal against the soil. In garden beds, this can be done by digging a shallow trench around the area, placing the edges of the plastic into the trench, and covering them with soil. For raised beds, plastic can be secured using staples or screws with wooden strips to help prevent tearing.

The goal of soil solarization is to maintain soil temperatures in the upper 6 inches at approximately 110°F to 125°F or higher each day. A soil temperature probe can help gardeners monitor conditions and ensure the process is working effectively.

Once solarization is complete, remove the plastic carefully and avoid unnecessary soil disturbance. Turning the soil can bring weed seeds from deeper layers back to the surface where they may germinate. With proper preparation and timing, soil solarization can be an effective, environmentally friendly tool for creating healthier garden soil and stronger plants.

Garden Calendar: July

Planting

- Plant Pumpkin seeds for a Halloween harvest.
- Use Portulaca or Marigolds to fill in bare spots of flower bed.
- Root cuttings of Azalea, Boxwood, Camellia, Gardenia, Holly, and Poinsettia in coarse sand. Cuttings should be 4-6 inches from new growth with lower leaves removed.
- Plant now for color in the fall: Marigold, Zinnia, Celosia, and Joseph's Coat.
- Daylilies may still be planted.
- Start cuttings for house plants: Ivy, Wandering Jew, Philodendron, and Begonia.
- Plant fall vegetables: Cabbage, Parsley, and Collards.

Fertilizing

- Do not fertilize Camellias after July 1.
- Fertilize Chrysanthemums around July 15.
- Fertilize all of the garden as you did in March.
- Fertilize lawns with well balanced fertilizer.

Pruning

- Remove faded flowers from Crape Myrtle to encourage a second blooming.
- Pinch back Mums before July 15. Cut back broken or withered fern fronds.
- All Vegetables must be picked regularly to ensure continued bearing.
- When cutting Boxwood into a hedge, make sure the base is wider than the top to allow sunlight to reach base of plants.
- Remove dead limbs from trees and shrubs.
- Roses should be pruned to encourage fall blooms.
- Remove flowers from Basil and cut Mint to encourage new shoots.

Mulch

- Check mulch on Azaleas and Camellias. Mulch should be at least 2 inches thick.
- Zinnias and Mums must be kept mulched to reduce necessary cultivation and conserve moisture.

Miscellaneous

- Water Azaleas well because they are setting flower buds now for next year.
- Cut grass at 2.5 - 3 inches during hot weather.
- Water the whole garden deeply once a week.

Home Accent

- Never leave house plants in a closed home over a vacation. Either water and place under a shady tree or have a friendly neighbor come in and water them for you.

In Bloom

- Caladium, Cleome, Crape Myrtle, Four-o'clocks, Hibiscus, Impatiens, Liriope, Marigold, Mallow, Moonflower, Oleander, Periwinkle, Plumbago, Portulaca, Salvia, Ageratum, Zinnia, Balsam, Butterfly Weed, Canna, Cosmos, Dahlia, Daylily, Funkia, Gladiolus, Lily, Lycoris, Lythrum, Petunia, Phlox, Rudbeckia, Scabiosa, Shasta Daisy, Snap-dragon, Snow-on-the-Mountain, Tuberose, Verbena, Veronica, Althea, Buddleaia, and Montbretia.

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Lawn Irrigation

As we move into the heat of the summer, we start to notice the effects of moisture stress more readily and frequently between rain events. One question I receive from homeowners typically is they want to know how much and how long to leave the sprinklers on. Honestly there are too many variables to give one cookie-cutter answer to this question. You will need to do some experimenting to determine what is needed for your lawn. It is recommended that your lawn gets one inch of water per week through irrigation or natural rainfall.

Drought stressed grass

A way to tell how much your sprinklers are putting out is to use the tuna can technique. A tuna can is typically one inch deep and is an accurate and reliable way to measure the amount of water put out by your automatic in-ground irrigation system or your sprinkler attached to a hose that you move around yourself. You will want to place empty tuna cans at various spots around your yard within the range of your sprinkler(s). Turn on the sprinkler system and allow it to run for roughly 30 minutes. After 30 minutes, measure the amount of water collected in each can. If the cans collected an inch of water, then you know you need to water for 30 minutes.

