



Pondweeds

Whether it be in the lawn, garden, or pond, weeds can be a consistent problem. Today I am going to talk about a varied group of plants called pondweeds, which (as you might guess) can be found in a pond.

Pondweeds are a group of rooted plants with alternate leaves. The leaves can be totally submerged or float on the surface of the water. The flowers and fruits are normally green to brown, small, and close together in oblong or ball-like spikes. Submersed leaves are thinner compared to floating leaves, are somewhat translucent, and positioned alternately along the stem. Floating leaves are more oval shaped than submersed leaves, leathery, and sometimes positioned somewhat opposite of one another. When visible, the leaf veins are parallel and run the length of the leaf.



These plants can be part of a healthy ecosystem. For example, they can be consumed by animals such as ducks and beavers and provide a habitat for fish. Under most conditions they do not cause problems, but some species can be problematic (e.g., curly-leaf pondweed; *P. crispus*). When control is necessary, there are several options for eliminating pondweeds. One option is to stock 5 to 10 triploid grass carp per acre for moderate infestations and 15 or more for severe infestations. Do keep in mind that abundant grass carp can impact other fish and live up to 20 years. One chemical option is to apply Endothall (4.23-pound formulation). Endothall (1.92 gallons per acre-foot of water) should be applied as a submersed injection (application using a wand or hose). Make sure to determine pond volume prior to application. Read and follow all chemical label instructions, especially the section on the use of personal protection equipment. Treat ponds when the plants are actively growing and the water temperature is at least 60°F. For larger bodies of water, it is best to treat one-third of the pond at a time. Wait 2 weeks or more between applications. A repeat whole-pond application may be necessary after the entire pond has been treated to eliminate remaining weeds.



For further information on pondweed control, see Extension Publication P3735-10, *Pondweeds*.

INSIDE THIS ISSUE:

Succulent Container for Mom	2
Garden Calendar	3
Calculating Fertilizer	4
Lawn Irrigation Check Calendar of Events	5
Proactive Gardening Choose Native Plants	6
Resurrection Fern	7

CONTACT INFORMATION

Forrest County
Phone: (601) 545-6083
Email: ext-forrest@lists.msstate.edu

George County
Phone: (601) 947-4223
Email: h.steede@msstate.edu

Greene County
Phone: (601) 394-2702
Email: mm3583@msstate.edu

Hancock County
Phone: (228) 467-5456
Email: cdo94@msstate.edu

Harrison County
Phone: (228) 865-4227
Email: tim.ray@msstate.edu

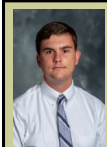
Jackson County
Phone: (228) 769-3047
Email: sls334@msstate.edu

Lamar County
Phone: (601) 794-3910
Email: rosso@msstate.edu

Perry County
Phone: (601) 964-3668
Email: b.odum@msstate.edu

Pearl River County
Phone: (601) 403-2280
Email: eddie.smith@msstate.edu

Stone County
Phone: (601) 928-5286
Email: hbj4@msstate.edu



Camden Oglesby, Extension Agent
MSU-ES Hancock County
Phone: 228-467-5456 E-mail: cdo94@msstate.edu



Eddie Smith, Ph.D., C.A., Co. Coordinator & Extension Agent

MSU-ES Pearl River County

Phone: (601) 403-2280 E-mail: eddie.smith@msstate.edu

Succulent Container for Mom

Mother's Day will be here before you know it. If you are struggling to find a present for your mom, consider a mixed succulent container planting.

There are hundreds of types of succulent plants that make beautiful combination container plantings. Most local garden centers and nurseries I see typically have many selections of succulents from which to choose.

Succulents are plants with soft and juicy leaves and stems that come in a wide array of colors, textures and sizes. Their leaves help them to retain water and survive in hot, dry climates. Additionally, because of their leaves, succulents are known for their air-purifying properties and can help to improve air quality in a room.

Aloe vera, sedum, kalanchoe, hens-and-chicks and jade plant are all considered succulents.

A succulent plant or container combination makes a great gift for those moms who love plants but do not necessarily have a green thumb.

Since succulents are about 90% water, they can miss a few waterings with no ill effects. They do not tolerate a soil that is too wet, so planting in well-drained soil is important. Unlike most container-grown plants, succulents love drought-like conditions. Make sure they dry out before watering them again.

Indoors, it may take up to a month before you need to water your succulents again.

Put succulents in a location that gets about six hours of full sun a day. Indoors, they look great by a window or in a bright room. Outdoors, they will brighten up a deck, porch or patio.

