Horticulture Hints

Spring 2010

LSU AgCenter
Research & Extension

Landscape Gardening and Ornamentals

Avoid Bad Plant Choices

Over the years, I have often cautioned gardeners about plants that typically don't do well in Louisiana. When I do have some idea about a plant's poor performance in our area, I think it can be just as important for gardeners to know what plants are likely to fail as those that are likely to succeed.

Now, I have to be careful here. I can't tell you how many times I've given lectures and mentioned that this or that plant will not grow well here, only to be collared by gardeners afterward who tell me how well the plant grows for them. I long ago stopped saying a plant will not grow here. I now hedge my statements by saying things like, "This plant is challenging and generally does poorly here," or, "Gardeners I've talked to in this area found this plant did not thrive for them."

There are, of course, also times I get asked about a plant and can find no evidence it has ever been grown locally. I don't necessarily discourage gardeners in those situations. But I do make it clear they are on new ground. Only adventurous gardeners who are not afraid of failure and can afford the loss should select plants that do not have a proven track record in Louisiana. Still, it is these excursions into the unknown that may lead to discovering new and wonderful plants that thrive in our climate.

At this time of the year, when you are looking at garden catalogs full of lovely pictures, it's good to take a deep breath and do some research before you pull out the credit card or checkbook and send in an order. The plants you find at local nurseries are almost all well adapted to our state; but there is no such assurance when ordering from a catalog or the Internet.

Before ordering an unfamiliar plant, do some research using books written for Louisiana and the LSU AgCenter's gardening publications. If you find the plant is not listed in references and gardening books for our area, is not carried by local nurseries and isn't familiar to local gardeners, it's because either it doesn't grow well here or it hasn't been tried yet. Either way, you are rolling the dice.

LOUISIANA Master Gardener℠

Louisiana Master Gardener Volunteer Program

Gardening is the number one pastime in United States. Learn new gardening skills and enjoy volunteering in your community by becoming a Louisiana Master Gardener.

The Louisiana Master Gardener program is a volunteer project of the LSU AgCenter. Classes are conducted in 23 parishes across the state. Each class covers one or two topics, and the series usually takes two to three months to complete. The state fee is $75, and individual parish programs may charge an additional class activity fee.

All Louisiana Master Gardener volunteers are asked to perform a minimum number of volunteer hours and continuing education hours each year to maintain their certification. For more information, contact your parish LSU AgCenter extension office or go to www.lsuagcenter.com.

Louisiana Master Gardener extension volunteers have accomplished a great deal in their communities.

Here are examples of the breadth of their service in Louisiana communities:

- 1,501 active Louisiana Master Gardener volunteers
- 1.71 million public contacts
- 57,304 volunteer hours (which is equivalent to having more than 30 full-time agents)
- Volunteer effort has a major economic impact and is worth $1.35 million to Louisiana

Learning and sharing your gardening knowledge as a Louisiana Master Gardener in your community is a worthwhile experience for you as a volunteer and for the people you help.

Bobby Fletcher Jr., Ph.D., Assistant Director, Louisiana Cooperative Extension Service, and Interim Southeast Region Director, LSU AgCenter

Planting Azaleas

Like all hardy shrubs, the best planting season for azaleas is October through March. If you intend to add some of these outstanding flowering shrubs to your landscape, try to get yours planted by the end of March or early April – before intense heat arrives.

Azaleas require good drainage, but they also need an even supply of moisture and will not thrive in a location that is constantly wet or constantly dry.

Some cultivars of azaleas will tolerate full sun if provided with a well-prepared bed and adequate moisture. Generally, however, azaleas grow best when they receive some shade during the day.

Four to six hours of morning sun provided by an eastern exposure is considered ideal. If planted where it's too shady, azaleas tend to have sparse foliage, look leggy and bloom poorly, so you have to achieve a balance, since azaleas may wilt frequently during hot, dry weather and their leaf edges can become scorched and brown if they're placed where it's too sunny.

Careful bed preparation will help ensure success. A soil high in organic matter is important. After removing unwanted grass or weeds from the bed, turn the soil to a depth of at least 8 inches and break up the clods. Next, spread 3 to 4 inches of compost, aged manure, composted finely ground pine bark or peat moss over the area. If your soil is alkaline, apply finely ground sulfur or copperas (iron sulfate), according to package directions, to help make the soil in the bed more acid. Azaleas prefer an acid soil. Finally, sprinkle a light application of an all-purpose or acid-loving plant fertilizer over the bed. Thoroughly incorporate everything into the bed, rake it smooth and you're ready to plant.

Water the plants prior to planting if the soil in the pots is dry. Arrange the azaleas in the bed while they are still in their pots to get the spacing and arrangement right. Remove the pots before planting. After removing a plant from its container, you may see a very dense network of roots around the outside of the root ball. This is not uncommon in container-grown plants. Use a knife to vertically cut into the root ball in several places, or use your fingers to pull the root ball apart and loosen it up. This will encourage the roots to grow out into the surrounding soil.

Plant azaleas so the top of the root ball is at, or slightly above, the soil level in the bed. Do not plant them too deep! Gently firm the soil around each plant with your hands to eliminate air pockets.

Azaleas are shallow-rooted and benefit greatly from mulch. As soon as they are planted, mulch the bed with about 2 to 3 inches of pine straw, leaves or pine bark.

Finally, thoroughly water the bed to finish settling the soil. It will be important to thoroughly and regularly water your newly planted azaleas whenever the weather is dry this coming summer.

Azaleas already growing in the landscape should be fertilized as soon as they finish flowering. Use a general-purpose or acid-loving plant food.

If the leaves at the ends of the branches are yellowish-green with green veins, they need iron. Treat them with chelated (pronounced KEY-lay-ted) iron, available in such products as Liquid Iron, and acidify the soil in their bed with copperas or a liquid soil acidifier.

Summer Bulbs

Summer-flowering bulbs provide an excellent way to introduce color and interest into the summer landscape.

Most summer-flowering bulbs are native to tropical or subtropical climates and will reliably bloom here for many years. Indeed, for some of these plants, the trick is not getting them to grow but rather keeping them under control.

Summer-flowering bulbs generally are planted in April and May, although plants growing in pots can be planted through the summer.

These plants fill a wide variety of uses in the landscape – providing valuable additions to flower beds, perennial borders, ground covers and containers. There are summer bulbs adapted to just about every growing condition in your landscape, from sun to shade and well-drained beds to boggy areas. Think of them as long-lived herbaceous perennials that will contribute flowers and/or foliage to the area where they are planted for many years.

