



Asian giant hornet

Murder Hornet or Cicada Killer Wasp?

In the past few weeks, I have received several phone calls from individuals claiming that they have the Asian giant hornets — “murder hornets,” as they are known — in their yards.

I quickly let them know, and I want you to know, that these insects have only been identified in the Pacific Northwest, mainly in the state of Washington and on Vancouver Island, Canada!

There is a size difference between the two insects that should be noted. Murder hornets are very large, between 1.5 to 2 inches long. The cicada killers are a little smaller, about 1.5 inches long. Visual marking on the upper abdomens of these insects are very useful in

identifying the two. Cicada killers have yellow stripes across their abdomen that are jagged and yellow in color. Murder hornets have smooth, straight lines across their abdomen that are either orange or dark brown in color.

It is interesting to know that in 2020, entomologists in Washington State were able to tie a small tracking transmitter, using dental floss, to the body of one of these murder hornets and tracked it back to its hive in a hollowed tree. They were able to destroy the nest, hoping to eradicate these insects. In 2019, Canadian officials were able to eradicate another nest in a public park on Vancouver Island, British Columbia.



Cicada killer wasp

Cicada killers normally appear during the summer months of July and August but evidently appear in September as well based on the recent phone calls I'm receiving. These insects feed on cicadas and, if not provoked, are harmless. Cicada killers are beneficial and are predators of cicadas.

It appears the movement of murder hornets is slow, and they more than likely will never make it down to our area, but stranger things have happened. If you hear of someone thinking that they have seen one of these murder hornets, more than likely they have encountered a cicada killer. The marking on the abdomen is a good way to identify the insect if they can get that close to analyze. Samples can also be

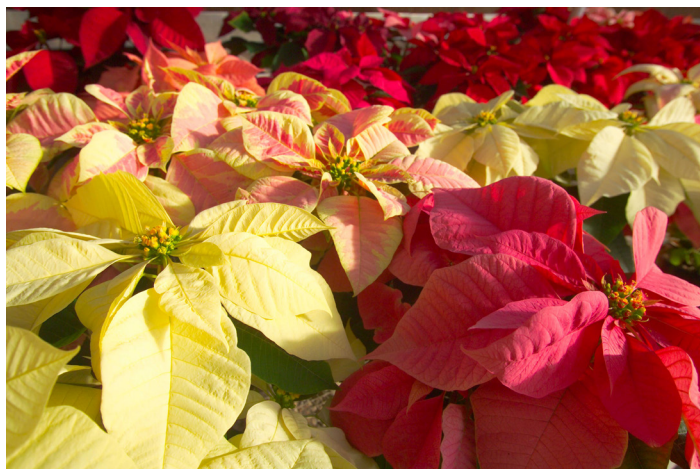
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dropped off to my office, and I can send them to our entomologists in Baton Rouge for identification.

*Dan Devenport
Horticulture Agent
Lafayette Parish*



Perfect Poinsettias

The holidays are right around the corner, and if you haven't passed by dozens of poinsettias in stores yet then you will soon. It's easy to throw caution to the wind and load your shopping cart up when you see all the beautiful shades of red, green and white. Remember, patience is a virtue, and taking time to properly inspect plants for damage or imperfections will prevent the disappointment of tossing out a spent plant before the season is over. Healthy poinsettias can last up to six weeks after purchase. However, if you like a challenge, it is possible to keep a poinsettia around to see next year's holiday festivities!

When looking for the perfect poinsettia, it is important to familiarize yourself with a little plant anatomy. Unbeknownst to many, the large colored leaves on the top half of the plant are not flower petals but are called bracts. The flowers are the small yellow and green clusters in the center of the plant known as cyathia. Because the flowers are so small, the large, colorful bracts help in attracting pollinators. If purchasing a traditional red poinsettia, the lower green leaves should be large, dense and dark in color. Leaves should be attractive with no signs of wilting or curling. Bracts should also be large and robust. Depending on the shade of red (and if not marbled), coloring should be bright and uniform. Leaf drop can occur if bracts are sagging or discolored. Take a step back and look at the shape of the plant. The poinsettia should appear healthy and evenly balanced. Check the cyathia for size and appearance of pollen. If you want a poinsettia that will last a while, choose a plant with small, unopened, green cyathia. If the cyathia are plump and yellow and pollen is present, then the plant won't last as long. While you're inspecting the plant up close, carefully

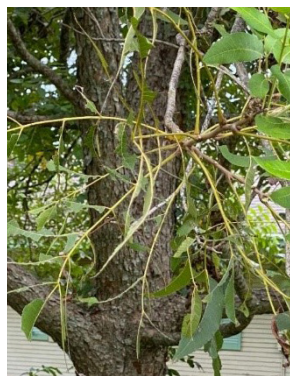
check underneath bracts and between leaves for insects.