Pruning succulents is generally not required, and very little fertilizing is needed because they are slow growers. Succulents naturally enter dormancy in the cold, dark winter months, and they need only enough water to keep from shriveling during this time.

I like to create my own container planting by purchasing individual succulents and adding them to a container of my choice. I have also purchased some premade combinations in unique containers.

If you decide to create your own container planting, make sure the container has holes for good drainage.

When arranging your succulents in a container, don't be afraid to be bold and adventuresome by varying leaf textures and colors. Choose a large one as your center plant and add some that cascade. You can add a tall succulent and then complete your container with filler plants.

I have been told succulents are representations of enduring love, so they are a great choice as a gift for your mom on Mother's Day. Your mom can enjoy her succulents for many years to come.



Garden Calendar: May

Planting

- * Plant Crape Myrtles when plants are in color.
- * Plant annuals and perennials early in the month and keep well watered.
- * Set out Chrysanthemums.
- * Continue planting Gladiolus. Can also plant Calla Lilies, Ginger Lilies, Tuberose, and Cannas.
- * Take Hydrangea cuttings and let root in coarse sand.
- * Plant in shade: Impatiens, Coleus, Sweet Alyssum, Lobelia, and annual Dianthus.
- * Plant in the full sun: Verbena, Periwinkle, Ageratum, Marigolds, Zinnas, Petunias, Wax Begonia, Clematis, Four-o'clocks, and Portulaca.
- * Plant these Vegetables and Fruits this month: Cucumber, Tomato, Pepper, Squash, Peas, Beans, Eggplant, Corn, Okra, Parsley, Watermelon, and Cantalope.



Pest Control

- * Keep an eye on garden pests and diseases: red spiders, thrips, aphids, lacebugs, lacewings, mealy bugs, caterpillars, slugs, snails, mildew, fungus, and crown rot.

Pruning

- * This is the last month to prune Azaleas and Camellias as new buds are formed in June.
- * Gardenias can be pruned by bringing a bouquet inside to beautify the house.
- * Cutting bouquets regularly will keep your plants pruned and prolong the blooming season.
- * Cut in early morning or late afternoon and put into water immediately.
- * Remove seedpods from bulbs and irises; they sap the plants' strength.

Mulch

- * Mulch layer helps maintain moisture and can protect roots from extremes in temperature.



Miscellaneous

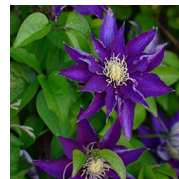
- * Water deeply during weeks that it does not rain.

Home Accent

- * Repot house plants during their active growing period: April through September.
- * May is a good month to repot and divide overcrowded ferns.

In Bloom

Confederate Jasmine, Gardenias, Begonias, Impatiens, Salvia, Geraniums, Roses, Hydrangeas, Magnolias, Azaleas, Clematis, Phlox, Sweet William, Deutzia, Honeysuckle, Golden-Rain Tree, Pomegranate, Mock Orange, and Weigela.





Tim Ray, C.A., Co. Coordinator & Extension Agent
MSU-ES Harrison County
Phone: (228) 865-4227 E-mail: tim.ray@msstate.edu

Calculating Fertilizers

Suppose you receive your soil sample results and it tells you that you need to apply 1 lb. of Nitrogen (N), 1 lb. of Phosphorous (P) and 2 lbs. of Potassium (K) per 1000 sq. ft. Knowing how much “actual” N, P, and K are in a bag of fertilizer can help you determine how many bags or pounds of product are needed to complete the job.

The fertilizer example we will use is 13-13-13 since it’s a very common, complete fertilizer. This is called a 1:1:1 ratio fertilizer. The number 13 on the bag represents a percentage based on 100 lbs. of the respective element in the bag so we can say there is 13% N, 13% P, and 13% K. Based on this, 13% of 100 lbs. is 13 lbs.

$$100 \text{ lbs.} \times 13\% (.13) = 13 \text{ lbs.}$$

Now let’s determine how much actual N, P, and K is in a commonly sold, 50 lb. bag. Since we find many fertilizers in a 50 lb. bag (50 lbs. is one-half of 100 lbs.), then one-half of 13 lbs. is 6 ½ lbs. of each element in a 50 lb. bag. We can find this by using the following calculation:

$$50 \text{ lb. bag} \times 13\% (.13) = 6.5 \text{ lbs. each of N, P \& K in a 50 lb. bag of 13-13-13.}$$

(likewise, a 40 lb. bag of 13-13-13 would be calculated as $40 \times .13 = 5.2 \text{ lbs. of each}$).