Summer bulbs will grow more vigorously if you prepare the planting bed properly and fertilize them occasionally. You generally should dig generous amounts of organic matter, such as compost, aged manure or peat moss, into the area before you plant your bulbs. A light sprinkling of a general-purpose fertilizer should be incorporated along with the organic matter.

For existing summer bulb plantings, fertilizing in April and again in July with a general-purpose granular fertilizer is quite sufficient. You may have found that some of your summer bulbs have grown vigorously in the past without fertilization (perhaps even more vigorously than you anticipated or desired). Under those circumstances, you do not need to, and probably shouldn't, fertilize them.

These summer bulbs thrive in Louisiana:

- **Full sun to part sun:**
  Agapanthus, Belamcanda, Bulbine Calla, Canna, Crinum, Crocosmia, Dietes, Garlic Chives (*Allium tuberosum*), Gladiolus, Gloriosa Lily, Habranthus, Hymenocallis, Iris, Lilies, Oxalis, Scilla peruviana, Stargrass (*Hypoxis angustifolia*), Tigridia, Society Garlic (*Tulbaghia*) and Zephyranthes.
- **Part shade to shade:**
  Achimenes, Alpinia, Arisaema, Bletilla, Caladium, Calla, Costus, Curcuma, Globba, Hedychium, Hymenocallis, Kaempferia, Walking Iris (south Louisiana) and Oxalis.

Pruning Crape Myrtles

One of the most abused trees in Louisiana's residential and commercial landscapes is the crape myrtle. Crape myrtles need occasional pruning to obtain the desired landscape effect, but many times these plants are butchered for no good reason.

An unfortunate trend in crape myrtle pruning is to "lop off the tops," which results in a tree reduced to trunks ending in stubs. The lush growth that occurs at these cut sites may appear vigorous but actually is structurally weak and is more susceptible to fungus diseases such as powdery mildew. In addition, when pruning is conducted improperly over several seasons, unsightly large, swollen knobs form at the point where pruning is done each year.

Horticulturists and landscape architects across the southeastern United States are appalled that this method of pruning continues to increase. There is not another small, flowering tree used in Louisiana landscapes that is treated this way. Why should we do it to crape myrtles?

Unfortunately, some gardeners have somehow gotten the idea they are supposed to prune their crape myrtles this way (generally from seeing crape myrtles that have been pruned this way). Nothing could be farther from the truth. For the overwhelming majority of us, enhancing the natural shape of our crape myrtles is most appropriate.

Some gardeners have been told crape myrtles need to be pruned that way to bloom well. This is not accurate. Unpruned crape myrtles bloom beautifully. For trees pruned back, the flower clusters may be larger, but the added weight on the ends of long branches causes them to bend over awkwardly, especially after it rains. Since the tree is smaller after such pruning, there actually are fewer flower clusters produced.

Sometimes crape myrtles are pruned improperly in an effort to create a different shape. There are a wide variety of crape myrtle cultivars available. Some grow tall and upright like a vase, while others are shorter and spreading, more like a mushroom. You cannot make an upright growing crape myrtle grow in the shape of a mushroom by cutting it back. The new growth will simply grow upright again over time. So if you want a crape myrtle that will mature the shape you desire, make sure you choose one that naturally grows that way.

Sometimes young crape myrtles are cut back to make them look "fuller." Young trees often appear more spindly and less substantial, but this is a matter of age rather than something that needs to be corrected with pruning. Young crape myrtles are not supposed to look like old crape myrtles. Over time young trees will attain the shapely, full canopies of older trees without drastic pruning.

People also say they need to cut a crape myrtle tree back because of its size. If the height of the crape myrtle is not causing a problem with a nearby structure or power lines, however, there is little reason to reduce a tree's height. To cut a crape myrtle back for the vague reason of "it just seems too large" ignores the fact that these plants are trees.

To prune a crape myrtle properly, first decide if it needs to be pruned. As with any pruning project, you must have a specific, valid purpose in mind before you begin. In other words, if you can't come up with a good reason to prune your tree, leave it alone. If you do see something that calls for pruning, study the tree carefully and determine what needs to be pruned to accomplish the specific purpose identified.

Every crape myrtle will need some pruning in its life to grow properly and fit in well with its surroundings. One important reason to prune is to eliminate crossed and rubbing branches, since rubbing branches can lead to open wounds.

Over time branches that are too low on the trunk will need to be pruned to raise the canopy. We often need to remove weak, thin branches from the inner part of the tree to produce a cleaner looking tree. Selected branches may need to be pruned back to a side branch or the trunk to create a shapelier tree. Of course, you need to prune to keep suckers removed from the base of the trunk.

Generally, avoid cutting back or shortening branches much larger than your finger, although cutting larger branches back to a side branch or to the trunk when needed is fine.

You may also need to redirect the direction of a branch's growth. This can be done by studying the branch carefully and looking for a side branch that grows in the desired direction. Prune back to that branch, and you have redirected the growth of the branch. This can be helpful where trees are too close to a structure, such as a house. Branches can be redirected to grow away from or up and over the roof line.

With its smooth, muscular trunks, peeling bark, filigree of leafless branches in the winter and exceptionally long blooming season in summer, the crape myrtle is rightfully popular here. Make sure you keep yours looking its best.

Consider Color When Planting Flower Beds

Lots of warm-season bedding plants are added to landscapes this time of year to provide color through the summer months.

Creating an attractive, colorful look with bedding plants is easier than ever, but it's a good idea to do a little thinking and planning before you go to the nursery. You generally will be more pleased with the results if you have a plan.

First, decide on a color scheme. It's flabbergasting that gardeners who take the time to worry if the colors of their couch, carpet and curtains go together will grab anything in bloom at the nursery and plant it together in a flower bed. No one can tell you what colors you should use in your flower beds. You know what you like. But think about it and consider which colors you will combine for this season. Generally, avoid purchasing bedding plants in cell packs of mixed colors, so you have control over which colors you will combine.

If you are unsure, combine cool colors together (reds with a blue tint, burgundy, rose, pink, magenta, purple, violet, lavender, blue, navy and any variations of those colors) or warm colors together (reds with an orange tint, orange, gold, yellow, rust, peach and any variations on these colors) for reliably harmonious results. Blue, white and gray will combine with just about any color scheme.

Use color where you want to focus attention, such as at your front door. Never use color to "beautify" an unattractive feature in your landscape such as a trash can area. That will only make sure everyone notices it.

In general, reduce the number of colors you use for best results. Or, in other words, use the colors you like in combinations that you like, but don't use every color you like at the same time in the same bed.

It also is important to plant individual colors in masses or groups, especially if the bed will be viewed from a distance (as in a front bed being viewed from the street).