Now that you've selected your poinsettia, it must be safely transported to your home or office. Poinsettias cannot handle temperatures below 50 degrees or excessive heat, so leaving them in the car while you finish your holiday shopping is not the best idea. Breakage of branches and leaves can be prevented by carefully storing a poinsettia in a sleeve or placing it in a secure location where it won't fall over. When home, remove the sleeve and find a location with at least six hours of bright light. Some sources say indirect sunlight is best to prevent fading of color. Avoid over and underwatering. Severe leaf drop can occur if the soil gets too dry, while root rot is very common in overwatered plants. Only use room-temperature water and take plants out of the decorative wrapping to avoid oversaturation. The best method to determine when it's time to water is by lightly probing the soil with a finger. If the soil is dry and crumbly, it's definitely time to water. If the soil feels moist and firm, then you're good to go.

Poinsettias are a true holiday staple. If traditional red, green or white isn't your thing, then there are plenty of other cultivars to choose from. Bright pinks, speckled reds, marbled yellows and many more brilliantly colored poinsettias are now available to express your unique holiday style.

For more information on poinsettias and other winter ornamentals, contact your parish horticulture agent or visit the LSU AgCenter website.

*Savannah Trahan
Assistant Extension Agent
Acadia Parish*



Pecan tree partially defoliated. Photo by Stephan Norman.

Defoliation Diagnosis

Have you gone out to see that there has been an overnight ruckus in your pecan orchard?

Have you been left with a bunch of rachis where there used to be leaflets?

Have you or your loved one ever experienced rapid pecan defoliation?

Unfortunately, there is no compensation from a class-action suit, so we can end this trope and ask some questions to get to the bottom of what may be the culprit in your orchard.

If it is earlier in the growing season, the most likely

culprit is May and June beetles. I very seldom get calls from people experiencing damage from them in larger trees. They seem to prefer targeting young plantings. They can seriously impact orchard establishment if major defoliation occurs. They often must be combated annually due to environmental factors. In one situation a grower found that trees closer to an overnight light source were especially prone to the problem. One of the most effective treatments is imidacloprid. It has the added benefit of minimal impact on many beneficial insects as well.

If it is later in the growing season and progresses rapidly, you may have been visited by the dreaded walnut caterpillar. These are much different than the annoying but less devastating tent caterpillars. The walnut caterpillar is an insect pest that used to be isolated to the southwest portion of the state but has been slowly creeping eastward. In a very short time period large trees can be significantly defoliated. At the nursery I collaborate with, we have seen midsized containerized trees defoliated overnight. For a young orchard and those with spray equipment, there are several treatment options. Bt and Spinosad among many others should have some efficacy. For large homestead trees and those with no spray equipment, treatment options are limited. Another issue is timing. By the time you notice the damage, it may be too late and they have moved on. Most calls I get on this issue end up being diagnosed based on damage received with the caterpillars being long gone.

I have just briefly touched upon treatment options for both of these pests. If you are experiencing something similar to these descriptions in your orchard, contact me at 318-427-2669 and we can discuss it further. We can work on proper diagnosis and a treatment plan tailored to your orchard.

*Michael Polozola, Ph.D.
State Pecan Specialist*

Fertilizer Decisions

Fertilizer prices in the past year have doubled, and many experts predict that these prices may persist through the spring growing season. It has never been a better time for growers to evaluate their home fertilizer practices and to assess if modifications or cuts can be made to spare the pocket without sacrificing production. Cost-cutting fertilizer tips include:

- **Soil testing:** In a time of sky rocketing prices, the cost of an LSU AgCenter soil test has never been a better value. Make soil nutrients more available to plants by getting your soil pH in the proper range. Avoid the unnecessary application of fertilizer by determining your soil's current nutrient levels.
- **Organic sources:** Natural fertilizer sources

from a neighbor raising rabbits, poultry or livestock can be a good alternative to commercial fertilizer. Composting manure six months before applying to vegetable crops is a good way to prevent issues with bacterial contamination of produce. Also, make sure that herbicide residue is not present in the hay being fed to livestock.