Tuna cans used to measure sprinkler water output

If the cans collected more or less than this amount, then calculate approximately how long you need to adjust the time up or down to apply the correct amount of water to your landscape so that it receives the recommended one inch of water in each watering session. If there is run-off before water application amount reaches the one inch mark, more waterings per week may be needed. This is especially true on clay soils or sloped terrain. Sandy soils may require more frequent and heavier amounts but let the turf tell you when its time to water. Don't always rely on the automatic sprinkler system you see running even during a rain event.

You may be able to only apply ½ inch per watering, so you would need to do this twice per week. On such lawns, core aeration would be highly recommended to help increase the rate at which the soil absorbs water. The best time to irrigate is early in the day, preferably before sunrise. This helps minimize evaporation loss and limits the time the lawn is wet, which reduces the potential for disease. Remember that deep watering promotes deeper root growth and produces healthy, durable turf with a deep root system that is better able to resist the effects of drought by accessing deeper water sources. Deep and infrequent application are the keys to a successful irrigation strategy.

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Summer Wildflowers

Summer is a great time to see wildflowers in our yards and near roadsides. These flowers are not only pretty to see, but they are beneficial for pollinators such as native bees and butterflies. Here are a few common wildflowers you may see this summer!

Purple Coneflower (*Echinacea purpurea*): These purple flowers are a part of the sunflower family and can grow up to four feet tall. Purple coneflowers bloom from June to August. They can be found statewide, and they prefer well drained soils in sunny areas.

Lance-leaf Coreopsis (*Coreopsis lanceolata*): Blooming from April through June, these yellow flowers can be found statewide. Lance- leaf coreopsis can often be found along roadsides and meadows. They prefer well drained soils in sunny areas, and they can grow up to two feet tall.

Plains Coreopsis (*Coreopsis tinctoria*): These yellow flowers have a red-brown center and can grow up to two feet tall. They can be found statewide, and they prefer well drained soils in sunny areas. Plains coreopsis bloom in the summer and are commonly found along roadways.

Wildflowers are great additions to your gardens, and they can help pollinators thrive around your home. Fall, September through November, is the best time to plant these wildflowers, as well as many others, in Mississippi. For more information on growing wildflowers, see our publication *Wildflowers for Mississippi Meadows and Gardens*.

A selection of wildflowers for sunny, wet areas, and ditches.

Common Name	Scientific Name
Blazing star, gayfeather	*Liatris* sp.
Bluestar	*Amsonia* sp.
Broomsedge	*Andropogon* sp.
Butterweed, groundsel	*Senecio glabellus*
Bullrush	*Scirpus* sp.
Cardinal flower	*Lobelia cardinalis*
Cattails	*Typhas* sp.
Horse tail	*Equisetum* sp.
Indian pink	*Spigelia* sp.
Joe-Pye-weed	*Eupatorium fistulosum*
Ironweed	*Vernonia* sp.
Loosestrife	*Lythrum* sp.
Louisiana iris	*Iris virginica*

Common Name	Scientific Name
Mallows	*Hibiscus militaris, others*
Plumegrass	*Erianthus* sp.
Rushes	*Juncus* sp.
St. John's wort	*Hypericum* sp.
Sedges	*Cyperus* sp.
Swamp lily	*Crinum americanum*
Swamp sunflower	*Helianthus angustifolius*
Stokes' aster	*Stokesia laevis*
Swamp milkweed	*Asclepias incarnata*
Tickseed sunflower	*Bidens* sp.
Turk's cap lily	*Lilium superbum*
Water hemlock	*Cicuta maculata*
White spider lily	*Hymenocallis* sp.

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Proper Weed ID: Important for Controlling Pond Weeds

"Can you tell me what to use to control the green stuff in my pond?" Well, no, not if I haven't seen what's actually growing there. All aquatic plants and algae are green and too often, at first glance, one may mistake a heavy infestation of slender spikerush for algae. Many aquatic weeds look similar. None-the-less, each may require different treatment methods or a combination of methods for optimal control.

Slender Spikerush

When it comes to weed management, there are four basic approaches: Physical, Mechanical, Biological, and Chemical. The latter is what pond owners focus on the most, especially if mechanical management has already been attempted.

Physical management involves deepening shallow pond edges so they drop quickly to 3 feet deep to reduce weed coverage, winter drawdown (a reduction in water level) can be effective and economical in controlling many kinds of aquatic weeds, and using pond dyes to control submersed aquatic weeds by shading the plants so they do not get enough sunlight.

