



Garden Tips

It is hot and time for the hot weather vegetables to be planted. Heat tolerant tomatoes like Heat Wave, Solar Set, Bella Rosa, and others can be planted in July (North MS) and August (South MS) for fall harvest.

Hot peppers thrive in hot temperatures. In fact, higher temperatures make hotter peppers. Okra, Eggplant, Southern Peas, and Malabar or Ceylon Spinach will keep something coming out of the garden through the summer.

Please be careful with your fertilizer applications. Using too much fertilizer can kill whole plantings when the temperatures climb.



One cup of conventional fertilizer is enough for fifty feet of row in the ground. Vegetables, except sweet corn and tomatoes, generally need to be fertilized only once after they are planted. Many vegetables are fertilized before planting and side dressed with N in four to six weeks. One tablespoon of one of the blue fertilizers is enough for a gallon of solution which is applied to several plants in containers.

Container vegetables need to be fertilized once every two weeks. More is not better.

Now is the time to plant pumpkins. Most large varieties do not do well here in our hot, humid climate. With care, smaller varieties can be grown here successfully.



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Hot Weather and Vegetable Gardens

As we enter summer, temperatures are rising. High temperatures can lead to stress for plants in the garden, as well as for the gardener. With a few simple steps it is possible to ensure that your garden can tolerate the high temperatures of summer. It is also important to recognize the signs of heat stress you may experience when working in the garden and take steps to be safe.

Heat increases the amount of water plants need and may also make plants less productive. One symptom of high temperatures we may observe in vegetable plants is leaf rolling. Leaf roll starts with the margins of lower leaves on the plant cupping. In tomatoes, potatoes, and cucurbits, leaf roll results in the leaves cupping upwards, while leaves of beans, peppers, and other vegetables cup downwards. If temperatures lower or other cultural steps are taken the leaves may recover; however, if temperature stress continues leaves may continue to show this symptom, and the entire plant can be affected. If conditions improve, new growth on the plant should not show leaf rolling.



Watering the garden well is one of the most important ways to improve problems with heat stress. Another way is to provide the garden area shade during the hot afternoon. The best place to plant a garden will have six to eight hours of sun but shade later in the day. Proper watering is also important to help maintain plants during the hot summer. Especially when weather is dry, providing the garden with sufficient water will help keep soil temperatures lower and ensure plants have enough water as transpiration increases. Generally, vegetable gardens need an inch of water per week, though raised beds or gardens in sandy soil will require more. Drip irrigation allows water to be delivered directly to the root zone of the plant and reduces the amount lost by evaporation.

Organic mulches such as straw or pine bark will also help plants tolerate summer stress by slightly reducing the temperature of the soil and improving soil moisture retention. Plants that are properly fertilized will also better tolerate high temperatures. It is best to harvest vegetables in the morning when plants have been able to retain moisture through the cooler night. Additionally, harvested vegetables should be brought to a cooler location as soon as possible in order to help maintain quality.

Working in the garden during the summer can also put a lot of stress on the gardener. It is a good idea to plan garden activities for cooler periods of the day whenever possible. When working in the heat, make sure to drink plenty of water and replace salts and minerals lost. It is also important to wear appropriate clothing and sunscreen to prevent sunburn. Working in the garden with a friend is also a great way to both make gardening more fun and keep safe in high temperatures. If you begin to feel tired or weak, are sweating profusely, or experience dizziness these may be the symptoms of heat exhaustion. You should immediately move to a cooler place, take time to rest, and drink plenty of water.

Warning Signs:

Heat Exhaustion	vs.	HEAT STROKE
Heat-related illness is Preventable!		
Stay somewhere cool		
Drink plenty of water		
Avoid sugar, alcohol & caffeine		
Wear light clothing		
Paleness		Extremely high body temperature (103°F+)
Tiredness		Red, hot, dry skin (with no sweating)
Weakness		Rapid, strong pulse
Dizziness		Throbbing headache
Headache		Dizziness
Fainting		Nausea
Muscle cramps		Confusion
Heavy sweating		Unconsciousness
Nausea or vomiting		

STOP
If you recognize symptoms of heat stroke, it is **LIFE THREATENING**. Get the person somewhere cool and seek medical attention **IMMEDIATELY**.

Watch out!
If left untreated, heat exhaustion can progress to

Michelle L. Holshue, 2012
Data on heat-related illness via CDC:
<http://emergency.cdc.gov/disasters/extremehat/>

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, Snapdragon, Snow-on-the-Mountain, Tuberose, Verbena, Veronica, Althea, Buddleia, and Montbretia.



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Should I Fertilize My Pond?