- **Crop selection:** Fertilizer expenses can account for up to a third of production costs. However, choosing to plant crops like beans, peas, okra and sweet potatoes will require very little nitrogen fertilizer and can usually be grown very cheaply in the home garden.
- **Application timing and methods:** Broadcasting fertilizer tends to increase losses to weeds and may go unutilized by plants. Banding fertilizer under the plant row is generally more efficient. Nitrogen fertilizers can leach rapidly during periods of heavy rainfall. Spoon feeding plants with multiple smaller applications of nitrogen through the growing season will generally produce the best results. Try and apply fertilizer close to the time of key plant peak demand. Minimize losses by fertilizing lawns in April after warm-season grasses have gone through their spring transition. Fertilizer fruit trees a few weeks before they leaf out in the spring.
- **Cover crops:** Grow your own fertilizer in the winter months with clovers, vetch and Austrian winter peas. Summer crops of iron clay peas, soybeans, sun hemp, etc. can be plowed under and used as a green manure to increase organic matter and nutrients.
- **Buy in bulk:** Often a 40-pound bag of fertilizer may be cheaper per pound than a small container. Fertilizer can be stored in a sealed plastic bag to prevent it from absorbing moisture and hardening.

*Stuart Gauthier
Extension Agent
St. Martin Parish*



American robin on a native holly. Photo by Norman Winter

Plant Trees and Shrubs During Cold Months

Winter is a great time to get outside and get things done in the garden. We are very fortunate here in the South to have good weather during the winter months for gardening, and it is an excellent time to plant trees and shrubs in the landscape.

Although deciduous trees and shrubs are in their dormancy, roots are still actively growing. Planting during December, January and February provides plants with several months to develop a strong root system before they put out a new flush of leaves and flowers in spring.

The structure of trees and shrubs in our lawns and gardens is very apparent this time of year. Dead branches, low-hanging branches and branches that cross one another are visible now and should be removed. Take this opportunity to trim your trees and shrubs. Removal will be much easier without the additional weight of leaves.

As retail nurseries begin clearing out Christmas trees and merchandise, they will be bringing in a new stock of woody trees and shrubs. Tropical plants will be available later in the warmer season when they are less likely to be damaged by colder temperatures.

The National Arbor Day Foundation has started the Time for Trees initiative to highlight how “trees clean our air, protect our drinking water, create healthy communities and feed the human soul.” Founded by J. Sterling Morton in 1872 in Nebraska City, Nebraska, where an estimated 1 million trees were planted, Arbor Day is celebrated every year. In 2021 it will be celebrated in most of the country on April 30. On this day, individuals are encouraged to plant trees.

Louisiana celebrates Arbor Day on the third Friday of January. The LSU AgCenter Botanic Gardens at Burden will hold its annual Arbor Day event on Jan. 23 from 9 a.m. to 1 p.m. Free and open to the public, this event

will feature educational talks on native trees given by experts from the LSU AgCenter. You and your family can plant a tree while there and get GPS coordinates so you can come back and visit “your” tree and watch it grow for generations to come.

When deciding what trees and shrubs to purchase and plant, it is best to sit down and consider the year-round interest of those plants. A great design will have beauty and interest in each season. That can include evergreen plants, flowering plants and deciduous plants that have excellent fall foliage change.

Evergreen trees and shrubs provide year-round greenery and are popular in almost every landscape design. Some good, large evergreen trees include live oaks (*Quercus virginiana*), Southern magnolias (*Magnolia grandiflora*), Leyland cypress trees (*Cupressus × leylandii*) and American holly trees (*Ilex opaca*).

The Southern magnolia has fragrant white flowers in late spring to midsummer, and in winter the female American holly trees sport gorgeous red berries that attract birds and other wildlife.

Some medium-sized evergreen trees are the Southern wax myrtle (*Morella cerifera*), camphor tree (*Cinnamomum camphora*) and red bay (*Persea borbonia*).

You can choose from several small evergreen trees with many different functions. Some have flowers and put on a display in the late fall into early spring. These include the camellia (*Camellia japonica*) and camellia sasanqua (*Camellia sasanqua*).



Loquats are great evergreen trees with sweetly scented flowers in late autumn.

