MISSISSIPPI STATE UNIVERSITY™ EXTENSION

County Gardeners Extension Express

MULTI COUNTY

DECEMBER 2018 VOLUME 11, ISSUE 12

The County Gardeners Extension Express newsletter team wishes your family a Merry Christmas and a Happy New Year.

2019 Master Gardener Training

The Mississippi State University Extension Service will be providing Master Gardener training classes for anyone wanting to become a Master Gardener volunteer. The Master Gardener volunteer program is a great way to gain horticultural expertise at a low cost, meet other avid gardeners, share gardening experiences, get connected to the community, and belong to a well-respected and educational organization.

It is an educational exchange program offered through county offices of the Mississippi State University Extension Service. Through this program, individuals are trained and certified in horticulture and related areas.

In exchange for educational training, individuals are asked to volunteer 40 hours of their time to help county Extension offices with horticulture projects that benefit the local community. Master Gardener volunteers help extend the educational arm of the university to the public by providing horticultural information based on university research and recommendations.

The classes will start in late February 2018. There is a $100.00 fee to pay for the material used during the training. You can get more information about the Master Gardener program by contacting your local county Extension office.

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Upcoming Events for December 2018

	Hancock County Events
11	**Selection and Care of Garden Tools**— 2:00 p.m. at the Bay St. Louis Public Library. This program will include information on the variety of garden tools available, how to select the best tools for the home gardener, and how to ensure they last by good maintenance. A demonstration on tool sharpening will be included. Presenter is Christian Stephenson, Hancock County Extension Agent.
12	**Hancock County Master Gardener Meeting**— 4:00 p.m. at the home of Barbara Huet. Potluck Christmas party.
12	**Selection and Care of Garden Tools —** 2:00 p.m. at the Pass Christian Public Library. This program will include information on the variety of garden tools available, how to select the best tools for the home gardener, and how to ensure they last by good maintenance. A demonstration on tool sharpening will be included. Presenter is Christian Stephenson, Hancock County Extension Agent.
	Harrison County Events
12	**Private Applicator Training** — 1:00 until 5:00 p.m. at the Harrison County Extension Office, 2315 17th St., Gulfport, MS. This training is for those who own or lease property for agricultural purposes. $20 per individual. No preregistration necessary. For questions regarding the training, contact Tim Ray at 228-865-4227.
	Pearl River County Events
1	**Pearl River County Master Gardener Garden Clinic**— 8:00 a.m. until 2:00 p.m. Home Depot in Picayune, MS. Dr. Eddie Smith, Extension Agent, and Master Gardeners will be available to answer all your gardening questions. Free publications on horticulture topics will be available.
7	**Pearl River County Master Gardeners Meeting**— 12:30 p.m. at Crosby Arboretum, Picayune, MS. Potluck Christmas party.
	Multi County Events
6	**Holidays: Past, Present, Future**— 12:00 noon until 1:00 p.m. Your local County Extension Office. Presenter: Lynette McDougald, Instructor, Plant and Soil Sciences. Description: Join Lynette McDougald AIFD, CFD will blend nostalgia, fad, and freshest flowers along with varied techniques to help you plan for your best holiday decorating. Call your local Extension office to RSVP.
13	**Christmas Cactus: Best Care & Blooming Tips** —12:00 noon until 1:00 p.m. Presenter: Dr. Dennis Reginelli, Regional Extension Specialist – Agronomic Crops. Description: A Christmas cactus in full bloom is a colorful addition to the holiday season. Given the proper care it will produced beautiful blooms year after year. Follow our simple steps and you will have plants blooming at just the right time each year. Your local County Extension Office. Call your local Extension office to RSVP.

Garden Calendar: December

Now is the time of year that Cabin Fever and garden catalogs in our mailboxes get us dreaming about getting out into the garden.

Planning
- Start plans on paper for changes or improvements in the garden.
- Order seed for early planting.

Equipment
- Repair and sharpen mowers and tools. Order new pots and markers.
- Check condition of sprayers.

Planting
- Set out trees and shrubs.
- Plant Sweet Peas, Poppies, and Larkspur.

Fertilizing
- January - March is the proper time to fertilize trees and shrubs.
- Apply lime to lawns if needed.

Pest Control
- Scale on broad-leaf evergreens should be sprayed with dormant oil for control.

Pruning
- Trim Nandinas.

Mulch
- Mulch Lilies with compost.
- Protect tender plants during periods of extreme cold.

Miscellaneous
- Keep bird feeders stocked. Provide water for birds.
- After freeze, check to make sure plants have not heaved out of the ground.

In Bloom
- Camellia, Winter Honeysuckle, Winter Jasmine, and in mild winters Flowering Quince

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Good Sanitation Helps Prevent Disease

Plant diseases can negatively impact both the appearance of ornamental plants and the productivity of vegetables. The backbone of a good disease management strategy for the home landscape is sanitation. The goal of sanitation is to eliminate or reduce the amount of potential disease by removing inoculum (fungal spores and bacteria). Sanitation can include any activities aimed at preventing the spread of inoculum to healthy plants.