Use pastel colors in areas that will be viewed primarily in the evening, since pastels show up better in low light. Pastel colors make a space look larger and more open and tend to create a serene, restful mood. Vibrant, rich colors, on the other hand, energize the landscape and can help make a larger area seem smaller and more intimate.

The large amount of green foliage that appears in the landscape makes it more forgiving of wild color combinations, but it's best not to push too far.

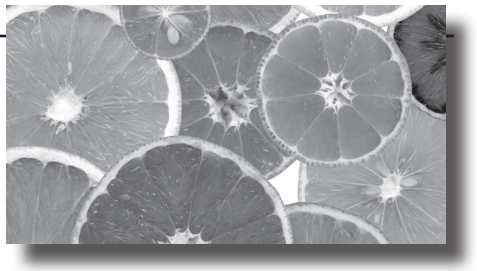
We wouldn't presume to tell you which colors you should like or combine to create flower beds you'll be proud of. But we will stress you should give it some consideration.

Checklist for March, April and May

1. Plant warm-season bedding plants beginning in mid-March (south Louisiana) or mid-April (north Louisiana). For best results, plant petunias by mid-March and wait to plant periwinkles (vinca) until late April.
2. After spring bulbs that reliably bloom again each year have finished flowering, don't rush to trim the foliage. Wait until the foliage turns yellow before cutting it off. Food is being manufactured and stored for next year's blooms.
3. Mulch plants to reduce watering requirements, suppress weed growth and minimize soil temperature changes. Excellent mulches are pine straw, chopped leaves and pine bark. Mulch should be applied 2 inches thick for effective weed suppression.
4. Divide and transplant older, large clumps of chrysanthemums in early March. Failure to divide plants can result in weak, spindly growth with few flowers.
5. Coleus is a great annual bedding plant for Louisiana's landscapes. Try some of the newer sun-loving varieties.
6. Fertilize shrubs in the spring using a general-purpose fertilizer. Carefully follow the label directions.
7. Watch for insect problems this spring. Lace bugs on azaleas and aphids or whiteflies on gardenias are common. Also examine camellias, sasanquas and hollies for scale insects on the lower foliage. Control with acephate, imidacloprid or horticultural oil sprays.
8. To encourage more rapid re-blooming, pinch off old flowers on bedding plants after their first flower cycle is completed this spring.
9. Roses may develop insect problems. Watch for aphids on tender new growth, thrips on flowers and cucumber beetles on foliage. Beetles may be a problem if a vegetable garden is nearby.
10. Garden centers will have many crape myrtles in May and June. Plant these shrubs and trees (depending on the variety you select) for great flowering all summer. Most varieties also have exfoliating, colored bark.

Dan Gill
Consumer Horticulture

Citrus Considerations



Citrus was first introduced into the continental United States by the early Spanish explorers at Saint Augustine, Fla., in 1565. Considerable time elapsed before citrus was introduced into Arizona (1707) and California (1769).

History also indicates citrus plants have been grown in gardens for many years in states that border the Gulf of Mexico, and some even has been grown as far north as Charleston, S.C. Small satsuma plantings developed in the Gulf states as early as the 1890s, But the freezes of 1894-95 and 1899 largely destroyed this early attempt.

Plantings again resumed until the freeze of 1916-17 struck, killing thousands of acres of citrus crops. By the early 1940s, the hardy satsuma had again made a comeback – when some 12,000 acres of plants were growing in the Gulf Coast areas of Louisiana, Alabama and northern Florida. But freezes in the two decades following World War II all but eliminated these plantings again.

Selecting Varieties

The three general classes of citrus that produce sweet fruits are mandarins, sweet oranges and grapefruit. All of these citrus types develop into attractive medium to large trees. But some are better adapted to coastal Louisiana conditions than others.

If the producer grows citrus outside and wishes to harvest the fruit, varieties should be selected that can be harvested early (September through November). Beginning in December (sometimes late November), freezing temperatures often are severe enough to freeze fruit while not damaging the trees. Freeze protection methods available to producers may be inadequate to keep fruit from freezing during December.

Mandarins

The mandarin class includes a large group of loose-skinned, deeply colored, highly flavored fruits. They are sometimes referred to as the kid-glove (easily peeled) fruits.

Within this group are the mandarins, satsumas, tangerines and tangerine hybrids. The terms mandarin and tangerine are used interchangeably for a number of loose-skinned fruits, depending on where they are grown. For example, the 'Dancy' variety is called a tangerine in Florida and a mandarin in California.

Unlike other types of citrus, cross pollination is required for optimum fruiting of a number of mandarin (tangerine) varieties and hybrids.

Satsumas

The highest degree of success and greatest satisfaction in growing citrus in Louisiana will be realized with satsumas. They withstand colder temperatures than the other forms of edible sweet citrus, produce more consistent crops over a longer period of time and require less cold protection.

The satsuma is a mandarin. It has excellent cold-hardiness and ripens its fruit well ahead of most freeze problems in Louisiana (September to November). Varieties generally available at retail outlets in the state include: 'Owari,' 'Kimbrough,' 'Brown's Select,' 'Louisiana Early,' 'Early St.Ann' and 'Armstrong Early.'

When grown under warmer climatic conditions (such as Florida), fruit often retain their peak quality for not much longer than two to four weeks, after which they may become puffy and rough in appearance and lose flavor and juice content. Under the cooler Louisiana climatic conditions, however, fruit tends to remain in good condition on the tree, retaining its juice and flavor for one to two months or longer after reaching full maturity.

Satsumas may become fully ripened for eating while peel color is still rather green. Certain fruits will ripen ahead of others, too. By beginning to harvest when the first few fruits become ripe, growers can lengthen the harvesting period by at least one to two weeks. For commercial purposes, however, it usually is desirable to wait until at least a prominent orange color has developed on the greenish peel (rind).

Cold Hardiness and Factors Affecting Freeze Damage

Among the citrus types that are most easily killed by freezing temperatures are citrons, lemons and limes. Temperatures from the mid- to high 20s will readily kill or severely damage these plants.

Sweet oranges and grapefruit are somewhat more cold-hardy and usually require temperatures in the low to mid-20s before incurring major damage to large branches.

Tangerines and mandarins are quite cold-hardy, usually withstanding temperatures as low as the low 20s before significant wood damage occurs.

Among the edible types of sweet citrus, however, the satsuma has the greatest degree of cold-hardiness. Properly hardened bearing trees will withstand temperatures as low as 18 to 20 degrees F without appreciable wood damage.

Temperatures at ground level can be several degrees colder than temperatures around the canopy of the tree, especially if there is no wind.