Other fragrant flowering trees include loquat (*Eriobotrya japonica*), banana shrub (*Michelia figo*) and sweet olive (*Osmanthus fragrans*). Other trees — including the Burford Chinese holly (*Ilex cornuta 'Burfordii'*), yaupon holly (*Ilex vomitoria*) and eastern red cedar (*Juniperus virginiana*) — provide ecosystem services such as wildlife food.

Compared to evergreen trees, deciduous trees have a much larger selection for use in Louisiana. Some large deciduous trees with good fall foliage change that are also great as shade trees for the landscape are American beech (*Fagus grandifolia*), bald cypress (*Taxodium distichum*), basswood (*Tilia americana*), pecan (*Carya illinoensis*), tulip tree (*Liriodendron tulipifera*), sycamore (*Platanus occidentalis*) and cucumber magnolia (*Magnolia acuminata*).



Chinese pistache is an excellent medium sized deciduous tree for excellent fall foliage.

Some outstanding small, spring-flowering deciduous trees are the fringe tree (*Chionanthus virginicus*), flowering dogwood (*Cornus florida*), Taiwan cherry (*Prunus campanulata*), saucer magnolia (*Magnolia X soulangeana*), parsley hawthorn (*Crataegus marshallii*), redbud (*Cercis Canadensis*) and silverbell (*Halesia diptera*).

Other deciduous trees with outstanding fall foliage change are the American hornbeam or ironwood (*Carpinus caroliniana*), hop-hornbeam (*Ostrya virginiana*), swamp red maple (*Acer rubrum Drummondii*), Japanese maple (*Acer palmatum*), southern sugar maple (*Acer barbatum*), green ash (*Fraxinus pennsylvanica*), sweetgum (*Liquidambar styraciflua*), Chinese pistache (*Pistacia chinensis*) and many oak species, such as shumard oak (*Quercus shumardii*), nuttall oak (*Quercus nuttallii*), white oak (*Quercus alba*) and post oak (*Quercus stellata*).

Planting trees is a great way to leave a lasting legacy for generations to come to enjoy. In my humble opinion, trees are the key to combating climate change by conserving energy, sequestering carbon and reducing the overall concentration of greenhouse gases in the atmosphere.

Consider this proverb: "The best time to plant a tree was 20 years ago. The second-best time is now."

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



Checklist for December, January and February



Leeks

December

1. In the vegetable garden: Plant onions sets, such as leeks and shallots, this month. Harvest bunching onions. Store vegetable seeds in the refrigerator to keep them viable (able to germinate). Store in tightly fitted plastic or glass containers.
2. In the lawn: Soil tests should be conducted every so often to check soil nutrient levels. If your soil tests indicate the need for lime, this is a good time of year to add it.
3. In the landscape beds: Keep winter weeds out of beds. Transplant alyssum, columbine, daffodil, dianthus, foxglove, hollyhock, larkspur, lobelia, narcissus, pansy, snapdragons and sweet William this month. Protect the roots and rhizomes of tropical plants by spreading a 4-to-6-inch layer of mulch around the base of the plant.

4. Trees and shrubs: Heavily mulch cold-sensitive trees and plants and cover them in extended periods of below-freezing weather. Winter is a good time to plant trees and shrubs. Water-in newly planted trees, but established trees will not need to be watered this month.
5. Fruits: Heavily mulch citrus trees to protect them from freezing temperatures. Cover young, tender citrus trees by constructing a simple frame extending above the leaves and cover with clear plastic. Make sure the cover does not touch tender leaves, and place the cover during the day to trap radiant heat coming up from the ground.



Pine straw mulch

January

1. In the vegetable garden: Cool-season vegetables and herbs tolerate freezing temperatures but small seedlings can be affected. Cover tender growth if you are expecting freezing temperatures with frost cloth, also known as reemay. If your vegetables need a boost of fertilizer, side-dress with a teaspoon of complete fertilizer placed a couple of inches from the base of the plant.
2. In the lawn: If you over-seeded with annual ryegrass, mow regularly to keep the lawn looking tidy. If winter weeds are bad, it is safe to apply broad leaf weed killer following label directions, or hand pull them.
3. In the landscape beds: Keep winter weeds in check by applying mulch at a 2-to-4-inch depth. Pine straw, leaves and pine bark are all excellent choices. Plant chilled tulips and hyacinths into the garden this month.
4. Trees and shrubs: This is a great time to plant trees and shrubs while temperatures are down. This is also a good time to relocate established trees and shrubs that you want moved elsewhere in the yard.

