MISSISSIPPI STATE UNIVERSITY™ EXTENSION

County Gardeners Extension Express

MULTI COUNTY

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

Poinsettia Care

Poinsettia (Euphorbia pulcherrima) is the traditional flower associated with the Christmas season and the top-selling flowering potted plant in the United States. If properly cared for, poinsettias may last many weeks or up to several months.

Tips for Care of Poinsettias during the Holidays

• Place the poinsettia in a bright location in the home where it can receive indirect light. Although it can withstand direct sunlight, watering requirements will increase and the flowers will not last as long.
• Keep poinsettias away from drafts, HVAC vents, and home heaters.
• Avoid letting the bracts touch cold windowpanes because the transfer of outdoor temperatures can cause damage.
• Overwatering is a major cause of early leaf and bract drop in poinsettias, so keep the plant moist but not soggy.
• If the poinsettia came with a plastic decorator wrap, punch drainage holes in the bottom of the plastic wrap or remove it for proper drainage.
• Place the plant on a drainage saucer.
• When needed, water the plants thoroughly until the water drains out into the saucer. Then pour off excess water so the potting soil will not become soggy.
• Maintain temperatures of 68 °F to 72 °F during the day and around 60 °F to 65 °F at night. Do not allow temperatures to drop below 50 °F.
• It is not necessary to fertilize the plants when in flower.

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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.

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.

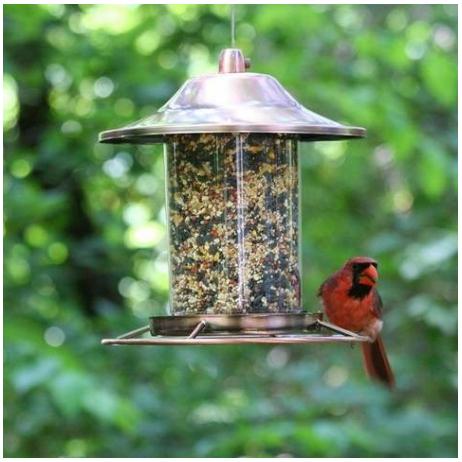
Equipment
- Repair and sharpen mowers and tools. Order new pots and markers.
- Check condition of sprayers.

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.

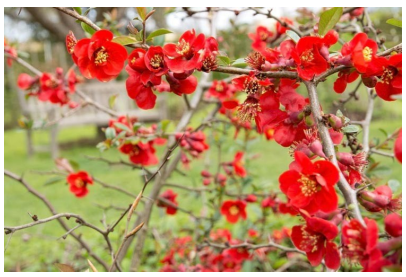
Pruning
- Trim Nandinas.



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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How Cold Temperatures Affects Citrus

Considering the recent "hard freeze" throughout the state and particularly down south where we grow citrus, it is important to understand how cold temperatures may affect your citrus trees. The temperature at which tissue of a given plant will freeze and the degree of the damage sustained are functions of several factors in addition to the species and variety involved.

Among the citrus types most easily killed or damaged by freezing weather are lemons and limes. Temperatures in the high 20s will kill or severely damage these plants. Sweet oranges and grapefruits are somewhat more cold-hardy and usually require temperatures in the mid 20s before incurring major damage to large branches. Mandarins (satsumas) are quite cold-hardy, usually withstanding temperatures as low as the upper teens or low 20s without significant wood damage. In fact, satsumas and kumquats have the greatest degree of cold hardiness. In general, it is recommended citrus trees be protected when the temperatures are expected to go below 27 degrees for an extended period. In addition, citrus trees can better withstand cold weather when they are dormant.

Fruit	*Temperature (degrees F)*
Grapefruit	23–24
Orange	23–24
Kumquat	16–17
Lemon	26–27
Lime	28
"Satsuma" mandarin orange, fully dormant	18
All other mandarin oranges	22–23

Minimum freeze temperatures for various citrus.

Typical freeze damage to citrus fruit (orange).

The freezing temperature reached, the duration of the minimal temperature, how well the plant became hardened or conditioned to cold weather before freezing temperatures occur, age of plant (a young trees are not as hardy as mature trees), and tree health are all factors in the potential for freeze damage. Wind or air movement is another important factor. On a windy night with clear or cloudy skies, leaf temperature will be about the same as air temperature. On a cold, clear night with little or no wind movement, however, leaf temperature can easily drop several degrees (3 to 4 degrees) below the air temperature because of supercooling caused by frost.