Duckweed

Mechanical control may involve raking or seining algae on the bottom or free-floating at the surface. Plant removal by mechanical means is usually not a permanent solution, as plants may grow quickly and recolonize, but it can be used to clear the majority of plants to improve effectiveness of other techniques such as biological or chemical control.

Filamentous Algae

Biological control uses an animal or other living organism to control the weeds. Biological control has many advantages over other weed control means. Triploid grass carp are commonly used for biological aquatic weed control. How much vegetation grass carp will consume depends on several environmental conditions, such as water temperature, water chemistry, and the kinds of plants available.

Chemical control requires using aquatic herbicides (and surfactants) that have met strict Environmental Protection Agency (EPA) standards for use in an aquatic environment. The herbicides are of low toxicity to fish and wildlife (and humans) when used according to label directions for each herbicide. Herbicides are generally species-specific, meaning they are effective only on certain plants. Identifying a problem weed is the first step to controlling it.

If you have a weed problem in your pond, follow these steps for proper aquatic weed control:

1. Identify the problem weed.
2. Choose the most economical and efficient approach for control.

A combination of techniques usually provides the best long-term control. If you select a chemical method of control, be sure it is economical, safe, and effective. Calculate pond area or volume to be treated and follow label instructions. Pay close attention to use restrictions following herbicide treatment. In high weed infestations, only treat 1/3 of the weeds at a time. Remember, you must follow label instructions, it's the law! For more information or to aid with weed identification, you can refer to Publication 1428. *Managing Mississippi Ponds and Small Lakes*. Or you may contact your local Extension office.

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Attracting Birds to Your Backyard

Birding is a fun activity enjoyed by both young and old. Often times many who enjoy birdwatching travel to secluded areas or refuges to enjoy the activity while overlooking the potential in their own backyard. By incorporating a few simple features into your yard you can often increase the diversity of wildlife spotted from your back window.

Eastern bluebirds readily nest in simple bird houses placed in backyards.

The first element to include is food. Using feeders is a common tactic that many home birders use. By using a mix with a blend of seeds and even incorporating other less common seeds you can attract a greater diversity of birds. Those with more space can include native grasses, flowers, trees, and shrubs that attract insects and produce seeds favored by local wildlife.

These more natural food sources also provide another important ser-vice, cover. Cover provides shelter for wildlife during weather events as well as predators. Adding cover and food sources can have a great impact on how many birds use an area. Placing food in close proximity to cover is often more beneficial as birds feel safer and more readily use feeders.

Water features provide aesthetics as well as attract wildlife.

Another service of cover is nesting structure. Come spring local birds will be looking for places to raise their young. Many of these will build nests in or around these native grasses and shrubs. Others like eastern bluebirds may be cavity nesters and can take advantage of bird houses placed around your yard.

One final feature worth considering if you want to attract birds to your backyard is water. Throughout the year birds will need a dependable supply of water. This can be as simple as a bird bath or as complex as a water feature circulating water through your backyard. One benefit to adding a water feature would be the ability to incorporate native wetland vegetation for a more natural appearance.

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Native Plants that Shine in the Summer

Summer in the South can be challenging for gardeners. High temperatures, humidity, periodic drought, and intense rainfall events can stress many landscape plants. Fortunately, numerous native plants have evolved to thrive under these conditions. Native species are adapted to local soils and climate, often requiring less irrigation, fertilizer, and maintenance than non-native ornamentals. They also provide valuable habitat and food sources for pollinators, birds, and other wildlife.

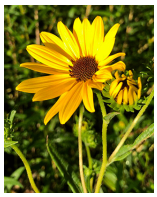
One of the most reliable native summer performers is purple coneflower. This perennial produces large pink-to-purple flowers from late spring through summer and attracts a variety of pollinators, including bees and butterflies. Once established, purple coneflower is drought tolerant and performs well in full sun.

Another excellent choice is blanketflower, a native wildflower known for its red and yellow blooms. Blanketflower thrives in hot, sunny locations and tolerates poor soils, making it an ideal choice for challenging landscape sites. The long bloom period provides continuous nectar for pollinators throughout the summer months.