Be sure to go out a foot or more from the trunk of the tree or shrub to get an adequate root ball. Water newly transplanted trees in well to help encourage new root growth.

5. Fruit: Cover tender fruit trees, such as citrus, when temperatures are set to drop into the mid-20s overnight. Wrap or drape the plants with canvas or another type of fabric extending all the way to the ground. Place the cover on trees during the day to trap radiant heat coming up from the soil. Fertilize citrus at the end of January to early February. Apply 1 to 1 ½ pounds of 8-8-8 or 13-13-13 per year of tree. Year one equals 1 to 1 ½ pounds, year two equals 2 to 3 pounds and year three equals 3 to 4 ½, and so on.

February

1. In the vegetable garden: Plant warm-season vegetables late this month to decrease the chance of disease and insect problems. Be prepared to cover plants in freezing temperatures. Cut seed potatoes with a couple of eyes about the size of a golf ball and plant 4 inches deep and 12 inches apart. Corn planted in late this month will have few earworms.
2. In the lawn: Time to relax and rejuvenate. Perform lawn equipment maintenance this month in preparation for the spring and summer. Dormant sodding can be done this month if you have new construction or need to stabilize bare patches in the lawn. The warm-season turf is dormant and will be brown but will green up in spring.
3. In the landscape beds: Fertilize Louisiana irises and calla lilies and other fall-planted spring-flowering bulbs and cool-season annuals with a slow-release granular fertilizer this month. Prune repeat-blooming roses.
4. Trees and shrubs: Prune your roses on or around Valentine's Day and begin a preventative spray program, alternating fungicides for blackspot and powdery mildew. Fertilize spring-blooming trees and shrubs.
5. Fruit: Time to fertilize fruit trees and shrubs, including apples, peaches, citrus, figs, blueberries and blackberries. Dormant cuttings from fig trees can be taken from 1-year-old growth and stored at 40 degrees for a month or so before rooting in moist media.

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

General Winter Vegetable Planting Tips

Let's make the most of December's garden and start the New Year off right by following best management practices to get the most out of our fruit and veg crops.

December is the last month I think of as actual winter. January and February to me are very early spring. So, in this last month of winter here are a few to-do items to help keep the garden active!



Strawberry plants covered to protect them from below freezing temperatures.

December

- Scout lettuce, strawberries and all cole crops for insects. Aphids, slugs, snails and worms tend to cause problem in the winter garden. Insecticides such as horticulture oil, insecticidal soap and Bifenthrin products (Ortho Bug –B-Gon Max) work great for aphid control. Insecticides that kill worms and loopers include Sevin, Bt (Dipel) and Spinosad. Snails and slugs are best controlled with baits. Iron phosphate baits are safest for pets. Early evening is when these pests feed. You want the baits to smell strong, so apply baits in the early evening for best results. If you have a lot of slug and snail problems, remove mulch from around the base of plants. This gives them fewer hiding spaces.
- Till and hip rows in the garden now for January-planted crops. Early January can be very wet.
- Plant onion sets. Choose sets that are thin, the size of a pencil or thinner. Thicker plants tend to bolt in cold weather and set seed rather than forming bulbs.
- Cover blooming strawberry plants when temperatures drop below 32 degrees Fahrenheit. Plants not in bloom? No need to cover.
- Order spring vegetable seed now if you want first pick of the great varieties. Wait too long and other gardeners will order all the good varieties.



Red Burgundy onions

January

- Onions can be planted from mid-December to early January. In early January, continue to plant onion sets. Bulbing onion varieties that perform well include but are not limited to: Texas Grano, Mr. Buck, Texas 1015Y, Pinot Rouge, Red Burgundy and Miss Megan.
- Mid-January through the end of February: Transplant broccoli, cabbage, cauliflower, chard, kale and lettuce into the garden. You can also direct-seed carrots, radishes, turnips and other rooting vegetable crops.
- Mid-January through mid-February: Plant Irish potatoes into the garden. Cut the potatoes a few days before planting. Cut larger potatoes in quarters and smaller potatoes in half. This larger size helps reduce rot. It doesn't matter if the potato pieces face up down or sideways. They will grow.
- Vegetable growers in south Louisiana should start their tomato, eggplant and pepper transplants mid-January. North Louisiana vegetable growers should wait until the end of January or the beginning of February. It takes between eight and 10 weeks to germinate and grow into a decent-sized tomato, pepper and eggplant seedling for the garden. Keep seedlings in a warm and BRIGHT area. One week prior to transplanting, move the seedlings outside to harden off.