Keep in mind that the temperature ranges given above refer only to leaf or wood damage. Citrus fruits may freeze at 26 to 28 degrees F when these temperatures last for several hours. Further, a longer duration of freezing temperatures is required to freeze fruits of grapefruit as compared with sweet oranges. And tangerines and satsuma fruits are the most easily frozen of the common citrus.

The particular temperature at which tissue of a given plant will freeze and the degree of the damage sustained are functions of a number of factors in addition to the species and variety involved. Some of the more important are:

- The freezing temperature reached
- The duration of the freezing temperature(s)
- How well the plant became hardened or conditioned before freezing temperatures occurred (The freezing point of tissue of a hardened citrus plant may be 5 to 6 degrees lower than an unhardened plant.)

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Lawns should be showing signs of spring re-growth, but you should be careful not to push growth too early with lots of fertilizer.

If fertilized too early, winter weeds will be fed – causing them to linger longer into the growing season. In addition, applying fertilizer or weed and feed too early may encourage brown patch disease (dead looking patches) in the lawn.

Large dead areas probably are die-outs from winter kill or fall brown patch disease. Treat these diseased areas with fungicides like PCNB, iprodione, Bayleton, mancozeb, captan or thiophate.

Consult your parish LSU AgCenter Extension agent for more information concerning brown patch disease.

Choose Correct Mower Settings

Cutting heights are important for healthy grass.

Choose the higher end of the recommended cutting height for grasses growing in the shadier areas.

Also, sharpen mower blades before the season and at midseason, too. And don't forget to replace old oil with new and stale gas with fresh before you start your mower this spring.

Cut grass to these recommended heights: common Bermuda grass – 1½ to 2 inches; hybrid Bermuda grass – 1 inch; zoysia – 1 to 1½ inches; centipede grass – 1½ to 2 inches; St. Augustine grass – 2½ -3 inches.

April Fertilizing

By late March (New Orleans and some other south Louisiana areas) to mid-April (north Louisiana), most grasses should be fully out of dormancy and actively growing in the state.

So it is time to start feeding your lawn. Turf fertilizers with high first number, low second number and medium last number are preferred unless a soil test shows otherwise.

For Bermuda grass, zoysia and St. Augustine lawns, consider applying fertilizer in April, June and August. For centipede lawns, apply fertilizer only one or two times during the growing season (April and July). Carpet grass needs very little fertilizer; once in spring is enough.

Lawn Weed Control

Herbicides can be effective tools for reducing weeds in your yard, but the best weed control is a thick healthy lawn.

Your parish LSU AgCenter Extension agent can advise you on fertilizer and other cultural practices that will improve the overall health of your lawn.

Weed preventer or pre-emergence herbicides may be applied safely in late winter and early spring to all established southern lawns. These products usually are granular and should be applied with drop or broadcast spreaders and watered in soon after application.

Pre-emergence herbicides are effective in reducing the emergence of several annual grasses like crab grass and goosegrass that infest lawns throughout the state. In other words, these herbicides work before you even see the weeds infesting your lawn.

Some pre-emergence herbicides available to homeowners are Green Light Crabgrass Preventer, Scott's Halts and Hi-Yield Crabgrass Control.

In most areas of the state, late winter to very early spring are key timings for pre-emergence herbicides for the lawn.

Post-emergence herbicides are used to kill weeds that have emerged. Apply post-emergence herbicides either before or several weeks after first green-up but not during first green-up.

Winter broadleaf weeds usually are prevalent in the spring. These broadleaf weeds often can be controlled by using selective liquid post-emergence "trimec-type" herbicides that contain formulations with three weed killing ingredients, 2,4-D, dicamba and mecoprop.

These herbicides are widely available and can be used on most southern grasses. Be extra careful, however, when using them on St. Augustine grass when the weather gets warmer.

Some trade name examples of trimec-type broadleaf herbicides are Bayer Advanced Southern Broadleaf Herbicide, Ortho Weed B Gon for Southern Lawns, Spectracide Weed Stop, Trimec and Ferti-lome Weed Free Zone.

Most herbicide labels will stress the use of these products on younger weeds at temperatures below 85 degrees. Even when used as directed, a temporary discoloration of the lawn may occur following the use of these herbicides. Some products will recommend a follow-up spraying two or three weeks after the first application.

When applying liquid herbicides in spot treatments, take care to wet the weed foliage only. Don't saturate the soil. And follow the manufacturer's recommendation for the amount of water and spray material to cover a given area – as well as the recommendations regarding mowing practices before and after the herbicide application.

In most cases, you should mow herbicide-treated lawns several times before collecting clippings for compost or mulch (consult herbicide label).

Avoid herbicide drift, and keep spray away from gardens. Tomatoes, okra and peppers are very sensitive to herbicides that contain 2,4-D.

Clean your sprayer thoroughly with an ammonia solution if the same sprayer is used for applying insecticides or fungicides on good plants. It is best to buy a sprayer specifically dedicated for weed killers, however, to avoid accidental injury to desirable plants.

Granular weed and feed products like Scott's Bonus S may be used when the first fertilizer application is recommended in your area of the state. This usually corresponds to a window of application from late March to mid-April for Louisiana. These products should be watered in soon after application.

Ron Strahan
Weed Scientist/Turfgrass Specialist

Vegetable Gardening

Spring is a great time to start a vegetable garden. There are three prominent times to plant vegetable seeds and transplants in your garden – March, April and May. Planting schedules are listed below.

Vegetables to Plant in March

Direct plant snap bean, Swiss chard, radish, lettuce, collard, mustard, turnip, cabbage, broccoli and sweet corn seeds. Plant tomato, pepper and eggplant transplants. Plant cantaloupes, squash, cucumbers and watermelons well after danger of frost has passed.

... and in April

Plant snap beans, butter beans, radishes, collards, cucumbers, eggplants, cantaloupes, okra, Southern peas (field peas), peanuts, pumpkins, winter squash, summer squash, sweet corn, sweet potatoes (late April), tomatoes (transplants), peppers (transplants) and watermelons.

... and in May

Most spring vegetables can be planted in May, since the soil has warmed and danger of frost has passed. Plant sweet potatoes (transplants), heat-tolerant tomatoes, okra, Southern peas, pumpkins, peanuts, sweet corn, watermelons, cucumbers, butter beans, squash, cantaloupes, collards and eggplants (transplants). Fruit set in the following vegetables is sensitive to high temperatures, so plant them during the first part of May for best results: snap beans, butter beans, sweet corn, tomatoes (except heat-tolerant varieties) and peppers (transplants).

Crop Highlights

Sweet corn. Planting corn early helps reduce problems from the corn earworm. The earliest planting should be made seven days before the average last frost date for your area. Plant every two to three weeks to provide a continuous supply of sweet corn. Remember to plant the same variety in a block of at least three rows side by side at each planting. This will help to ensure good pollination and well-filled ears.

