

Upcoming Events:

2021 Summer Dean Lee Virtual Field Tour

Horticulture videos will be posted on our Dean Lee YouTube channel at <https://bit.ly/DeanLeeYouTube> and the Central Region Horticulture webpage.

For more information, contact Dr. Sara Shields at 337-463-7006 or SRS Shields@agcenter.lsu.edu

Never miss an issue of Horticulture Hints from the LSU AgCenter! Visit the Horticulture Hints website at

www.LSUAgCenter.com/HortHints

Then click on the Subscribe button!



A purple coneflower blooms in the native demonstration garden. Photographer: Sara R. Shields

coneflower species. Depending on variety, plant heights can vary from 12 inches up to 36 inches or more. Most coneflowers prefer full sun, though some can tolerate part shade. And you'll find a wide range of colors available, from pinks and purples to dark fuchsia, and from light whites, yellows and greens to vibrant yellows, oranges and dark reds. Coneflowers can be started from seeds indoors after Christmas or purchased as transplants throughout most of the year. Whether you prefer the look of the older varieties or the vibrant colors of the newer hybrids, coneflowers can make a terrific addition to the landscape thanks to their long bloom period and drought tolerance.

Please join us as we continue to expand and strengthen our horticulture efforts throughout the Central Region. If you have any questions on these initiatives, please contact your local LSU AgCenter Extension office.

*Sara Shields, Ph.D.
Louisiana Master Gardener State Coordinator
Central Region Horticulture Coordinator*

Greetings!

We hope the fall 2021 edition of the Central Region Horticulture Hints contains information you can use to keep your lawn, gardens and landscape looking great during this time of year.

Our demonstration gardens continue to provide dazzling colors as we begin moving into fall. Our spotlight for this quarter is on one of our hardy native perennials, the coneflower (Echinacea). Our purple coneflower (E. purpurea) is one of seven different Echinacea species native to the central and eastern United States. Plant breeders have worked to develop new and improved colors and forms of Echinacea in recent years, with many of the new varieties derived from hybrid crosses between two different

Live Oaks of Central Louisiana

Live oaks are native to the Gulf Coast of the United States and are a beloved shade tree in Louisiana and other southern states. William Guion, a natural landscape photographer, documented these trees and wrote "Quercus Louisiana: The Splendid Live Oaks of Louisiana." In the book, he references Edwin Lewis Stephens, the first president of the University of Louisiana at Lafayette.

Stephens created the Live Oak Society and was responsible for planting oak seedlings at the intersection of University Avenue and Johnston Street in Lafayette, trees now known as the Century Oaks. He believed the live oak



Live Oak Trees at Dean Lee Research Station Photo credit: Mark Carriere

should have been named *Quercus louisiana*, not *virginiana*, because of the vast number of live oaks found in this state.

According to the official Live Oak Society website, to be considered for membership, a live oak must have a girth (waistline) of 8 feet or greater at 4 feet, 6 inches above grade. A tree with a girth over 16 feet is classified as centenarian. Recently, the LSU AgCenter nominated two of its prized live oaks at the Dean Lee Research Station for membership with the society and succeeded in registering these trees. The trees at the research station are in good company, as there are 409 live oaks registered in central Louisiana.

If you have a live oak meeting the membership requirements, you can fill out and submit the live oak registration form on the Louisiana Garden Club Federation Inc. website. There is no charge for registering, and the main benefit of registering with the Live Oak Society is the pride of memorializing a large, valuable live oak.

*Keith Hawkins
Central Regional Horticulture Agent*

Low Maintenance Fruits for Home Landscapes

Fall is a season for many things, but for me fall is for fruit trees. While most of the fruits we enjoy growing in central Louisiana bear fruit in spring and summer, fall is the time to get them planted because of our mild fall and winter temperatures. Extended periods of soil temperatures above 45 degrees Fahrenheit enable root growth much later in the season than in colder climates. This lagniappe root growth over the fall is very helpful for trees getting a head start in the spring and can be critically important in them surviving out hot and occasionally dry summers.