Many disease organisms overwinter on plant debris such as fallen leaves. If this debris is left in the garden area, spring rains result in the spread of the pathogen to healthy plants. Wind and rain will move the disease to other areas of the garden or landscape. Removal of this debris is an important part of a disease control plan, especially for diseases such as rusts, powdery mildew, and bud and flower blights.

In many cases, burying plant residue with soil helps break down the plant material and destroys some pathogens. In addition, pruning out diseased branches can prevent spread onto healthy tissue. In perennial beds, old flower heads, stalks and any diseased plant parts should be removed. Examine shrubs and trees for dead branches. If dead areas are the result of canker disease, their removal will prevent later spread of the disease. When cutting away a diseased branch, the pruning cut should be made 4 to 6 inches below the diseased area. Remember to properly disinfect tools between cuts. A solution of 1 part bleach to 19 parts water (5%) is effective.

If a plant was infected by leaf spot, raking and disposal of fallen leaves will help minimize the problem. Diseased plant tissue should not be added to compost piles as some organisms can survive in the soil and will spread when the compost is added to the garden area.

Good sanitation practices can dramatically reduce the incidence of disease in the home landscape as well as reduce the need for pesticide applications throughout the year.

Diseased plant material such as fallen leaves and fruit, as well as diseased stems, can serve as sources for disease in the home landscape.

Cold Damage to Plants

Cold temperatures can lead to damage to a variety of plants in the home landscape, particularly citrus, palms, and tropical ornamentals. While some damage due to cold temperatures can be seen right away, injury may also not show itself until the following summer. Wilting or loss of leaves in summer may be a result of cold injury to the plant that occurred the previous winter. Cold damage can also result in the death of the plant and not be obvious until the plant fails to emerge from dormancy in the spring.

Cold temperatures are more damaging to plants when they occur suddenly after warm weather. Due to the sudden change in temperature the plants are not able to prepare for the cold by reducing the amount of water in the vascular tissues that transport water and nutrients through the plant. Damage to nutrient transporting phloem cells can lead to stunting of root growth, while damage to water transporting xylem cells can prevent water from reaching branches leading to wilting or defoliation. Plants with new growth due to fall pruning or applications of nitrogen can be more susceptible to damage from cold. Cold damage can be seen on almost any part of the plant. Roots may be damaged leading to their rotting away, and bark may be split. The most serious damage due to cold is to the cambial tissue immediately under the bark. This tissue is responsible for the plant growth, and if it has turned brown, the tree is unlikely to survive.

While it is tempting to take immediate action and prune potentially cold damaged plants, it is best to wait until spring. It is difficult to identify the extent of any damage until the plant begins to leaf out. It is also possible that there will be another cold weather event, and leaving the plant unpruned will offer a small amount of protection against further damage. Protect plants from further cold injury by covering them during cold snaps, and as weather warms watch them closely to ensure they get enough water. Damage to roots may make cold damaged plants sensitive to drought.

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Watering Plants During Winter

Watering plants in near freezing temperatures creates a false sense of security with many homeowners, worrying that wet soil will freeze and injure plant roots. However, supplemental watering is vital. If you do not receive a lot of rain over several weeks, your plants may need to be watered. Although your plants are dormant during the winter months, they're not dead, so during dormancy they still have some basic metabolic functions that must be driven with water collected from the soil.

Cold dry winds tend to dry out plants, and since we don't see plants actively growing in the winter we may forget they need water. In addition, roots are prone to drying in the winter, causing permanent damage to perennials. By keeping plants watered and healthy, they will be better able to weather future cold snaps and will grow better once spring finally arrives.

Watering your landscape plants during dry periods in the winter months can help keep plants alive and healthy.

As long as you water early in the day before the temperature drops below 40 F, the water you give your plants can actually be protective against nighttime freezes. The water in the soil acts as a trap for heat and helps the area around your plant stay a little bit warmer than the air as the night approaches. This extra heat can protect your plants from damage.

As a general rule of thumb, soak the soil to at least a depth of 6 to 8 inches. This holds true for the lawn, flowers and some trees and shrubs. This depth provides moisture to the crowns and a vast majority of the feeder roots. Trees should be soaked more deeply. Hold off fertilizing landscape plants until spring arrives. Fertilizing now will encourage new growth, which is more susceptible to cold damage.

Lawns, especially newly established lawns, should receive periodic watering during dry periods in the winter.

If you have an underground irrigation system, keep in mind a day or two of freezing temperatures should not harm an underground system, as the soil below is still warm and insulates the pipes. However, extended cold, winter weather will damage an underground system if not properly prepared for winter.

