



Pond Management

Over the last few months with my family at home WAY more than we are accustomed to, the importance of a few ponds we have was quickly realized. My kids and several neighboring youths were able to thoroughly enjoy fishing, helping to pass the time during our extended “Spring Break”. Between the notable daily traffic at our local bait shop and increased call volume related to pond management, I think many others have been doing the same thing.

While this year’s increase in local fishing activity may not have been planned, a little simple management can help to ensure your private / farm ponds are safe, clean, producing and eye appealing additions to your property.

Water Quality / Fertility

In most instances for common private or farm ponds fertilize applications of N-P-K are not needed or recommended (have a Soil sample ran if you are unsure). Occasional applications of an agricultural lime can help to maintain an alkalinity of at least 20 ppm. Low alkalinity can cause stress on fish and other aquatic life. Contact your local MSU-ES Extension Office for assistance in checking your alkalinity levels. Most offices are equipped with a kit for in house testing.

Weed Control

There is a wide range of aquatic weeds that can cause issues for ponds in our area. The key to management is proper identification. Some weeds can be controlled easily with grass carp, or physical removal while others may require herbicide treatment. There are 18+ different herbicides labeled for aquatic use, each one offering different options for application type, rates, and types of plants it controls. Proper identification helps ensure the proper method for pond weed control is used. Also, in most instances it is advisable to only treat 20-30% of the pond at a time with an herbicide for weed control, to prevent an oxygen imbalance as dead plants decay.

Fish Management

Catch and EAT, in most cases when I get calls for fish problems in ponds, overpopulation is an issue. There are times during the first couple of years after stocking, or when managing for trophy size fish, you may want to release certain size fish. However, for a typical bass and bream pond you should be harvesting 15 pounds of bass and 45 pounds of bream per acre per year to maintain proper population levels ensuring proper growth and healthy fish.



For new pond construction or in-depth maintenance assistance, check with you local Extension Office or check out our publication: Managing Mississippi Ponds and Small lakes at https://extension.msstate.edu/sites/default/files/publications/publications/p1428_0.pdf



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Fall Weed Control

Control of Winter annual weeds begins towards the end of Summer and beginning of Fall. Pre-emergence herbicides should be applied in late August early September to prevent these annual winter weeds from becoming an issue. To be effective, pre-emergence herbicides must be applied before weeds emerge. To be effective, they must be applied before weed seed germination. These herbicides require 0.25 to 0.5 inches of rainfall or irrigation for activation so try to time the application within a day or two of expected rainfall, but not a torrential downpour where all of the product ends up being washed away. All of the herbicides in this list can be used on established, southern turfgrasses. **READ, and FOLLOW, THE LABEL completely** to make sure you can use it in your situation. A partial list of common (active ingredient) and trade names for Pre-emergent Weed Control in Home Lawns by Homeowners can be found below. Just as with an application of fertilizer, going in two different directions that total the labeled rate will provide a more consistent barrier to emerging weeds rather than an application in one single direction. Depending upon label directions and application restrictions for the particular product you purchase, reapplication may be beneficial in 6-8 weeks. It is not recommended you use a product that contains a fertilizer carrier at this time as the turf is getting prepared for winter dormancy and encouraging a flush of growth can be detrimental.

Common Name – Trade Name (partial list)

1. dithiopyr - Sta-Green Crab Ex; Green Light Crabgrass Preventer; Vigoro Preemergent Crabgrass and Weed Preventer
2. pendimethalin - Scotts Halts Crabgrass Preventer
3. oryzalin - Southern Ag. Surflan A.S.
4. isoxaben - Portrait Broadleaf Weed Preventer
5. benefin + oryzalin - Green Light Amaze Grass and Weed Preventer; XL 2G
6. benefin + trifluralin - Hi-Yield Crabgrass Preventer; Southern Ag. Team 2 G
7. corn gluten meal - Concern All Natural Weed Pre-venter Plus; Nature's Guide Corn Gluten Meal



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

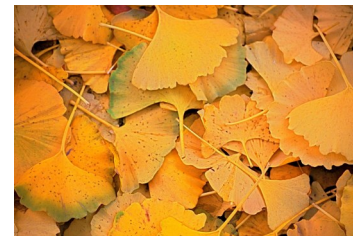
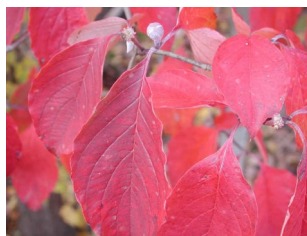
- ◆ Turn compost pile.
- ◆ Propagate by layering. Scrape underside of a strong branch, bend down to ground, cover with soil and weigh down with a brick. Water from time to time and end of branch will put out new growth; becoming a new plant.
- ◆ Pick flowers in bloom and dry for future arrangements. 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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Fall Chores

As cooler weather approaches, important tasks await the avid gardener. Great looking vegetable gardens, orchards, and home landscapes don't just happen. Plenty of elbow grease and hard work are required to be successful. Plants must be fertilized, watered, pruned, weeded--the list goes on and on.