We can grow many fruit-bearing plants and trees in our climate, but I am fond of recommending that careful consideration goes into species and cultivar selection. A great example of this is peaches. Some individuals can grow them with little difficulty, but many more struggle to get fruit either through insects, disease or lack of time to implement cultural practices. It is for that reason that I tend to only recommend peaches to those with more gardening experience.

Luckily, there are plenty of low-maintenance options

for fruit-bearing plants in the home landscape, such as blackberries, blueberries, figs and citrus. For those that have a little bit more experience and are willing to expend a little more effort in maintenance, strawberries and muscadines are my intermediate recommendations.

Blueberries are a great fruit for many of us in the central part of the state, though you may struggle with establishment if you have alkaline soil. If you fall in that category, I encourage you to grow them in large containers or a raised bed. If you keep them pruned properly, they should not outgrow that environment. You will likely need to fertilize them with ammonium



*Berries mature on a blueberry plant.
Photo credit: Dr. Sara R. Shields*

sulfate because I have found that those with alkaline soil often have alkaline water as well. Gardeners with acidic soil will find blueberries very easy to grow with little effort. I recommend monitoring soil/substrate pH conditions and keeping the level close to 4.5 with regular applications of ammonium sulfate for anyone growing blueberries.

Blackberries thrive in our climate and area. There are many cultivars on the market, with the majority having a biennial growth cycle. Vegetative growth occurs on first year canes (primocanes), and the second-year growth (floricanes) produces the berries. Once the floricanes have made fruit, they fade out and need to be removed to encourage primocanes that will become the next year's floricanes. Blackberries are easier to maintain on a trellis system, but it is possible to grow them successfully without one. Disease can occasionally be an issue, and this is a situation where cultivar selection for resistant cultivars is critical.

Figs are another great low maintenance tree fruit. They tend to be very disease resistant, but they occasionally can have issues with rust. Regular pruning will be needed to keep the tree in a manageable shape and size. Figs can be a bit sensitive to drought and will drop fruit without adequate water in the summer months.

Citrus is a very popular choice for many in our area. Most of the time it is a fairly low input fruit requiring very little care except for the occasional insect pest. The only caveat is when we occasionally have an extreme cold event. Those that can be covered and provided supplementary heat can survive most events, but occasionally there are events, such as this past winter, where even this cannot protect some trees. With that in mind they tend to thrive in environments south of Alexandria but can have issues in the northern part of our territory.

*Michael Polozola, Ph.D.
Central Region Horticulture Agent*



The Hammond Trials Website: A Virtual Walk Through the Gardens

App.lsuagcenter.com/hammondtrials

During the past year the Hammond Research Station, like most other places, was closed to the public. However, that did not stop us from planting our trials and maintaining the gardens. In fact, it was a fantastic year for the gardens. We felt very fortunate to be able to continue our work in the trial gardens, yet it was bittersweet. One of the best aspects of public gardening and planting the trials is to have everyone enjoy them and see the fruits of our labor. We decided this restriction would not suffice, and we set forth to build the Hammond Trials website to house all of our trial data. When the website was completed, we realized we had gone well beyond what we had set out to accomplish.

The Hammond Trials website has up-to-date information on all of our trial plants, including ratings, photos and observations. Moreover, we have updated cultural information, growing information and functionality/ecosystem services to the website. You can search for plant material by flower color, sun conditions, soil conditions, etc. You can also search for specific functionality, such as native or pollinator plants. We have many different categories and “tags” that can be searched to find the perfect plant. Furthermore, we have developed phase one of the “virtual walkthrough” where you can search for current trials by bed, just like you are in the garden. We are currently working on phase two of the virtual walkthrough, where you will be able to click on a virtual map and see up-to-date photos and information for the plants in each bed/garden. We also have a repository of video tours, research updates, Louisiana Super Plants and much more. With new features being added periodically and new plant ratings continually updated, we hope that you continue to use the new website as a fun guide and resource for all your landscape plant needs. The website will never be better than taking a stroll through the gardens, but it is very close. Come visit our website at app.lsuagcenter.com/hammondtrials, and make sure to bookmark the site. We can’t wait to hear what you think.