When planting sweet corn, drop two or three seeds every 8-12 inches in the row and cover to about ½-1 inch deep. After the seeds germinate and the plants are 3-4 inches tall, thin to one plant per hill. Side-dress a 100-foot row with ¾-1½ pounds of ammonium nitrate when the plants are about 12 inches high and again when the plants are 24-36 inches high. One pint of fertilizer is about 1 pound.

Dust or spray silks with Sevin about every two to three days after silks first appear and until silks begin to dry. This treatment will help reduce corn earworm damage.

Harvest sweet corn early in the morning while it is still cool. Chill or cook immediately after harvesting. Sweet corn that is ready to harvest should have a well-filled ear. Kernels should be bright and plump, and their juice should be milky.

New high-sugar varieties have more room for error in harvesting because they are sweeter and stay sweet longer.

A recommended early maturing regular variety is Seneca Horizon. Midseason varieties are Funks G90, Gold Queen or Merit. Late-season regular varieties are Silver Queen (white), Iochief, NK199 or Golden Cross Bantam. Three ounces of seed will plant 100 feet of row.

Try the improved super sweet (Sh2) and enhanced (EH) (se) varieties of sweet corn. They are much sweeter than regular sweet corn and hold their sweetness longer. The super sweets need to be isolated from field corn or regular sweet corn; however, because they lose some of their sweetness when pollinated by these other types of corn. The super sweets don't germinate well in cool soils, so wait until soil has warmed considerably before planting. If you love to eat fresh corn on the cob, try these improved super sweets.

Many new high-sugar modern varieties also are commonly available now. The best include (early) Platinum Lady, White Out, Xtra-Tender 372, Temptation, Sweet Ice, Bodacious, Sweet Riser, Dazzle, Lancelot and Precious Gem; (midseason) Argent, Devotion, GSS966, Passion, BSS982 or 977, Snowbelle, Summer Sweet (7630Y, 7210, 8102), Honey Select, Crisp N Sweet 711, Incredible, Prime Plus, Big Time, Sweet Chorus and Sweet Rhythum; (late or long season) Even Sweeter, Pegasus, Tahoe and Silver King.

Snap beans. Plant bush varieties every two weeks, starting right after the average last frost date for your area. This will provide a continuous harvest for an extended period.

Good bush snaps for Louisiana are Ambra, Bronco, Contender, Pod Squad, Valentino, Dusky, Festina, Hialea, Magnum, Storm, Strike, Provider and Bush Blue Lake 274. An All-America Selection is Derby. Try Roma II for a good eating, flat Italian pod bean. For a purple pod bush snap, try Royal Burgundy in early spring. Those who prefer the yellow wax beans should choose Golden Rod Wax, Goldmine or Golden Improved.

One-half pound of seed will be more than enough to plant a 100-foot row. Plant seed about 1-2 inches apart in the row.

High temperatures at bloom cause many of the flowers to fall off. Generally, beans don't produce well when planted in late May. For best quality, harvest pods before the developing seeds cause the pod to bulge. Beans can be held for up to seven days at 40-45 degrees F and 90-95 percent humidity.

Pole snap bean varieties produce larger yields, since they produce for a longer period than bush varieties. Space seeds about 6-12 inches apart. About 2-3 ounces of seed will plant a 100-foot row.

For pole snaps, the All-America Selection winner is Kentucky Blue. The Blue Lake KY Wonder 191, Dade, Rattle Snake and McCaslan have done well

in Louisiana. For those who want a bean that sets well in the heat, try the vigorous Yardlong Asparagus Bean, and harvest pods when about 18 inches high.

Tomatoes. Begin transplanting plants in mid-March in south Louisiana or at the end of March in north Louisiana after the danger of frost is over. If a frost occurs, you will need to cover the newly planted transplants!

To avoid severe damage from disease and insects, spray tomatoes after fruit set every seven to 10 days with a fungicide (Daconil or Maneb) and an insecticide (Sevin or Malathion).

Plant tomatoes in a well-drained site that receives plenty of direct sunlight. The best location for tomatoes is one that receives at least seven to eight hours of direct sunlight a day. When tomatoes receive too little sunlight, few blossoms are formed, and many that do form fall off before setting any fruit.

Space tomato plants 18-24 inches apart. When transplanting, pour about 1 cup of a starter solution in the hole. Make your own by mixing ½ cup of a complete fertilizer (8-8-8) in 2 ½ gallons of warm water. Commercial soluble fertilizers also are available. This will encourage a strong root system and faster growth.

Tomato vines may be determinate or indeterminate. Indeterminate types have a vegetative terminal bud that continues to grow. Determinate types have a fruiting terminal bud that keeps the plant from growing beyond a predetermined height. Determinate types are better suited for container gardening. Indeterminate types will need to be staked in the field.

Indeterminate varieties that grow well in Louisiana include Better Boy and Big Beef (large), Champion, Fantastic, Terrific, Sun Gold, First Lady, Husky Gold (dwarf) AAS, Jet Star (low acid), Monte Carlo, Pink Girl (pink); cherry - Sweet Million, Sweet Chelsea, Jolly, Small Fry, Juliet, Elf, Elfin, Navidad, Cupid, Mountain Belle and St. Nick.

Determinants have very productive vines that grow to heights of 4 feet. Stems terminate in a flower cluster. Determinants should be pruned only once or twice up to the first cluster.

Recommended determinate types for Louisiana include Celebrity (an AAS winner, best taste), Carolina Gold, Fla. 47 or 91, Mountain Spring, Cherry Grande (cherry), Floralina, Mountain Fresh and Mountain Crest. Also try Sun Master, Sunleaper, Summer Flavor 6000, Mountain Spring and Phoenix.

Note: The spotted wilt virus has nearly eliminated tomato production in some areas. If you had this trouble, plant Bella Rosa, Amelia, Crista, Quincy or Talageda variety. These are resistant types.

Bell peppers and eggplants. Wait to transplant bell peppers and eggplants until the weather has warmed considerably. These vegetables are sensitive to cold soils and weather. Once stunted by cool weather, they recover slowly.

A garden site with full sun is required for growing bell peppers. Any shade will greatly reduce fruit set. Space peppers about 12-18 inches and eggplants about 18-24 inches.

Recommended nonhybrid varieties of bell peppers for Louisiana are Capistrano, Jupiter and Purple Beauty. Recommended hybrids are Aristotle, Camelot, Revolution, and Heritage. Valencia, Paladin, Plato, Super Heavy Weight, Blushing Beauty and the piquant Mexibell hybrids are AAS winners. For a yellow bell, try Orobelle, Summer Gold, Valencia or Summer Sweet 8610.