While the temperature ranges given above seem low, those given are only for leaf or wood damage. Citrus fruits easily freeze at 26 to 28 degrees when these temperatures occur for several hours. Ripe fruit can withstand lower temperatures more than green or immature fruit because sugar lowers the freezing point of the juice in the fruit, reducing the chances of freeze. If you have no way of protecting your citrus from freezing temperatures, it may be best to pick as much of the fruit as possible before extended freezing temperatures occur. I recommend checking the weather daily for changes in temperature leading up to a potential freeze to help make your decisions.

So, what can you do to protect your citrus trees? If you have citrus growing in pots, move them inside your garage, greenhouse, or Florida room; for in-ground trees, cover, if possible, with a light blanket, sheet or plastic but remove them when temperatures get above freezing; use old Christmas lights to produce heat in the tree but, the new LED type bulbs are NOT recommended; use other heat sources, if feasible and safe, such as a blower heater; water (overhead irrigation or similar) can be sprayed over the tree to add an endothermic layer of ice to the tree. However, IF water is sprayed over the tree for protection, it must be started right before freezing and continued until temperatures are above freezing. Keep in mind ice will add more weight to limbs.

There is no benefit to pruning a freeze damaged plant until spring growth commences, and the full extent of injury is determined. Pruning might be counterproductive by stimulating faster bud activity before the danger of additional frost/freeze events has passed. If your citrus dies back below the graft union, any new limbs produced will be the old parent plant or rootstock and not like what you currently have. This fruit is usually bitter and not very good.

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Pruning Landscape Plants

We usually have a long window of opportunity to do many of our winter chores, and we can usually find a good day to suit our comfort level from late December through early March. With the cold weather we experienced during November, now is a great time to start to think about our pruning needs and preparing for pruning our landscape plants. We recommend waiting until the entire plant is dormant before doing any major pruning, as this can this cause unwanted stress to the plant or even cause a flush of new growth, which can then be injured by cold temperatures.

Pruning grapes and muscadines -Remember when pruning grape vines, the grapes are produced from the buds of one year old canes which are about 1/4 to 1/3 inches in diameter and are reddish brown. When properly pruned, 80 percent to 90 percent of the grape wood is removed every year. Now you know why people can make so many grapevine wreathes. Grape vines with a main trunk and four canes are often trained to a two-wire trellis. Before pruning, select four strong lateral one-year old canes (arms) that are close to the trellis and mark with a ribbon or colored tape. Tie the four arms to the trellis. Remove everything else. Prune off the ends of this year's arms so that 10 to 15 buds remain on each of the arms and only 2 to 4 buds are left on the renewal spurs.

Pruning is required to cut the current season's wood to two to four buds during the dormant season.

Pruning fruit trees -Peaches, plums, pears and apples especially require annual pruning to remain productive. If left unpruned, fruit production tends to be limited to the top and outer portions of the tree and every other year. Harvesting becomes a real chore, and becomes left to the giants of the family. Remove any diseased or crossing branches first. Then cut back last year's growth by about 50%. Peaches and plums are usually pruned to an open-center so remember to keep that area free of branches, while apples and pears are typically pruned with a central leader.

More detailed information on the correct procedure for pruning, as well as general care, of fruit trees can be found in the following publications at your local extension office or on the extension.msstate.edu website:

IS1434 - FRUIT AND NUT REVIEW - PEACHES, NECTARINES, AND PLUMS
IS1433 - FRUIT AND NUT REVIEW - APPLES AND PEARS
P2290 - ESTABLISHMENT AND PRODUCTION OF MUSCADINE GRAPES

Why Soil Testing is Important

Plants differ with respect to their soil pH and nutrient needs. Soils vary considerably in their capability to meet a plant's nutritional needs depending on factors such as soil parent material, soil texture and structure, the amount of organic matter, biological activities, regional climate, and current growing conditions. Taking a soil test and using the recommendations that come with it will help plants receive adequate amounts of nutrients needed for plant growth. Other benefits, such as minimizing fertilizer runoff into the environment and cost savings from applying only what your plants need, are also good reasons for taking a soil test.

Soil Sampling

The results of your soil test will be only as good as the sample you collect. Follow the four steps below to take a good soil sample.

Step 1

Take a small amount of soil from the top 4- to 6-inch depth and place in a bucket. Repeat process 5 to 10 times from different places in the area or plot you are sampling.

Mix the soil and transfer it to a pint size zip-lock bag (fill bag completely). Label the bag with a five digit code. Use a separate sample bag for each area; for example, one sample bag for the side lawn, one sample bag for the front lawn, and one sample bag for the vegetable garden.