*Jeb S. Fields, Ph.D.
Director of the Hammond Trials*

The Fall 2021 Louisiana Super Plants

The Louisiana Super Plant program is an education campaign of the LSU AgCenter that identifies superior plant material for Louisiana landscapes. Louisiana Super Plants have gone through rigorous trials at multiple AgCenter locations across the state of Louisiana and have been approved by Louisiana's ornamental horticulture industry. Louisiana Super Plants are considered to be "university tested and industry approved." The Louisiana Super Plant team has completed voting and selected the winners of the 2021 Louisiana Super Plants. While it was a very competitive year, we have four amazing plants that we can say with confidence are at home in every Louisiana landscape.

The first fall 2021 entry into the Louisiana Super Plants program is a longtime landscape favorite and native grass — *Muhlenbergia capillaris* — commonly known as Muhly grass. We wanted to build upon the native plant trend, and we just love native grasses. This is a workhorse in the landscape, thriving in many conditions and resisting almost anything it encounters. One of the few ornamental grasses grown for its flowers, Muhly grass blooms with lacy pink flowers in the fall when most other grasses are turning down for the year. Muhly grass does well in sun or part shade, handles wet and dry soils, and is just plain adaptable. Hardy throughout the state, muhly grass can grow 3 to 4 feet tall and spread 3 to 4 feet wide and can be enjoyed as a single specimen or planted in bunches. Muhly grass is very low maintenance, has year-round landscape appeal, and is one of the most drought-tolerant grass species available.

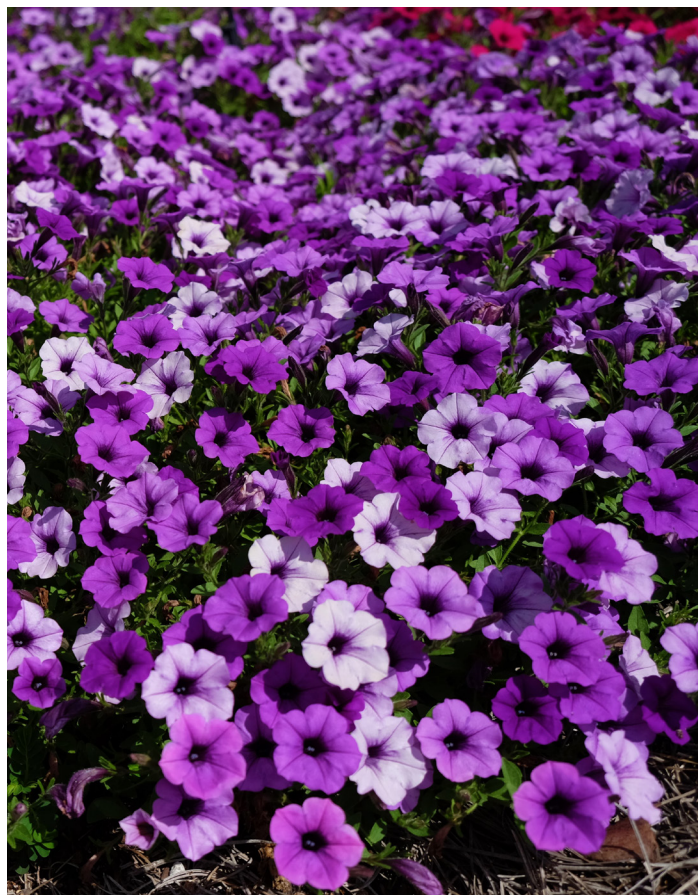
We absolutely love our cool-season color, and petunias are some of the best we can plant in Louisiana. That's why we are naming Supertunia Mini Vista indigo our final 2021 Louisiana Super Plant. Supertunia Vista Bubblegum is still one of our favorite cool-season Louisiana Super Plants, and one of the best landscape petunias for Louisiana Landscapes; however, the Supertunia Mini Vistas bring some added excitement. The mini part of the name indicates smaller flowers, which add a unique look and feel to the landscape. While we really like all the Supertunia Mini Vista varieties, indigo brings a distinctive color, with individual flowers ranging from soft white to lavender to deep indigo. The extreme flower density and vigor ensure that these will be well received in any garden. Grown in full sun, these make an excellent addition for the cool season, providing color, texture and appeal from November through May. These also look great in containers!