This is a question Extension Agents receive quite often when discussing pond management. One of the first questions I ask in return is how often do you fish, and do you keep the fish you catch? The most common response is, not much or very little. But the answer to “Should I fertilize?” is not always simple because it may depend on the long-term objectives. More often, however, the answer to the question is no! Here are reasons why...

- Fertilizing a pond is a waste of time and money if you fish it only occasionally. You just produce more fish that aren't caught, increasing the possibility of crowding and slow growth. Keep in mind a pond will only grow so many fish per acre. So, if you want big fish, fish must be caught and removed. If you are catching the same size bass many times over, odds are you're overpopulated.
- If your pond is muddy, do not fertilize. Mud keeps sunlight from passing through the water and binds up phosphorus from fertilizer. This prevents good plankton growth. If a pond stays muddy most of the time, do not fertilize the pond until the mud problem is corrected.
- If undesirable species dominate the pond, renovate the pond, restock, and then begin fertilizing if your objective is to grow bigger fish. Pond renovation is best done in the fall. Similarly, if desirable species are out-of-balance and are small, fertilizing just makes more small fish. Fix the balance first.
- If your pond is infested with weeds, do not fertilize. During warm months, pond weeds use up the fertilizer the microscopic plants should get. The pond stays clear even after repeated fertilizer applications, and you gain more weeds.
- If you use a commercial feeder, do not fertilize. It is not necessary to fertilize ponds if you follow a feeding program. Commercial feed adds nutrients to the water and adding fertilizer can degrade water quality.
- I've visited many landowners whose ponds are spring fed or floods easily from nearby creeks or rivers during heavy rainfall. In some spring-fed ponds, too much water flows through the pond to maintain plankton blooms. In this case, fertilizer constantly being diluted has little positive effect.

The decision of whether to fertilize a fishing pond should be considered very carefully. It is not a one-time task and must become part of a scheduled program. Proper fertilization significantly increases the total weight of fish produced in a pond, often by as much as three times. Fertilizer stimulates growth of microscopic plants, called phytoplankton. Phytoplankton forms the base of the food chain, and small animals eat these small plants and serve as food for bream, which in turn are eaten by bass, therefore, bigger fish. Regardless, the bottom line is, if you don't manage it, don't fertilize it!

Calendar:

July 19th: The Hancock-Harrison Forestry & Wildlife Association will host Adam Butler, Wild Turkey Program Coordinator with the Mississippi Department of Wildlife, Fisheries, & Parks. The program will be held at Coastal Research & Extension Center at 1815 Popp's Ferry Rd in Biloxi beginning at 6 PM. A meal will be provided so please contact Tim at 228-731-8567 to preregister if attending in-person for the meal count. You may also view it on zoom at <https://msstateextension.zoom.us/j/95527767862>.





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Lawn Irrigation

As we enter the typically hot, dry portion of our growing season, barring any tropical systems or pop-up afternoon showers, homeowners usually ask about how much and how long to water their lawn. There are too many variables to give a solid answer to this question. You will need to do some experimenting and testing with your sprinkler/irrigation system to determine what is needed for your lawn. It is recommended that your lawn gets 1-1.5 inches of water per week through irrigation or natural rainfall.



A way to tell how much water your sprinklers are putting out is to use the tuna can technique. A tuna/wet cat food can is typically around one inch deep. Place empty tuna/wet cat food cans at various spots around your yard within the range of your sprinklers. Turn on the sprinkler/irrigation system and allow it to run for about 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. If the cans collected more or less than this amount, then calculate approximately how long you need to water your landscape so that it receives the recommended one inch of water in each watering session.



If there is runoff before water application reaches the one inch, more watering per week may be needed. This is especially true on clay soils, sloped terrain, or compacted soils. You might be able to only apply ½ inch per watering, so you would need to do this twice per week.

On lawns with compacted soils, 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 grass blades are wet, which reduces the potential for disease. Remember that deep watering promotes deeper root growth and produces healthy, durable turf.

Another way to help your lawn deal with the stresses of high heat and low moisture is to raise the mowing height of your lawn. This allows the plant a greater ability to store and conserve water during times that water is in short supply.

Upcoming Events

Pine Belt Beekeepers July 7th, 7:00 p.m., Lamar County Extension Office Purvis



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Venomous Snakes

When it comes to snakes in Mississippi we have plenty of them. Even though they may be scary they also are useful. Snakes feed on rodents that can be very pesky to us humans so that alone makes them beneficial. There are 55 different kinds of snakes in Mississippi, out of those, only six are venomous. So you are way more likely to come in contact with a nonvenomous snake than a venomous snake. Whenever you are enjoying the outdoors always be alert and when you do encounter snakes it is best to leave them alone. Seventy five percent of people bitten by venomous snakes are harassing or trying to kill the snake when they are bitten. Snakes only bite when they feel threatened.