Aruba, Carmen, Giant Marconi, Gypsy, Cubanelle, Ivory, Banana Supreme, Biscayne and Aconcagua are not bell-shaped but are sweet. Producing yellow and red bell peppers is difficult in our humid conditions.

Note: Spotted wilt virus has hindered bell pepper production in many areas. The varieties Stilleto, Patriot and Excursion II are resistant to spotted wilt virus. Try these varieties if you had trouble producing bell peppers or had trouble with tomato spotted wilt virus on your tomatoes.

Recommended hybrid eggplant varieties are Fairy Tale, Night Shadow, Blackbell, Calliope, Classic, Epic, Dusky, Santana, Rossita or oriental Ichiban. The green eggplant varieties produce well in Louisiana and are less bitter than the purple varieties in hot, dry weather. Seed and plants are not always available, however. The Louisiana Market Bulletin is a fairly good source for green eggplant seed and other hard-to-find vegetable seeds and plants. Good older eggplants are Florida Hi Bush and Black Beauty.

Cucurbits. All squash, cucumber and melon members of the cucurbit family can be planted in May, but yields may be lower than normal with the late plantings. Plant these outside well after the danger of frost is over. For transplants, start in pots two to three weeks before transplanting.

Recommended cucumber varieties for slicing are Taledega, Dasher II, Fanfare AAS, Diva AAS, General Lee, Speedway, Poinsett 76, Slice More, Thunder, Indy, Intimidator, Sweet Slice and Sweet Success. For pickling, try Calypso, Fancipak and Jackson.

Recommended summer squash crooknecks are Prelude II, Dixie, Gentry, Goldie, Supersett, Destiny III and Medallion. Recommended yellow straight-neck are Goldbar, Liberator III, Enterprise, Cougar, Multipik, Patriot II, Superpik, Fortune and Lemondrop. Recommended zucchini varieties are Declaration II, Justice, Independence II, Tigress, Lynx, Spineless Beauty, Senator, Gold Rush (AAS), Payroll, Revenue and Dividend. Recommended scallop or patty pan varieties are Peter Pan and Sunburst. Recommended hard shell (winter) squash varieties are Waltham, Butternut, Butternut Supreme, Early Butternut, Ultra Butternut, Tay Belle Acorn, Cream of Crop Acorn (AAS), Table Queen, Table King (AAS), Imperial Delight, El Dorado, Estrella, Celebration Acorn, Table Ace, Vegetable spaghetti, Tivoli Spaghetti (AAS), Golden Hubbard, Bush Delicata and Sweet Mama Buttercup.

Viruses are a big problem in squash production. Try planting some of the new virus-resistant varieties: Prelude II, Destiny (yellow crookneck), Liberator and Conqueror (yellow straight neck), Declaration, Payroll, Judgment III, Revenue and Independence (zucchini).

Recommended cantaloupe varieties are Odyssey, Eclipse, Aphrodite, Athena, Primo, Magnum 45, Super 45, Mission, Vienna, Ambrosia, Earlidew or Honey Max.

Recommended watermelon varieties are Crimson Sweet (OP), Jubilee II (OP), Fiesta, La Sweet (OP), Jamboree, Jubilation, Patriot, Regency, Royal Star, Royal Jubilee, Royal Sweet, Sangria, Stars 'N

Stripes, Starbrite and Summer Flavor 800, 710 or 500. Seedless varieties are Revolution, Summer Sweet 5244, TriX Carousel or 313, Cooperstown, Millionaire, Crimson Trio, Laurel or Nova. Ice box types are Sugar Baby or Mickeylee, and yellow varieties are Gold Strike, Tendersweet, Desert King or Butter Cup.

Apply 2-3 pounds of 8-24-24 or similar fertilizer per 100-foot row before planting. Side-dress with ¾-1 pound of ammonium nitrate or 1½-2 pounds of a complete fertilizer (13-13-13) per 100 feet of row when vines begin to run. Remove all but three to four well-shaped fruits from each plant when they reach 4-5 inches in diameter.

Pumpkins are much like winter squash, but the flesh is often coarser and stronger. For a small size, choose Oz, Spookie, Small Sugar, Trickster, Baby Bear or Prankster. Recommended medium-size pumpkins are Frosty, Casper (white), Lumina, Neon, Howdy Doody, Autumn Gold (AAS winner), Cotton Candy and Ghost Rider. Recommended large or jack-o'-lantern types are Howden, Howden Biggie, Appalachian, Spirit (AAS), Gold Rush, Big Autumn, Big Max, Gold Medal, Aspen, ProGold 510, Gold Bullion, Sorcerer and Big Moon. For an extra-large pumpkin, try Atlantic Giant, Full Moon or Prize Winner.

For Halloween pumpkins, plant seed in early July.

Cushaws are large, long-neck pumpkins that have a meaty, finer-textured flesh. Miniature pumpkins have been bred for ornamental use. Varieties include Munchkin, Jack-B-Little, Wee-B-Little, Lil Ironsides and the white Baby Boo.

Cucurbit hints: Don't be concerned if the first several squash fruit fall off the plant before they reach an edible stage. The first flowers to form in early spring squash are the female flowers (with the miniature fruit). Male flowers do not form at that time, so no pollination takes place. In a few days, though, the male flowers appear, and normal fruit set begins. In summer, the process reverses with the male flowers usually developing first and the females later.

Cucumber yields may be doubled by growing plants on a trellis. To get cucumber vines to climb a trellis or fence, you may need to tie them to the trellis in the beginning. Once they catch hold, however, they will continue to climb.

Use pesticides on cucurbits late in the afternoon so as not to reduce the bee population. Side-dress cucumbers, squash, watermelons and cantaloupes with ¾ pint ammonium nitrate per 100-foot row as vines begin to run. Weekly applications of a general-purpose fungicide (Daconil or Maneb) and insecticide (Sevin or Thiodan) starting at first bloom will protect the foliage and improve yield.

Plastic mulch will reduce fruit rot and enhance the production of cantaloupes and the other cucurbits.

Lima beans (butter beans). Lima beans require warmer soil (70 F) than snap beans to germinate, so wait until soil warms (usually in early to mid-April) before planting.

Bush varieties to plant are Henderson's Bush, Fordhook 242, Thorogreen, Bridgeton, Nemagreen, Dixie Butterpea or Baby Fordhook.

Plant lima beans every two weeks through mid-May to extend the harvest. One-half pound of seed will plant a 100-foot row when three or four seeds are planted every 12 inches within the row.