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Pond Drawdowns for Weed & Fish Management

One of the most useful and inexpensive pond management practices is called a "winter drawdown." Winter drawdowns can be useful in controlling aquatic weeds and can help manipulate fish populations. To perform a winter drawdown, make sure the pond has a drain pipe that lets the water levels be lowered and kept down throughout the winter. Ponds without a drainpipe can be retrofitted.

Aquatic weed problems are common in farm ponds and usually are challenging to manage. Winter drawdown exposes weeds to air-drying and freezing temperatures. This can be an effective weed control technique, especially if done in successive years.

For effective weed control, drop the water level of the pond to expose aquatic weeds in the more shallow portions of the pond. Usually, water levels are reduced enough to expose 35 to 50 percent of the pond bottom, but this percentage may vary greatly, depending on topography and design of the pond. Maximum drawdown should be accomplished by mid to late November, and the water level should remain low through February. Spring rains will fill the pond. The combination of a winter drawdown, shoreline deepening, and effective early spring herbicide application usually eliminates or greatly reduces aquatic weed infestations.

Winter drawdown is also a good fish population management technique in largemouth bass/bluegill ponds. By reducing the water level and pond area, you drive forage fish, such as bluegill, out of shallow water refuges and concentrate them in open water, making them more available for bass to eat. This is a good technique to use in ponds having "crowded bluegill" but still containing viable bass populations. Routine annual drawdowns can help maintain a balanced bass/bluegill fishery. Drawdowns can make bass-crowded situations worse. If you have a bass-crowded pond, do not use winter drawdowns until pond balance is restored. Fish attractors, such as brush tops and gravel beds, can be more easily put in place while the water is down, and this is a good time to deepen edges to the recommended minimum depth of 3 feet.

Winter drawdown should be done only in the winter. It should never be done in summer, as the extreme temperatures in Mississippi summers, coupled with the increased activity level of fish and reduced oxygen levels in warm water, will likely result in fish kills in a summer drawdown.

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Cold Frames

Cold frames are protected plant beds with no artificial heat added. Cold frames can be used to provide shelter for tender perennials, "harden off" seedling plants, as well as start cold tolerant plants such as pansies or cabbage earlier than they could be started in open soil. Cold frames can also be used to overwinter summer-rooted cuttings of woody plants. The temperature inside a cold frame is usually not more than five or ten degrees higher than the outside temperature. However, with young and tender plants, this small increase in temperature can make a world of difference. Hotbeds are simply heated cold frames, and act as a miniature greenhouse while taking up very little space at a low cost. Hotbeds are great for giving warm season vegetables such as tomatoes and peppers an early start.

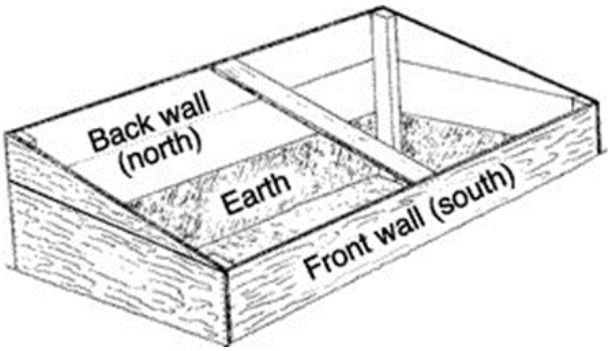

Figure 1. Simple design for a wooden cold frame.

A cold frame or hotbed is constructed as a rectangular box with the back higher than the front and a transparent roof. Often, recycled materials such as scrap lumber and old window sashes can be used for construction. The slope of the roof from back to front should be 1 inch per foot. Glass sashes are the most efficient materials for roofing, but roofs can also be made of polyethylene film stretched over a wooden frame. Sides can be made from wood, brick, concrete or metal. A simple cold frame can be made with stacks of square hay bales and a wind sash roof.

Figure 2. Cold frame constructed from wood and hay bales.

When building a cold frame or hotbed, the first step is to level the area. Temporary frames can be set on the soil surface, but for a permanent structure the area should be excavated. After the bed area has been excavated put down a layer of coarse gravel about six inches deep and cover the gravel with screening or burlap to prevent soil from shifting into it. A two inch layer of sand should be placed on top of the screening to make levelling easy and provide a base for heating coils if they will be used. Planting can be done either in four to six inches of good garden soil or in flats or pots.

Figure 3. Cold frame built with brick and recycled window sashes.

In hotbeds a soil temperature between 70 and 75 degrees Fahrenheit is ideal for planting most seeds. Once seeds have germinated, temperatures should be adjusted for the type of plants involved. Temperature in cold frames is more difficult to control, but covering the roof with straw on cold nights and daytime ventilation can help with maintaining temperatures in the desired range.

Plants in cold frames or hotbeds are very attractive to insects, so a close watch should be kept for pests such as aphids, thrips and whiteflies. The small area makes applying controls fairly easy for these insects before they cause plant injury.

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