February

- Continue to transplant broccoli, cabbage, cauliflower, chard, kale and lettuce transplants into the garden. Successive planting, or planting a portion of a row or a new row, every two weeks ensures a steady harvest.

- Direct-seed beets, turnips, mustard, parsley, radishes, lettuce, snap beans and Irish potatoes.
- Pull winter weeds. Hand-pull them or cultivate with a tiller or hoe. Get weeds out of the garden. Small insects like thrips like to hide here and get your spring crops later. Pre-emergent herbicides like Dual and Treflan are wonderful technology that can make gardening easy, especially in larger gardens. To control grasses in the garden use Poast or other herbicides with the active ingredient sethoxydim to kill grass and not broadleaf weeds.
- Leave space for spring crops, which will go into the garden in March and April. If you have not pulled up rows, be sure to get it done at the first chance of dry weather. Spring is here!

Enjoy the Garden,

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

Winter Turfgrass Management

The dormant season for turfgrass begins in December

Most lawns should be dormant or at least close to this stage by Christmas. Because lawns are not actively growing, fertilizer applications are not needed during the winter. Most lawn fertilization for growth should have stopped on home lawns by late summer (late August to very early September for St. Augustinegrass and centipedegrass).

Nitrogen fertilizer on dormant to semidormant St. Augustinegrass, centipedegrass and zoysiagrass lawns can lead to increased brown patch and winter kill. Also, nitrogen applications during this time have a greater potential for leaching or movement into nontarget areas.

Soil sampling and pH adjustments

I'm a big believer in soil testing. If your lawn did not perform well last growing season or you just want to get a quick check on soil pH, get the soil tested. Winter is an excellent time to collect soil samples and submit them for analysis.

Samples should be a composite of soil collected from 3 to 4 inches deep at various places around the lawn. Mix well and reduce the sample to about a pint of soil and take it to the LSU AgCenter Extension Service office in your parish or to a participating garden center. Make sure to specify the type of grass you are growing on the soil test form.



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



Annual bluegrass seedhead



Catchweed bedstraw is a sticky winter weed that attaches to pants and pets.

Soil samples submitted to the LSU AgCenter result in a wealth of information concerning the overall fertility of your soil. If results of the soil test indicate the soil pH is too acidic, lime will be prescribed in the soil test recommendations. Sulfur may be prescribed for soils that are too alkaline. Winter is the best time to apply

lime or sulfur so that it can be activated by for the growing season next spring and summer. The correct soil pH is extremely important and has everything to do with nutrient availability and fertilizer performance.

Turf establishment

Postpone any permanent warm-season turfgrass seeding until next spring. Soil and air temperatures will be too cold for germination and growth.

Sod, such as St. Augustinegrass and centipedegrass, can be laid during winter and established successfully during the spring. But remember to maintain good moisture to prevent the sod from dying. Establishment of sod is easiest, however, when sodding is delayed until the middle of spring, well after spring green-up.

Large patch disease (formerly brown patch)

Large patch disease can come and go throughout the winter if the weather is mild. Treatment with fungicides containing myclobutanil, propiconazole, pyraclostrobin, and triticonazole and azoxystrobin will reduce the spread of large patch. Damage from large patch will slow spring green-up, and diseased areas will remain unsightly until warmer spring weather conditions help with turfgrass recovery. These diseased areas become more prone to weed infestations.



Mock strawberry

Winter weed management

Broadleaf weeds, such as clover and lawn burweed (sticker weed) and annual bluegrass infesting St. Augustinegrass, centipedegrass and zoysiagrass and dormant bermudagrass, can be suppressed with a late fall followed by a winter application of atrazine herbicide. The window for these atrazine applications is from October to early March. Herbicides containing a three-way mixture of 2,4-D plus dicamba plus mecoprop (trimec-type herbicides) can be used for

winter broadleaf control on the same lawns that were sprayed with atrazine. MSM (metsulfuron) works well on lawn burweed and is highly effective on clovers and false garlic. Weed-and-feed products can be substituted as your first application of fertilizer during the early spring.