Recommended pole lima beans are King of the Garden, Carolina Sieva, Willow Leaf, Florida Butter, Christmas and Florida Speckled. Plant seeds 6-12 inches apart. One-quarter pound of seed will plant a 100-foot row.

Sweet potatoes. Bed seed potatoes during April and into May. Transplants should be ready to cut in four to five weeks. Sweet potatoes slips (transplants) can be set out in late April if soil is warm enough (above 70 F). Cut plants from plant bed about 1 inch above soil line and transplant. Purchase weevil-free plants.

Cutting rather than pulling helps reduce sweet potato weevils and many disease problems. Cuttings develop feeder roots within a day or two if the soil is warm and moist. Holding the cut slips in the shade for two to three days before transplanting will help increase survival.

Use a low nitrogen fertilizer such as 6-24-24 or 8-24-24 at 2-3 pounds per 100-foot row.

Beauregard, developed by the LSU AgCenter, is the most popular variety. It is high-yielding, very attractive and tastes great. Bienville requires a sandy soil.

Okra. Soil needs to be warm (65-75 degrees) for okra seeds to germinate. Soak seeds overnight in tap water to soften seed coat before planting.

Recommended varieties are Louisiana Green Velvet, Emerald, Annie Oakley (hybrid), Cowhorn, Cajun Delight-AAS, Burgundy and Clemson Spineless. Each of these varieties, except Louisiana Green Velvet, is semidwarf.

Peanuts. Many home gardeners wish to plant a row or two of peanuts. Shell the peanuts and plant about four seeds per foot of row. Plant peanuts in April and May.

Spanish peanuts have the smallest seeds. Runner types have intermediate-size seeds, and Virginia types have the largest.

Fertilize lightly with 1-2 pounds of 8-24-24 or similar fertilizer per 100-foot row. Soil should be high in calcium.

Onions, shallots, garlic. Harvest mature onion bulbs, garlic and shallots in the early summer. When mature, the tops begin to turn yellow or brown and fall over. Pull them, trim tops and roots and lay the plants on top of the row or place in burlap sacks for a couple of days to let them dry – if weather permits. Then store them in a cool, shaded and well-ventilated place. (Ideal storage for onions after drying is 45-50 degrees and 65-70 percent relative humidity.)

Irish potatoes. Begin digging 90-120 days after planting. Plant tops start turning yellow as tubers reach maturity. Allowing the potatoes to remain in the ground a few days after tops die or after tops are cut will help set or toughen the skin and reduce skinning, bruising and storage rot.

Spraying potatoes with a general-purpose fungicide (Daconil or Maneb) at the end of April or early May will protect the foliage from early blight and improve yields.

To keep potatoes for several weeks, allow cuts and skinned places to heal over at high temperatures; then store in a cool, dark place with high humidity. Don't store where they will receive light, because they will turn green and develop an undesirable taste.

Mulching

Remember to mulch your garden. There are several mulch options including black plastic, leaves and pine straw. Using mulch has several benefits including reducing weed germination, preventing soil from splashing on vegetable leaves and fruit, which, in turn, reduces insect and disease damage, and adding organic matter to your soil, thus improving soil health and tilth.

Fertilization

General vegetable fertilizer recommendations pertain to complete fertilizers, such as 13-13-13. Rates generally are based on 100-foot rows with soils of low-to-medium fertility. Perform a soil test. For soils of higher fertility, reduce the rate about 25-50 percent. One pint of liquid fertilizer is equal to about 1 pound of granular fertilizer.

Use the recommended amount of fertilizer for the plants listed:

1-3 pounds:
beans, Southern peas, okra,* English peas and sweet potatoes.

3-4 pounds:
beets,* cantaloupe,* watermelon,* carrots,* radishes, turnips,* lettuce,* onions,* garlic,* shallots,* mustard,* spinach, hot peppers,* squash* and cucumbers.*

5-6 pounds:
cabbage,* broccoli,* Brussels sprouts,* sweet peppers,* collards,* cauliflower,* tomatoes,* Irish potatoes,* eggplant* and corn.*

Crops marked with an * require at least one side-dressing of about ¾ pound (about 1½ cups) of ammonium nitrate per 100-foot row or per 300 square feet. Additional side-dressings will help obtain high yields (especially corn and tomatoes).

Note: An 8-24-24 or 7-21-21 usually is a better fertilizer than 8-8-8 for most vegetable crops because of the low ratio of nitrogen to phosphorus and potassium. One of these should be available in your area. If 8-24-24 or 7-21-21 are not available, don't hesitate to use 8-8-8, 13-13-13 or another complete fertilizer.

Kathryn Fontenot and Jimmy Boudreaux, Horticulturists

Fertilizing Pecan Trees

There are 17 nutrient elements that are essential for the growth and reproduction of pecans.

Pecans obtain carbon, hydrogen and oxygen from water and the atmosphere. The other 14 elements are divided into macro-nutrients and micro-nutrients.

Nitrogen (N), phosphorus (P), potassium (K), calcium (Ca), magnesium (Mg) and sulfur (S) are macro-nutrients, which are needed in fairly large quantities compared to the micro-nutrients. Zinc (Zn), manganese (Mn), iron (Fe), boron (B), copper (Cu), molybdenum (Mo), chlorine (Cl) and nickel (Ni) are micro-nutrients, which are required by pecans in very small amounts but are no less essential for good tree growth than the macro-nutrients.

These nutrients generally are taken up from the soil by the pecan roots, but often additional fertilizers are applied to maximize tree growth.

There are a large number of fertilizers available today, and choosing what type of fertilizer to use can be confusing.

All fertilizers are labeled with three numbers that indicate the guaranteed analysis or the fertilizer grade. These three numbers give the percentage by weight of nitrogen (N), phosphate (P_2O_5) and potash (K_2O). Often, these numbers are said to represent nitrogen, phosphorus and potassium, or N-P-K, but remember that it is not N-P-K, but N-P_2O5-K_2O.

For example, in a 100 pound bag of fertilizer labeled 10-10-10, there are 10 pounds of N, 10 pounds of P_2O_5 and 10 pounds of K_2O. This fertilizer actually would contain 10 pounds of N, 4.3 pounds of P and 8.3 pounds of K.

Other nutrients contained in the fertilizer will be listed on the bag, as well. These analyses allow the grower to select a fertilizer that contains the nutrients necessary for his or her specific situation.

When selecting a fertilizer, you may also need to consider the acidifying effect of the fertilizer. Nitrogen in the form of ammonium has an acidic reaction in the soil, while nitrogen as nitrates has an alkaline reaction. If your soil is acid and you are trying to raise the pH, avoid acidic fertilizers. A soil pH of 6.0 to 6.5 ensures the availability of essential nutrients. If the pH is too low or too high, uptake and use of nutrients is impaired. Apply lime as suggested in the soil test report to correct low pH. Sulfur can be applied to correct an excessively high (alkaline) pH.