For more information on the Louisiana Super Plants program, contact Jeb Fields at the LSU AgCenter Hammond Research Station or check them out on our new website: app.lsuagcenter.com/hammondtrials.

Jeb S. Fields, Ph.D.
Assistant Professor and Extension Specialist
Hammond Research Station



Muhly Grass



Supertunia Mini Indigo



Checklist for September, October and November

1. In the lawn, areas of brown grass may be the disease brown patch, which is prevalent in the cool months. The most important cultural practices to control the disease are nutrient and water management. Stop nitrogen application and decrease irrigation. If you are still mowing, remove clippings to prevent disease spread. Chemical control includes applying fungicides containing maneb, myclobutanil, PCNB, propiconazole, thiophanatemethy or triadimefon every 10 days as the fungus persists.

2. Plant cool-season bedding plants to enjoy their color in fall, winter and spring. Plant seeds or transplants of calendula, forget-me-not, pansy,



Snapdragons

poppy, snapdragon, sweet alyssum, sweet peas, cornflower, dianthus, columbine, daffodil, foxglove, hollyhock, larkspur, lobelia, narcissus and sweet William.

Trees and shrubs: Prune hydrangeas and gardenias after they have completed their bloom. Remove suckers from crape myrtles. June begins hurricane season. Check shade trees carefully for

dead or unhealthy limbs and remove them ahead of the storms. Take down any large trees that look unhealthy or if they have any rotten or decayed areas.

3. Water plants when rain is scarce this month as October is traditionally the driest month of the year in Louisiana.
4. It is time to purchase and plant strawberries. If you have limited space, you can plant them in flowerbeds or containers in full sun. Make sure they have good drainage. Some recommended varieties are Sea Scape, Camarosa, Eversweet and Chandler. Fertilize them with one-third of a pound of 10-10-10 per 100 feet before plants are mowed.
5. Warm-season turfgrasses are slowing their growth and preparing for dormancy. Stop nitrogen-fertilizing grasses. If you like green grass in the winter, you can overseed your lawn with ryegrass.



6. Fall is a great time to plant trees and shrubs. Some great fall blooming plants are sasanquas, cassias, golden raintree, re-blooming roses and encore azaleas.
7. Bare-root fruit trees can be planted at any time during the dormant season, usually from about mid-November through February in Louisiana. Wait until spring to plant tender citrus and fig trees. Many citrus fruit types are ready for harvest.
8. Soil tests should be conducted every two to three years to check soil nutrient levels. If your soil tests indicate the need for lime, this is a good time of year to do so. Consider applying lime following aerification so that materials are more accessible to plant roots. Remember, it takes time for lime applied at the soil surface to change the soil pH within the soil profile. If using calcitic limestone, apply up to 25 pounds of product per 1,000 square feet. If using calcium hydroxide, apply 5 to 10 pounds of product per 1,000 square feet. Plant spring-flowering bulbs in your gardens from late October through early December. Exceptions are tulips and hyacinths, which must be refrigerated and planted in late December or early January.
9. Watch azalea plantings for early fall infestations of lace bugs. Control with acephate, horticultural oil sprays (bifenthrin, cyfluthrin or permethrin), and other recommended insecticides.



White, yellow and brown mottling from lace bug damage.