Attention to detail is extremely important when taking a proactive approach against disease. Gardeners who maintain healthy plants often use a combination of common-sense strategies to keep leaf spots, wilts, root rots, and similar diseases under control. The following strategies can be carried out this fall and will likely maintain or improve the health of your garden.

Leaf spot diseases such as rose black spot, photinia leaf blight and holly tar spot can be reduced next year by removing fallen leaves before next spring. In the case of vegetable garden plants, remove this past season's crop debris from the garden. Most microorganisms which cause disease to survive our winter conditions with little difficulty, so sanitation will help reduce such diseases as early blight and Septoria leaf spot of tomatoes in next season's garden.

While you're out in the garden, it would be a good idea to make a few notes about "what vegetables were grown where." This will allow you to devise a rotation strategy for next spring and avoid the mistake of planting the same vegetables in the same spot. Diseases have a way of building up if the same vegetable crop is planted too long in the same spot.

In the orchard, most canker and dieback diseases such as fire blight and black knot of plums will be less of a problem if infected branches are removed by pruning. Be sure to cut 6 inches or so below the last visible signs of infection. Clean and disinfect cutting tools between cuts to prevent spread of plant disease microorganisms. Ten-percent bleach solution (1 part bleach to 9 parts water) is a very good disinfectant to dip your pruning shears in after each cut to help decrease the spread of infection among fruit trees. Remember to wash and oil your pruning shears after use; otherwise, the disinfectant can rust them.

Remove "mummies" (old, dried-up fruit) which may be present on and beneath peach trees as a way to cut down on brown rot fruit disease. This is also helpful for bitter and black rots of apples. Diseased apples, which may still be on trees or fallen to the ground, should be removed to help cut down on these fungus diseases next year.

Fall is a great time for collecting soil samples to determine fertility needs for gardens, orchards, and landscape plantings. It pays to follow a recommended fertility program, since well-fed plants are less vulnerable to attack from diseases and other pests. At the same time you're gathering soil samples to identify fertility needs, collect duplicate samples to have your soil checked for nematodes. These pesky little creatures can rapidly build up and cause problems. Root knot and other nematodes can certainly cause problems at times.

Take advantage of these cooler temperatures to clean up your garden site. A proactive approach to disease is much more effective than reacting after a disease problem is underway in your landscape.





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Controlling Aquatic Weeds—Proper ID is Most Important

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 a homeowner might mistake duckweed or other aquatic plants, such as slender spikerush when it's heavily infesting a pond, for algae. None-the-less, each one of these require different treatments from an overall management standpoint.

When it comes to weed management, there are four basic approaches: Physical, Mechanical, Biological, and Chemical. The latter is what homeowners 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 draw-down (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.

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.

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 in aquatic weed control:

Identify the problem weed.

Choose the most economical and efficient approaches to control. A combination of techniques usually provides the best long-term control.

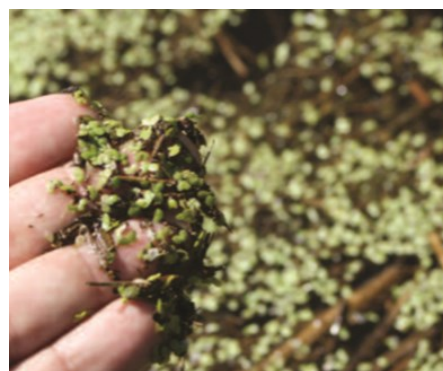
If you select a chemical method of control, be sure it is economical, safe, and effective. Calculate pond area or volume to be treated and follow label instructions.

Pay close attention to use restrictions following herbicide treatment.

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.