Knowing this, we can calculate the amount of total product (13-13-13) needed to give us 1 lb. of N, P, & K per 1000 sq. ft.

$$50 \text{ lbs.} \div 6.5 \text{ lbs.} = 7.7 \text{ or } 8 \text{ lbs. of total product to give us 1 lb. of each element.}$$

(likewise, a 40 lb. bag of 13-13-13 would be calculated as $40 \div 5.2 = 7.7 \text{ or } 8 \text{ lbs. of product}$)

Now that we know how much actual N, P, & K is in the bag all we need to do is determine how many bags we’ll need. Remember that the soil test suggested we needed 1 lb. each of N, P, and 2 lbs. of K per 1000 sq. ft. As an example, we’ll say we have a 9,000 sq. ft. lawn. We can find the answer by using the following calculation:

$$9,000 \text{ sq. ft. lawn.} \times 8 \text{ lbs. of product per 1000 sq. ft.} = 72 \text{ lbs. or about a 50 lb. bag and a half of 13-13-13.}$$

Well, we have a little more to do yet. Remember we need to add that extra 1 lb. of potassium. Generally, about 2 lbs. of Muriate of Potash (0-0-60) per 1000 sq. ft. will provide us with that extra 1 lb. we need to obtain our fertilizing objective.

In order to calculate fertilizer products with completely random numbers, such as 30-10-15, each one needs to be calculated separately since they are relatively independent of each other.

$$50 \text{ lb. bag} \times 30\% (.30) = 15 \text{ lbs. N}$$
$$50 \text{ lb. bag} \times 10\% (.10) = 5 \text{ lbs. P}$$
$$50 \text{ lb. bag} \times 15\% (.15) = 7.5 \text{ lbs. K}$$

Although there are applications for the 30-10-15 example used above, choose a fertilizer that contains the numbers representing the needs of your crop according to your soil test results. However, that’s not always possible if you’re relying on the local garden centers to carry it. An example would be if your soil test suggests you need to add 1 lb. N, 3 lbs. P, and 2 lbs. K. Most garden centers may not carry a 1:3:2 ratio fertilizer such as a 10-30-20 so, because we generally don’t apply more than 1 lb. of N per application, choose a fertilizer product based on the amount of nitrogen and supplement the phosphorus and potassium as needed with triple super phosphate (0-46-0) and Muriate of Potash (0-0-60).

An example would be 28-0-4. A 50 lb. bag of 28-0-4 contains 14 lbs. of N, 0 lbs. of P, and 2 lbs. of K. It takes a little over 3 1/2 lbs. of product to give us our 1 lb. of actual N. However, we would have to apply 25 lbs. of product to give us 2 lbs. of K and that would create an extreme excess of N. Therefore, it’s better to apply the other two elements separately.

A fertilizer calculator found online can aid you in determining the correct amounts needed.



Ross Overstreet, C.A., Co. Coordinator & Extension Agent

MSU-ES Lamar County

Phone: (601) 794-3910 E-mail: r.overstreet@msstate.edu

Lawn Irrigation Check

As we start to emerge from the cooler, wetter winter months and start to see the warmer temperatures and longer days typical with Spring, it is a great time to start going through our lawn and garden irrigation systems to inspect for broken or cracked fittings and connections. As we begin to stir outside more and more, it's better to go ahead and get these systems dialed in prior to putting them to use in the heat of the summer and droughty periods and realizing they aren't working properly.

Hopefully, the system you use had been drained, properly winterized, and all exposed pipes properly protected prior to the extremely low temperatures we experienced over the Christmas/New Year's timeframe. Any pipes that weren't properly protected or prepared for those cold temperatures could easily have damaged areas that will show up when the system is repressurized. This includes all types of irrigation systems, not only in-ground automated systems but also includes above ground systems, like drip irrigation lines as well as conventional rubber hoses and any nozzles that assist with the watering chores.



Give your entire system a complete look over and going through to ensure proper function and no broken lines or pipes. It is much easier to fix or replace broken lines now in the cooler temperatures and softer ground now to head off any major issue than waiting until the system is needed more urgently to discover an issue. Run and observe each zone to ensure adequate coverage and proper function. Not only will this help maintain a healthy landscape in the stressful summers but will also help conserve water.

Calendar of May Events

Date	Event
	Pine Belt Beekeepers Association
May 2nd	The Pine Belt Beekeepers Association will meet at the Lamar County Extension office beginning at 6:00 PM.
	Private Applicator Certification Training
May 2nd	Tim Ray will host a PAT at the Harrison County Extension office beginning at 1:00 PM. This certification is for those who own or rent land for agricultural purposes. \$20 per individual.
	Forrest/Lamar County Forestry Association Spring Field Day
May 18th	The Forrest/Lamar CFA will host it's annual Spring Field Day at Longleaf Plantation in Purvis. RSVP is required for this event by May 10th. CEUs available. See flyer on page 7 for more details.