The best way to identify venomous snakes is to become familiar with their color patterns and other characteristics. There are nonvenomous snakes that have color patterns that are similar to those of venomous snakes. Most of the venomous snakes have a large triangle shaped head except the coral snake which has a narrow head. Head shape is very useful in identification but is never 100 percent accurate. Also snakes can look different at different ages and regions where they live.

Always remember to, keep your property clean, and watch where you walk, sit or place your hands and whatever you do don't try and pick up a snake. There are many snake repellants on the market but they do not work. Below are pictures (Pictures from MWFP website) of poisonous snakes found in Mississippi.



Copperhead *Agkistrodon contortrix* (northern Miss.)



Copperhead *Agkistrodon contortrix* (color variation)



Copperhead (juvenile coloration)



Cottonmouth *Agkistrodon piscivorus*



Cottonmouth *Agkistrodon piscivorus*



Cottonmouth (juvenile coloration)



Pigmy Rattlesnake *Sistrurus millarius*



Pigmy Rattlesnake *Sistrurus millarius*



Eastern Diamondback Rattlesnake *Crotalus adamanteus*



Canebrake Rattlesnake *Crotalus horridus*



Canebrake Rattlesnake (juvenile showing single button)



Coralsnake *Micrurus fulvius*

Well-water Screening & Septic System Workshop

Private well owners in Pearl River County may participate in a free water-screening program offered by the Mississippi State University Extension Service.

Participants are also invited, but not required, to attend an in-person informational meeting about proper management of onsite wastewater systems, commonly known as septic tanks or septic systems. Technical assistance is available to help troubleshoot septic system problems.

Sampling bottles and instructions can be picked up weekdays July 12-25 from 8 a.m. to 5 p.m. at the MSU Extension office in Pearl River County at 204 Julia St., Poplarville. Water will be screened for total coliform and E.coli bacteria. Results and related recommendations will be sent by mail.

Participants should draw the water samples on July 26 and deliver them to the Extension office that same day. The informational meeting will be from 6-7 p.m. on July 26.

For more information, contact Dr. Jason Barrett at 662-325-1788 or the Extension office in Pearl River County at 601-403-2280. For video instructions on how to properly take a water sample, visit <https://extension.msstate.edu/natural-resources/water/mswon>.



MISSISSIPPI WELL OWNER NETWORK

MISSISSIPPI WELL OWNER NETWORK PROGRAM

The Mississippi Well Owner Network program is a free, educational training opportunity for Mississippi residents who depend on private home wells for their water needs. The program will benefit private well owners who want to become familiar with groundwater resources, septic system maintenance, well maintenance, water quality, and water treatment. Private well owners are independently responsible for monitoring the quality of their wells. Essentially, they are the operators of their own water systems and are responsible for ensuring that their water is safe.

BRING YOUR WELL WATER SAMPLES!

Well owners may bring water samples to be screened for total coliform and *E. coli* bacteria. Pick up approved sample containers with instructions at the Extension Office within the date range shown on the right.

Each participant will receive free MSU Extension publications related to private wells and septic systems.



**MISSISSIPPI STATE
UNIVERSITY**

EXTENSION

WATER SCREENING CAMPAIGN

**PEARL RIVER COUNTY
MSU EXTENSION OFFICE**
204 Julia Street, Poplarville

1. SAMPLE CONTAINER PICK UP
July 12-25, 8 a.m. to 5 p.m.
2. WATER SAMPLE DROP OFF
July 26, 8 a.m. to 5 p.m.
3. SEPTIC SYSTEM WORKSHOP
July 26, 6-7 p.m.

Call 601-403-2280 for information.



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Events

Beekeeping for Beginners

Friday, July 15, 10:00 to 11:00 a.m.

Bees and gardens go hand in hand! Pearl River County Extension Agent **Dr. Eddie Smith** will provide an introduction to how to get started with beekeeping, covering native plants for bees, basic biology, equipment, protective gear, mistakes and tips, how to grow your first colony of bees, and manage them throughout the year. Members free; \$5 for non-members. Registration is required. Call 601-799-2311 to register. **This program is for children and adults.**



Online Private Applicator Certification Program

A private applicator is a certified applicator who uses or supervises the use of restricted-use pesticides to produce an agricultural commodity on his or her own land, leased land, or rented land or on the lands of his or her employer. Private applicators must be at least 18 years old.

In response to limited face-to-face training during the COVID-19 situation, the Mississippi Department of Agriculture–Bureau of Plant Industry has approved an online private applicator certification program developed by the MSU Extension Service. Persons needing to obtain or renew their private applicator certification can complete the online training (two video training modules and a competency exam) by using the following link: <http://extension.msstate.edu/content/online-private-applicator-certification-program>. The fee for training and testing is \$20, payable online by credit card, debit card, or eCheck.

 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.

\$20 COST

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