10. Utilize fallen leaves as mulch, or build a compost pile using leaves, grass clippings and remains from your vegetable garden. We are still in hurricane season until the end of November. Do your part to be a good citizen and steward of our community by keeping storm drains free of leaves and lawn debris. If you choose not to utilize leaves as mulch or compost, bag them up. But please don't blow them into the roads or toward your neighbors' yards! I call this kicking the can.
11. Many of the summer-blooming perennials are finished or finishing up their floral displays for the year. Cut back the flower stalks and old, faded flowers to keep the plants looking attractive.
12. Prune ever-blooming roses by early September.
13. Enjoy the fall color in trees such as bald cypress, Nuttall oak, Shumard oak, cherry bark oak, flowering pear, Chinese pistachio, ginkgo, Japanese maple, sweetgum, sumac, red maple, Southern sugar maple and hickory. Plant some if you don't already have them in your landscape.

*Heather Kirk-Ballard, Ph.D.
Consumer Horticulture Specialist*



Cauliflower

Vegetable Gardening

Falling out of love with the heat? No worries! Fall is around the corner, and there are plenty of cool-season vegetables and herbs to plant. Before planting, following a few of these tips will set you up for a successful harvest.

1. Remove weeds in the garden.
2. Remove warm-season herbs and vegetables that have disease symptoms and are covered

in insects. If you have time, let the garden sit empty for a few days to a week.

3. Apply compost, fertilizers or aged manures. Building up soil nutrients prior to planting will increase later yields.
4. Check your irrigation. Fix leaks.
5. Find a source of mulch. My favorites are leaves, pine straw, shredded paper or plastic and paper mulches.

Now that the slate is clear, let's move on to the fun stuff ... planting!

In September

- **Plant transplants or start seed to transplant into the garden in the following two months:** Broccoli, Brussels sprouts, cabbage, Chinese cabbage, cauliflower, collards, lettuce, kohlrabi, kale and Swiss chard.
- **Direct-seed these into the garden:** Beets, endive, carrots, English peas, snow peas, mustard, onions (seeds, mid-to-late September), parsley, snap beans (early September), radishes, rutabaga, spinach and turnips.
- Garlic toes are planted in mid-to-late September. Shallot sets can be planted all month long.



Garlic Toes

In October

- **Plant transplants of:** Broccoli; Brussels sprouts; cabbage; Chinese cabbage; cauliflower; kale; lettuce; turnip, mustard or collard greens (although I always just direct-seed these because it's cheaper); and Swiss chard.
- **Direct-seed:** Beets, carrots, celery, endive, kale, leaf lettuce, mustard collard or turnip greens, radishes, onions (early-to-mid October to create sets for a December planting), parsley and spinach.



In November

- **Plant transplants of:** Broccoli, cabbage, cauliflower, broccoli, kale and Swiss chard. *If possible, try and plant these transplants early-to-mid November. Any later than that and you risk a freeze taking out small plants.*
- **Direct-seed:** Beets, carrots, kale, mustard, spinach, Swiss chard and turnips.
- **Continue to plant:** Shallot sets and garlic toes in the first part of the month.



Swiss Chard

For my last piece of fall garden advice, think about how much produce you can eat and or give away at one time. Like many of you, I am an overzealous gardener. Planting 50 to 100 heads of cabbage or broccoli at one time is nothing. But my small family can't eat all of that. We give it away and waste some. To avoid this, use successional planting.

This means divide your garden rows in thirds or quarters. Instead of planting the entire row in cabbage, plant one-third of the row. Then wait two to three weeks and plant the middle third of the row. Then wait two to three more weeks and plant the last third. This will help your fall crops, such as cabbage, broccoli, cauliflower, head lettuce and more, come in throughout the entire season rather than all at once.

Enjoy the Garden,

Kathryn "Kiki" Fontenot, Ph.D.
Associate Professor, LSU AgCenter School of Plant,
Environmental and Soil Sciences

Fall Lawn Care in Louisiana

Should you fertilize lawn during fall?

Louisiana usually stays warm well into the fall, and lawns continue to grow until nighttime temperatures dip into the 50s. So, be sure to mow and water your lawn as needed to keep it healthy.