Brad Jones, Co. Coordinator & Extension Agent

MSU-ES Stone County

Phone: 601-928-5286 E-mail: hbj4@msstate.edu

Proactive Gardening

Not to date myself too much but, growing up on a truck crop farm in the 80s and 90s, we spent many hours in the summer thinning plants, turning vines, and hoeing rows out. While my grandfather never used the word “scouting” as I recall there were many days, we felt like we were just walking a field with a stick, tossing a few long vines out of a row just so he could keep us out of trouble. Looking back now that may have played a small role in his plans but I have also come to appreciate the things we saw along the way. From removing dead plants that might carry disease, to noticing insect damage that needed attention there were things we found out walking the fields that you don’t find as easily from a bench seat. Those walks helped to plan out spray regimens, harvest time and other activities.

Papaw also made sure to walk the perimeter of fields at random times and random ways that always seemed odd to me. As I have learned from working with clients and my kids at home on their garden projects, that’s a pretty good trick to keeping deer and other wildlife out. If they don’t know your pattern it keeps them guessing a little.

The weather this past few weeks has been awesome with fields and gardens thriving. It’s easy to get busy and catch a quick look as you drive by or notice from a distance while you’re on to something else. But I would encourage you to take some time several days a week to walk your garden, lawn, fields or whatever you may grow. Enjoy your efforts and note progress, pull a few weeds, look for issues such as fungus or disease, scout for insect damage, and just check on things.

From disease to insects, being proactive on catching issues makes treatments and corrections much more efficient. If we can help in any way please contact myself or your local MSU Extension Office.

Choose Native Plants for your Landscape

More than 50 species of native plants do well in Mississippi home gardens and yards. Selected types are very hardy and have showy flowers. Black-eyed Susan is the earliest bloomer of this group, flowering as early as late May. The yellow flowers of this plant are beautiful when interspersed with the red and pinkish flowers of bee balms and the lavenders offered by blazing star during June through August. Milkweeds typically bloom from summer through fall, depending on the species. During late August, blooms of narrow leaf sunflower appear and continue blooming through late fall. A palette of color can occur in patches planted with these native wildflowers.

Native plants can add attractive accents to Mississippians’ yards and provide excellent food sources for birds and butterflies. Many native wildflowers, shrubs and vines produce flowers that attract hummingbirds, butterflies and sphinx moths. Native plants also provide a variety of benefits to gardening enthusiasts such

as not requiring watering, fertilization and other maintenance. Because they grow naturally in this region, they are adapted to local climate and soil conditions. So, a homeowner can enjoy beauty from native plants and save money on land-scaping costs!



Black-eyed Susan



Heath Steed, Co. Coordinator & Extension Agent
MSU-ES George County
Phone: (601) 947-4223 E-mail: h.steede@msstate.edu

Resurrection Fern

Resurrection Fern is an evergreen fern that is commonly found growing throughout our area on trees and many other areas. I have even seen it growing on a roof that was under a large live oak. Our humid climate is the perfect place for resurrection fern to thrive. Many of its host plants include live oak and many other oaks, pecan, magnolia, and cypress.

Resurrection fern is considered an epiphytic plant, this means that it grows on another plant and depends on that plant for support but not nutrition. These ferns do not have true roots so that is why they live in areas where it is continually moist. They get moisture and nutrients from the air or from small pools of water that collect on the host plant or surface. The reason it is called resurrection fern is that during dry periods the fern will dry up and look dead but after a rain or even a few days of heavy fog they will green back up and thrive.

So, the question I always get about these ferns is, Are these ferns killing my trees? and the answer is no. Resurrection fern is not a parasite, it does not indicate decline and it won't kill your trees.



Registration 8 am @ Grace Covenant Church
(1242 Old Hwy 11 Purvis)
carpool to Longleaf Plantation



Spring Field Day
Saturday, May 18th
Longleaf Plantation

\$30 non-members \$10 members
RSVP/check due prior to May 10th
PO Box 191 Purvis MS 39475

- Forestry/Wildlife management techniques and goals
 - Including:
 - Invasive species ID and control
 - Prescribed Fire
- Brief history of Longleaf Plantation
- Tour of facilities and forestlands
- Bioblitz with Dr. Mike Davis, USM Environmental Science

Lunch will be provided



MISSISSIPPI STATE UNIVERSITY
EXTENSION



CEU Hours available for attending