Step 2

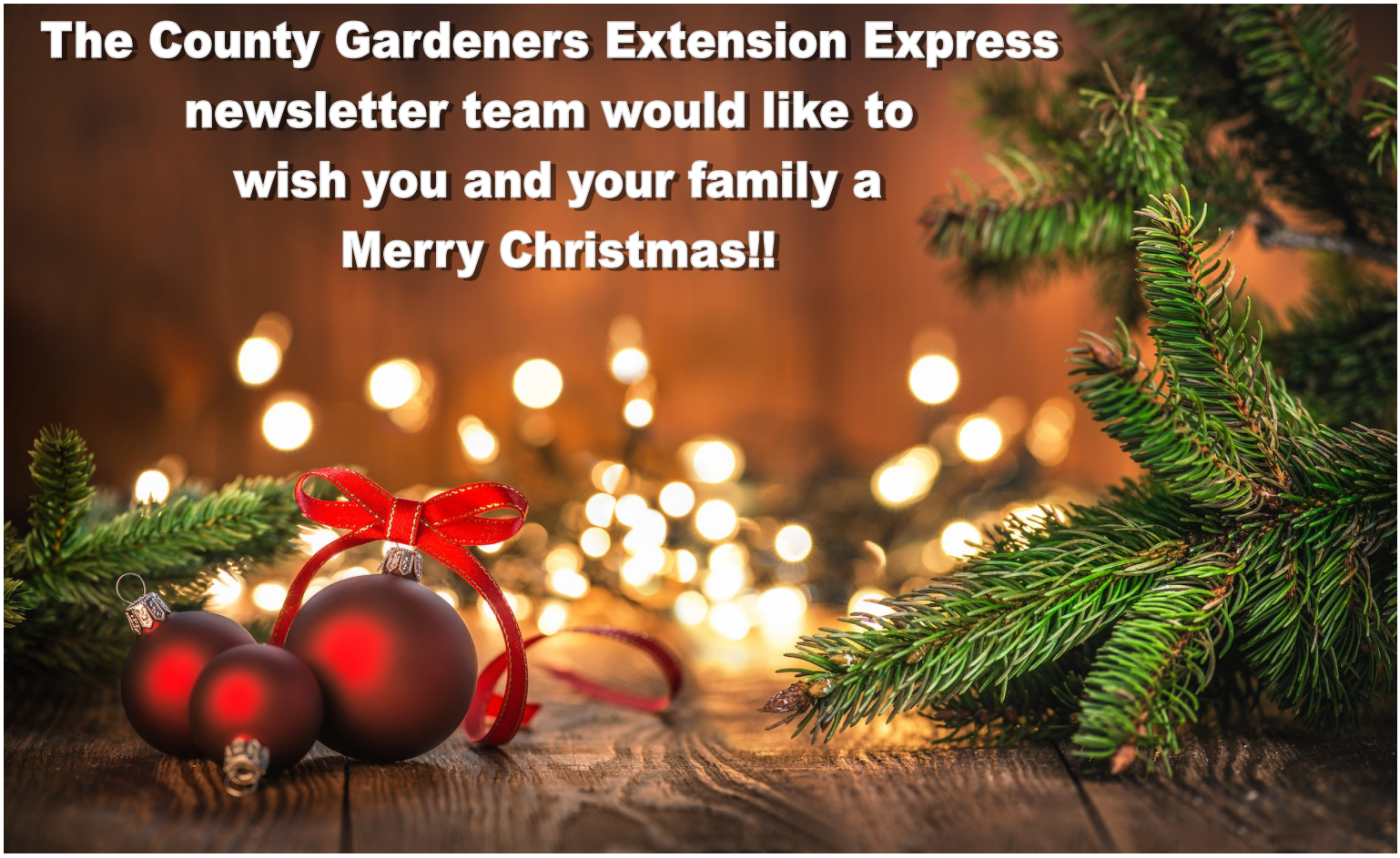
If you are sampling the area around your home divide your home area into different plots, according to use.

Step 3

Bring your soil samples to the county Extension Service office. **Make sure you bring a check or money order to pay for your soil test. The fee is $8.00 per sample.**

Step 4

The Extension Service staff will help you fill out a soil testing form and package your sample to be mailed to the soil testing lab. You should receive your results in about 10 days. If you have questions about your soil test results, contact the county Extension Service office.



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.