If the fall feels more like summer, keep an eye out for armyworms in bermudagrass. Sod webworms and chinch bugs may still be active in St. Augustinegrass deep into the fall. Chinch bugs are most active in hot and dry weather. Insecticides such as carbaryl, bifenthrin and chlorantraniprole are effective insecticides for killing chinch bugs and moth larvae such as armyworms.

When summer is over it is time for your fertilizer spreader to hibernate until next year. Fertilizing warm-season lawn grasses during the fall with high nitrogen (summer-type) fertilizers or winterizing fertilizers containing high levels of nitrogen is not recommended for Deep South lawns. Stimulating fall growth of St. Augustinegrass, centipedegrass and zoysiagrass with nitrogen leads to increased large (brown) patch disease and winter kill. Bermudagrass may be fertilized into September, but I would not make any more applications of high percentage nitrogen-containing fertilizers after late August on St. Augustinegrass, centipedegrass or zoysiagrass.



Armyworm feeding on bermudagrass. - photo by D. Sexton

If you would like to extend the green color in home lawns this fall, apply foliar iron spray or spreadable iron granules. This will give you a nice flush of green color without increased growth.

Winterize the lawn?

I am sure that you have heard of winterizer fertilizers. Potassium (the last number in the analysis on fertilizer bag) is the nutrient associated with winter hardiness and increased disease resistance with turfgrass. There is an advantage to having the correct amount of potassium in the soil when it comes to dealing with environmental stress. Get a soil test before applying high potassium fertilizer, however, since there is no advantage to applying excessive amounts of this nutrient. If a soil test indicates that potash is lacking, choose a fertilizer containing potassium with zero or a very low percentage of nitrogen (the first number on a fertilizer bag) during the late summer or early fall because we are not trying to stimulate growth for the reasons discussed above. If a soil test calls for adding potassium, you can apply during late summer to early fall while the lawn is still growing. Very slow growth still occurs even though day lengths get shorter by late September and October. I am sure that you have probably noticed before that you do not have to mow your lawn as often as we move into October.

An important fact to consider if you bag your lawn clippings: The removal of grass clippings from lawns can severely deplete the soil of potassium. Grass leaves and stems contain very high levels of potassium. Keep in mind that when a lawn is mowed appropriately, it is better to leave clippings to decompose on the lawn as a good source of turf nutrients, including potassium. Clippings from a lawn that is mowed regularly have only a small role in the overall buildup of thatch in turfgrass.

Speaking of soil tests ...

Fall is the best time of the year to get your soil tested by the LSU AgCenter Soil Testing and Plant Analysis Lab.

Soil testing really is the first step to a beautiful lawn next spring and is the best way to determine exactly what your lawn needs to become thick and healthy. If you have not tested your soil in the past several years, do it now.

To test your soil, submit a pint of soil to the LSU AgCenter Extension Service office in your parish. The pint should be a composite of soil samples collected from several different areas in the lawn. You only need to go about 4 inches deep. Also, to simplify the soil sampling and submission process, there are pre-addressed submission boxes with sampling instructions at several garden centers throughout the state. There is a small fee for testing.

The sample results will be sent to your home mailbox and email in less than two weeks. An LSU AgCenter extension agent can help you interpret the results from the soil sample. The results may indicate that lime is needed to increase soil pH. If so, fall and winter are good times to apply lime because it takes several months to activate in the soil. Elemental sulfur may be recommended to reduce soil pH in alkaline soils.