The type or form the fertilizer comes in is called the formulation. Some of the formulations available to the homeowner include water-soluble powders, liquids, slow-release pellets, slow-release spikes, tablets and granular solids.

Fertilizer formulation can affect the quality of results. Granular and liquid formulations can be applied evenly and distributed to the entire root system. Spikes, pellets or fertilizer packets are convenient to use but concentrate the fertilizer in one spot, which may lead to root burn from excessive fertilizer.

Fast- and slow-release fertilizers are available, and both have pros and cons.

Fast-release fertilizers are immediately available to plants but are also subject to rapid depletion from the soil through leaching or volatilization. It also is possible to damage plants by burning them when fast-release fertilizers are applied too heavily. Burning occurs from tissue dehydration as a result of excessive fertilizer salt concentration near the roots.

Slow-release fertilizers are either organic material that must be broken down by microbial activity before nutrients are available to plants or slowly soluble or coated fertilizers that depend on soil moisture to release them. There is little loss from leaching with these materials, and the homeowner will not have to apply them as frequently as fast-release fertilizers. But, by the same token, nutrients are not immediately available to the trees.

Either slow- or fast-release fertilizers can produce good results if used correctly. Slow-release fertilizers generally are more expensive per pound, but the labor savings may be worth it. Follow label instructions regarding application rate or use as if it is not a slow-release formulation. The slow-release formulations usually are complete (provides N-P-K) fertilizers, which are thought to be more beneficial than a one element fertilizer such as ammonium sulfate (21-0-0).

Before you plant pecan trees, test your soil, because the results will help you to determine what type of fertilizer and how much of it you need to apply.

The fertility needs of pecan trees can vary. Young pecan trees transplanted in deep, loamy, fertile soil may not need fertilizer additions immediately. But trees transplanted in nonfertile, poorer soils may require several applications of fertilizer beginning in late May the year of transplanting.

When fertilizing such trees, very low rates are used to avoid damage caused by excessive fertilizer concentrations. Do not place fertilizer within 1 foot of tree trunks to avoid fertilizer burn on the trunk and large roots. Do not place fertilizer in the planting hole because it may injure roots.

Pecan trees often grow slowly during their first year of life, especially in heavier soils. You might see only 12 to 36 inches of growth the first year, regardless of fertilizer. It is not necessary to fertilize slowly growing young trees. If you see rapid growth, broadcast a complete fertilizer around the tree's drip line in May. Just remember, however, that even the correct fertilizer applied at the optimum time cannot compensate for poor growing conditions such as lack of moisture, inadequate disease or insect control, undesirable soil, excessive shade or poor variety selection.

Standard fertilization of lawns near and beneath pecan trees may supply much of the fertilization requirements of both trees and lawn. Additional fertilizer applications probably will be necessary, however, to supply nutrient requirements during years with large nut crops.

Fertilizer should be applied by broadcasting over the root zone of the pecan tree. Pecan roots usually extend beyond the limb spread of the tree. Exercise care when applying fertilizer, because excess fertilizer in narrow bands or clumps could injure lawn grasses or tree roots. Uneven application also can cause dark and light green streaks in the lawn.

Once your trees are bearing fruit, it is important that you do not stop fertilizing them annually. Continued fertilization of pecan trees will ensure steady crops.

For mature trees, the following guidelines, based on trunk diameter, can be used to determine how much fertilizer you need each year (Table 1). Apply ¼ pound of actual nitrogen per inch of trunk diameter measured about 4.5 feet above the soil line in late February or early March. Later during the growing season (May or early June), add an additional ¼ pound of nitrogen per inch of trunk diameter on trees that have a large nut crop. The fertilizer should be broadcast applied, beginning 3 feet from the trunk and extending just past the canopy.

Table 1.

Fertilizer Source	Analysis	Pounds per inch trunk	For 10" diameter tree
8-8-8	8-8-8	3.125	31.3 lbs
Calcium Nitrate	15.5-0-0-19	1.613	16.1 lbs
Ammonium Sulfate	21-0-0	1.190	11.9 lbs
Ammonium Nitrate	34-0-0	0.735	7.4 lbs
Urea	46-0-0	0.543	5.4 lbs

Zinc nutrition is especially important in pecan production. Zinc deficiency is a common problem for pecan trees and is often referred to as rosette. The most common and noticeable symptoms of rosette are bronzing and mottling of leaves; early defoliation; dead twigs in tops of trees; abnormally small nuts; small yellowish, chlorotic leaves; and short, thin twigs growing on older scaffold branches with rosettes of small yellowish-green leaves at the tips.

When zinc deficiencies occur on acid soils, zinc fertilizers can be applied to the soil for root uptake. Apply 36 percent zinc sulfate to the soil at a rate of 1 ½ pounds per inch of trunk diameter up to a maximum of 10 pounds per mature tree every third year.

On an alkaline soil with a pH of 7.0 and up, zinc must be applied to pecan trees by foliar sprays on the leaves at 14-21 day intervals from April through June. Use 2 to 3 pounds per 100 gallons of water or 2 to 3 teaspoons per gallon of water. Three sprays should be sufficient on older trees and three to five sprays on younger trees.

Zinc needs are best determined by a laboratory analysis of leaf samples taken in late July or early August. Instructions for taking leaf samples are available from any LSU AgCenter Extension Office. The leaf tissue analysis report will tell you how much zinc to apply.

Although most other nutrients usually are not deficient in trees growing in Louisiana soils, the leaf analysis also will detect if other nutrients need to be supplemented in your fertilizer program, and that information will be reported back to you.

Charlie Graham
Extension Pecan Specialist

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- Whether the plant is wet or dry (The killing temperature is 2 to 4 degrees F lower for a dry citrus plant.)
- Age of plant (A young plant cannot withstand as much cold as a more mature tree.)

Healthy trees are more hardy than diseased trees. Another complicating factor contributing to observations by some that citrus plants seem to freeze at higher temperatures in some years than others is the difference between air (ambient) temperatures and leaf (tissue) temperature.

On a windy night with clear or cloudy skies, leaf temperature will be approximately 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 F) below air temperature because of radiation heat loss. Thus, under such circumstances, while the minimum air temperature on a given night may have only been 25 degrees F, actual leaf temperature of the plants may have reached 21 to 22 degrees F. The critical temperature is that of the leaf or fruit and not the air temperature itself.

In addition, trees with a good fruit crop are less hardy than those with no fruit.

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Horticulture Hints





Spring 2010

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Parish agents, please adapt these suggestions to your area before disseminating.