For gardeners seeking a large shrub or tree, southern wax myrtle is a great option. Native throughout Mississippi, this evergreen shrub tolerates heat, drought, salt spray, and occasional flooding. Its dense growth provides cover for birds, while the wax-coated berries serve as a food source for wildlife. Southern wax myrtle is commonly used as a screen, hedge, or specimen planting.

Muhly grass offers exceptional landscape interest and adaptability. Although its famous pink flower plumes appear in the fall, the plant's fine-textured foliage remains attractive throughout the summer. Muhly grass tolerates drought, heat, and a wide range of soil conditions. It performs particularly well in low-maintenance landscapes and pollinator gardens.

Gardeners interested in supporting butterflies should consider buttonbush. This native shrub naturally occurs in moist areas and along pond edges. During summer, it produces distinctive spherical flower clusters that attract bees, butterflies, and other beneficial insects. Buttonbush is especially valuable for rain gardens and wet landscape areas.



Another summer standout is swamp sunflower. Despite its name, this plant adapts to a variety of conditions and produces bright yellow flowers that attract pollinators and provide late-season color. It thrives in full sun and can tolerate both moist and moderately dry soils once established.

When selecting native plants, gardeners should match species to site conditions such as sunlight, soil type, and moisture levels. Although native plants are generally well adapted, proper placement remains essential for long-term success. By incorporating native species into the landscape, gardeners can create beautiful, resilient gardens that withstand summer conditions, provide food and shelter for wildlife, and reduce maintenance.

The Crosby Arboretum

Ages 8-13 years

Take It Outside! Afternoon Activities for Youth

JULY 14 - 17

1:00PM-4:00PM

TUESDAY — *Trees, Turtles, and Toads!*

Enjoy an afternoon with our environmental educators and learn some cool facts about some of the trees, turtles and toads that call the arboretum home.

WEDNESDAY — *Things with Wings!*

All about Bats, Birds and Bugs! This afternoon is all about FLIGHT! We will explore topics such as how long would your wing span be if you could fly?

THURSDAY — *Anything Can Happen!*

Come out and see who's up to what today. We will look for signs of animals and explore the three different habitats in which our animal friends live.

FRIDAY — *Fun with Friends!*

Games galore today! Let's have an afternoon of PLAY just for the fun of it. Enjoy old-fashioned outdoor games and try your hand at making giant bubbles.

MISSISSIPPI STATE UNIVERSITY™ EXTENSION

The Crosby Arboretum

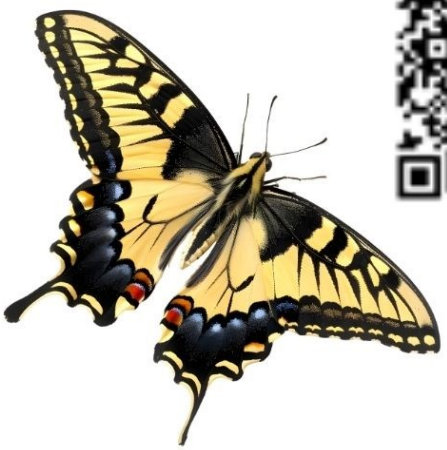
Gardening for Butterflies

with special guest

Dr. Eddie Smith

Extension Specialist I & Host of Southern Gardening

During this program, participants will explore some of Mississippi's most recognizable butterfly species. Attendees will also learn which nectar plants attract adult butterflies, how to design a butterfly-friendly garden, and practical ways to increase butterfly populations in home landscapes, community gardens, and pollinator habitats.



Saturday, July 18th
10:00AM - 11:30AM

FREE to members
$5 non-members

MISSISSIPPI STATE UNIVERSITY EXTENSION

MISSISSIPPI STATE UNIVERSITY
EXTENSION

INTRO TO CANNING AND FOOD PRESERVATION

TUESDAY July 28 - 2 PM

PREREGISTRATION REQUESTED

MS STATE EXTENSION LAMAR COUNTY

216 SHELBY STREET SUITE B - PURVIS MS 39475

For more information or to register for the class, please call the Lamar County Extension Service Office @ (601)794-3910 prior to July 20th

LEARN FROM JEFFERSON DAVIS EXTENSION AGENT LATONYA RAMSEY TO SAFELY CAN, FREEZE, AND PRESERVE FRUITS AND VEGETABLES AT HOME!

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