Weed control

The best way to cut down on winter weed problems is to get your lawn thick and healthy during the spring and summer months. If your lawn struggled during the growing months, inevitably it will be full of winter weeds next spring. Late summer/early fall is your first opportunity to reduce winter weed infestations with preemergence herbicides. Preemergence herbicides, such as prodiamine, pendimethalin, dithiopyr, isoxaben and indaziflam may be applied in mid-to-late September to help manage the first flush of winter weeds like annual bluegrass, chickweed and lawn burweed. Consider reapplication in early November. These herbicides work prior to the emergence of the weeds, so timing the application before the weeds germinate is critical. Atrazine can be applied on most southern lawns for annual bluegrass and broadleaf weeds in October except for bermudagrass. Atrazine could be applied on bermudagrass after the bermudagrass is dormant. MSM (metsulfuron) can be highly effective postemergence on broadleaf weeds, such as white clover and lawn burweed. Lawn burweed, or “sticker weed,” is a winter annual that germinates in October and grows all winter long. Next April, lawn burweed produces the burs that are capsules that contain burweed seed. To avoid the stickers in the spring, you must treat lawn burweed during fall and winter.

*Ron Strahan, Ph.D.
Associate Professor, LSU AgCenter
Weed Scientist and Turfgrass Specialist*



Annual bluegrass is the most common grass infesting winter lawns.



Lawn burweed germinates in the fall and produces painful stickers by the spring.



Wild geranium is a common winter broadleaf infesting fall lawns.

Laurel Wilt, a Disease of Woody Trees, Active in Louisiana

Laurel wilt is a devastating disease of woody trees in the Lauraceae family. Trees currently susceptible to laurel wilt include avocado, California laurel, camphor tree, pondberry, pondspice, redbay, sassafras, swampbay and spicebush.

Laurel wilt was first confirmed in the state in 2014 on mature sassafras trees in Union Parish. Since then, the disease has spread to Beauregard, Bienville, Claiborne, Grant, Lincoln, Natchitoches, Ouachita, Rapides, Sabine, Vernon and Winn parishes. The disease is caused by a fungus called *Raffaelea lauricola* that clogs the vascular (xylem channels) system of the tree and interrupts the water supply. As a result, the affected tree wilts and eventually dies. Initial symptoms of laurel wilt are rapid wilting and drooping (flagging) of leaves. As the disease progresses, infected trees exhibit reddish to purplish brown discoloration of foliage and the entire canopy turns brown. Brown leaves do not defoliate immediately and tend to remain attached to the branches for a period of one year or more in the case of redbay trees, but brown leaves drop readily in other host trees. Removal of bark from infected trees reveals discoloration of sapwood.

The fungus is carried by the invasive redbay ambrosia beetle (*Xyleborus glabratus*) from infected to healthy trees. The



Figure 1. A group of dead sassafras trees with brown leaves infected with laurel wilt caused by *Raffaelea lauricola*. Photo by Raj Singh, LSU AgCenter



Figure 2. A young sassafras exhibiting flagging of shoots near the apex of a diseased tree. Photo by Raj Singh, LSU AgCenter



Figure 3. A sassafras leaf exhibiting symptoms of lack of water (marginal necrosis) due to clogging of xylem tissue. Photo by Raj Singh, LSU AgCenter

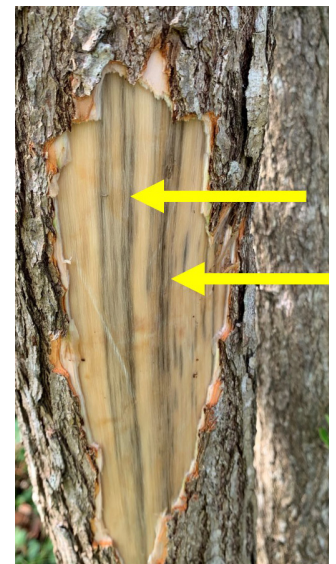


Figure 4. Discoloration of sapwood of a sassafras tree infected with laurel wilt. Photo by Raj Singh, LSU AgCenter



Figure 5. A cross-section exhibiting discoloration of sapwood of a sassafras branch infected with laurel wilt. Photo by Raj Singh, LSU AgCenter



Figure 6. Toothpick-like tubes comprised of fine sawdust caused by redbay ambrosia beetle on the bark. Photo by Albert Mayfield, USDA Forest Services



Figure 7. Redbay ambrosia beetle entrance hole on a young sassafras tree. Photo by Raj Singh, LSU AgCenter