When it comes to managing lawn burweed specifically, don't wait until the stickers show up in April to treat. It's too late then. Spray burweed in early November with products mentioned previously. Repeat these applications in February and March.



Wild geranium is a common winter broadleaf infesting lawns.

When should you resume fertilizing your lawn

Lawns may show signs of green-up in southern Louisiana in late February. Do not push turfgrass growth with fertilizer at that time! Fertilizer applied too early will feed winter weeds and will result in lush turfgrass growth that is more susceptible to injury from late frosts and increased levels of large patch disease. Lawns may be fertilized in the New Orleans area by late March, but delay fertilizing central Louisiana lawns until April. Consider fertilizing lawns in north Louisiana around mid-April.

*Ron Strahan, Ph.D.
Associate Professor
Turfgrass and Weed Science*

Sooty Molds

Sooty molds are a result of nonplant pathogenic fungi that grow superficially as a thin black layer on leaves, fruit, twigs and stems of various crop plants or trees. The fungi grow on the honeydew produced by insects with piercing-sucking mouthparts. The insects, including aphids, leafhoppers, mealy bugs, psyllids, scale insects and whiteflies, pierce the plant tissue with their stylets and feed on plant sap. While continuously feeding, these insects ingest a large volume of sap fluid into their bodies, which is not entirely digested. After extracting nutrients from the sap, these insects excrete excess water and sugars from their bodies in the



Figure 1: Aphids feeding on a weed host.

form of a sticky, sugary substance called honeydew. Most of the time, these insects feed on young, tender new growth and the honeydew drops below on all plant parts, including leaves, fruit, twigs and stems. Additionally, the honeydew covers understory vegetation, concrete surfaces, sidewalks, furniture, parking lots, etc., under host plants infested by sap-sucking insects.

Sooty molds are saprophytic fungi with dark, powderlike spores that break down honeydew. Abundance of sooty molds lead to formation of a thin, black layer. There are several species of sooty molds, but the most common ones are *Capnodium* spp. and *Fumago* spp. Sooty molds do not directly affect the host plant on which they reside but can inhibit the photosynthetic ability of the plant by covering leaves, twigs, fruit and stems. Under extreme conditions plants entirely covered with sooty mold may lose vigor and be predisposed to other plant pathogens. Plant growth may also be retarded, and yields can be significantly reduced. The aesthetic value of the plants covered with sooty mold is greatly reduced.

All plant species that are hosts for sap-sucking insects with the piercing and sucking type of feeding are affected with sooty molds. Some of the common landscape plants heavily affected by sooty mold are azaleas, camellias, citrus, crape myrtles, magnolias,



Figure 2: Whiteflies feeding on the underside of a holly leaf.

oleander, pears, pine, roses, sago palms and viburnum. Hedges, small bushes or other plants, such as boxwoods, Indian hawthorn and ground covers, get sooty mold if the trees under which they are planted are infested with these insects. This happens when the honeydew from insects high in the canopy of trees drops on the vegetation underneath.

Managing sooty molds is very simple. Keep insects, such as aphids, mealy bugs, scale insects and whiteflies, in check. Once the insect problem is solved there will be no new sooty mold occurrence. The existing sooty mold infestation dries out after some time and easily sloughs off the infested areas.



Figure 3: Crape myrtle bark scale on a crape myrtle trunk.



Figure 4: Crape myrtle leaves covered with sooty mold.



Figure 5: Citrus fruit and leaves covered with sooty mold.



Figure 6: Honeydew present on the upper surface of crape myrtle leaves.



Figure 7: Honeydew present on the upper surface of a rose leaf.



Figure 8: An Indian hawthorn covered with sooty mold planted under a large tree infested with aphids.

Pressurized water can be used to wash off the sooty molds. Care should be taken while using pressurized water because it may damage the plant parts.

Insect infestations are generally controlled with insecticides, insecticidal soaps or horticultural oils. Before applying any kind of chemical pesticide, it is very important to identify the insect properly. Samples of plants infested with insect pests may be taken to your extension agent for identification. Consult with your local extension agent on the use of chemicals for managing insects. The LSU AgCenter Plant Diagnostic Center is also available to diagnose your plant health problems.

*Raghuwinder (Raj) Singh, Ph.D.
Horticulture Pathology Extension Specialist*



Figure 9: Mulch covered with sooty mold under a crape myrtle tree heavily infested with crape myrtle bark scale.

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