Slender Spikerush



Duckweed



Filamentous Algae

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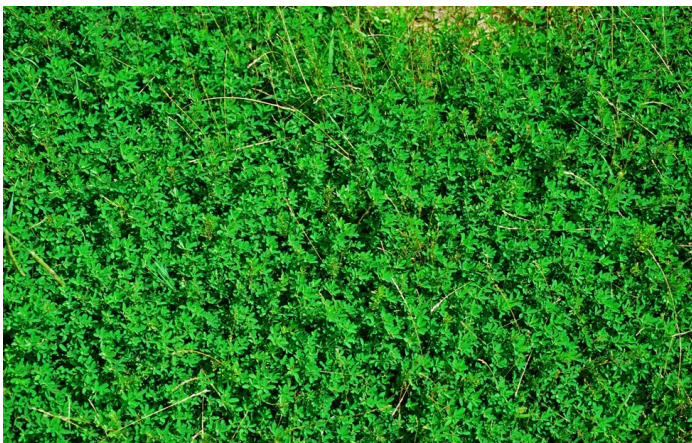
Common Lespedeza

As our growing season continues, sometimes landscape issues such as an increase in the presence of weeds become more apparent. By this stage in the season, summer annual weeds are usually very difficult to control with herbicides. The absolute best defense against weeds in your home lawn is to properly manage and maintain it (Publication 1322, Establish and Manage your Home Lawn, contains information on how to do so). Of course, even well-maintained lawns will have weeds pop up here and there in our area. If you notice weeds in your lawn and want to control them, the first step to doing so is to identify what the weed is. Once you have it identified, you can then look up specific information regarding the control of that weed in your lawn type. Your local Extension office can assist you with identification and control recommendations.

One weed that has been asked about frequently is common lespedeza (*Kummerowia striata*). It is a summer annual legume with three smooth, oblong leaflets connected to reddish stems that become woody with age. One helpful identifying characteristic is the venation of the leaflets that is easily visible, especially on the back side of the leaflets. Common lespedeza can withstand very low mowing heights which can make it difficult to spot at first if you are not paying close attention.

If you see common lespedeza in your lawn and you have not had a soil test done recently, that may be the first thing to check. Common lespedeza is often found in poor soils including those with limited nitrogen available for turf growth. Common lespedeza can also thrive in compacted soils where grass will not be able to grow, so take a closer look and see if aerification might be needed in your lawn. If you consistently see common lespedeza in your lawn, there are several preemergent herbicide options that can be effective when applied in mid-late spring. Preemergent herbicide applications can help minimize issues with annual weeds later in the season. There are also some options for postemergence control, but once the stems of common lespedeza have become woody, it is very difficult to control this way. You can find a list of recommended herbicides for common lespedeza control in Publication 2910, Lespedeza Control in Maintained Turfgrass. It is important to always read the label before applying herbicides and to double check that the product you are using is safe for your type of grass. Make sure the equipment you are using has been calibrated to ensure proper application.

While it may be difficult to control summer annual weeds at this point in the season, now is a great time to take a soil test so that you can prepare your lawn for next year's growing season. Remember, the best defense against weeds is a strong and healthy lawn.



Common Lespedeza can form dense mat in home lawns. (Photo By: John D. Byrd, Mississippi State University, Bug-wood.org)



When not mowed consistently, common lespedeza may bloom (Photo: Rebekah D. Wallace, University of Georgia, Bug-wood.org)



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Daylily Rust

Rust diseases get their name from the yellow, orange, or red spores that form on infected plants. Rust fungi may infect many different types of plants including many of the plants in the home landscape. Rusts are spread by windblown spores and are favored by milder temperatures and leaf surfaces being wet. Most species of rust fungi have several life stages that may look very different. Some species of rust must alternate between hosts in different plant species in order to complete their life cycle.

Daylily rust, caused by the fungus *Puccinia hemerocallidis* is native to Asia and was first identified in Florida and Georgia in 2000. Attempts to restrict the movement of the pathogen were not successful, and daylily rust has since been confirmed in over 30 states. Symptoms of daylily rust first appear as yellow to white spots on the upper surface of leaves and yellow to brown vertical streaks on the foliage. Dusty orange spores may be found on the underside of leaves, usually in long streaks. In cases where disease pressure is high, hundreds of lesions can form on a single leaf and eventually result in the death of the foliage. Eventually a second type of spore is formed and the masses on the underside of the foliage will turn a darker color. While symptoms of daylily rust may be confused with damage from aphid feeding, or daylily leaf streak, caused by a different fungal pathogen, neither of these conditions result in orange pustules forming on the leaves. Daylily rust also infects *Patrinia*, a herbaceous annual only rarely used in home landscapes. Though *Patrinia* is required for the full completion of the fungus's life cycle, spores spread from infected to healthy daylily plants can propagate the pathogen in the landscape.

Resistant cultivars and sanitation are the most important tools to manage daylily rust. All plant residue should be removed in the fall and disposed of away from the growing site. Newly purchased plants should be trimmed to remove foliage in the spring before planting in order to reduce the possibility of introducing daylily rust into the landscape. To aid in control of daylily rust, plants may be sprayed with propiconazole, myclobutanil or chlorothalonil. Spray at 2-week intervals as needed, and also after cutting back plants. Do not spray chlorothalonil during blooming period.