Figure 9. Flagging of a young branch resulting from a black twig borer injury. Photo by Raj Singh, LSU AgCenter



Figure 10. Black twig borer entrance hole on a flagged branch. Photo by Raj Singh, LSU AgCenter

pathogen also may spread from infected trees to neighboring healthy trees through grafting roots. Both the beetle and fungus also may spread to new locations indirectly when people move infested firewood from areas where laurel wilt and redbay

ambrosia beetles are prevalent. Redbay ambrosia beetles are brown to black in color and very small (2 mm) in size. Initially, the redbay ambrosia beetles may attack the branches, and the infested trees may not look wilted. Later, the trees start to wilt, and toothpick-like tubes of fine sawdust produced by ambrosia beetles can be seen on the trunk. The sawdust toothpick-like tubes may easily



Figure 8. Redbay ambrosia beetle adult. Photo by Jason A. Smith, University of Florida

wash away with rainwater and may not be present on infected trees after a downpour.

Rapid and early disease detection and removal of infective trees is the most effective management strategy to combat laurel wilt. After removal, burn the diseased trees or dispose of them properly to prevent the further disease and beetle spread. Avoid moving firewood from areas where laurel wilt and redbay ambrosia beetles are prevalent or known to occur. When it comes to firewood, remember to buy local and burn local!

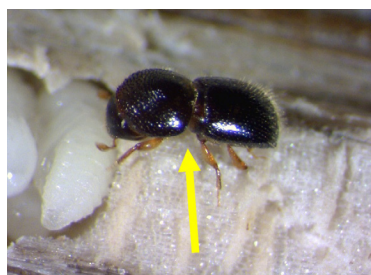


Figure 11. An adult black twig borer (*Xylosandrus compactus*). Photo by Raj Singh, LSU AgCenter

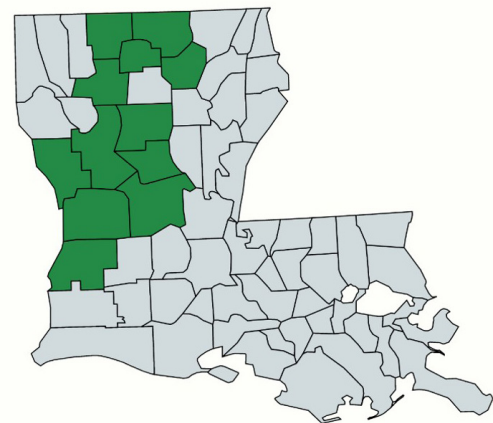


Figure 12. Distribution as of March 10, 2021 of laurel wilt disease in Louisiana. Photo by Raj Singh, LSU AgCenter

Early symptoms of laurel wilt can be easily misdiagnosed with the damage caused by the black twig borer (*Xylosandrus compactus*). The black twig borer attacks small diameter branches and causes death (flagging) of infested branches. If you notice symptoms of laurel wilt on susceptible host trees listed above, please contact Dr. Raj Singh at 225-578-4562 or email rsingh@agcenter.lsu.edu

Raj Singh, D.P.M.
"The Plant Doctor"

Associate Professor/Horticulture Pathology Extension Specialist
Director, Plant Diagnostic Center

School of Plant, Environmental and Soil Sciences

Horticulture Division

155 J. C. Miller Hall - LSU

Baton Rouge, Louisiana 70803



Visit our LSU AgCenter Store
www.LSUAgCenter.com/OnlineStore

School of Plant, Environmental and Soil Sciences
155 J. C. Miller Hall - LSU, Baton Rouge, Louisiana 70803
225-578-4070; Fax: 225-578-1068

Visit our website: www.LSUAgCenter.com

William B. Richardson, LSU Vice President for Agriculture, Louisiana State University Agricultural Center, Louisiana Agricultural Experiment Station
Louisiana Cooperative Extension Service, LSU College of Agriculture
PUB 3655-21-F-CE (online) 7/21

The LSU AgCenter and LSU provide equal opportunities in programs and employment.