LSU AgCenter
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Horticulture Hints

for Louisiana

Winter 2023

Soaker hoses and drip tape are ideal watering systems to prevent excessive disease in smaller gardens. Photo by Kathryn Karsh Fontenot, PhD

Watering Well

Fall 2023 was so dry you were likely to see several things occurring in the garden …

If you had irrigation and used it, you probably had a wonderful crop of fall vegetables. You also may have had less disease incidence and a little bit more insect damage since so many other plants were dying from the drought. If you didn't have irrigation, you probably saw complete loss of the crops. Water is so very important, not only to keep plants from wilting but also as a critical part of photosynthesis. So, if the fall taught us anything … it's to invest in irrigation. Below are some tips for irrigating your vegetable garden.

Vegetable Irrigation Tips:

- Plant the garden on the side of the house where you have a water faucet. You will be more likely to water if you have easy, convenient access to water.
- Water at the base of plants. Plants drink from their roots. Each time you water the foliage you increase the chance of spreading disease.
- Use soaker hoses or drip irrigation in vegetable gardens. The goal is to maintain soil moisture. So, we water a little bit each day to keep the soil moist but not saturated. Allowing our garden to dry out and water every couple of weeks slows overall vegetable growth and leads to cracked and bitter tasing fruit.
- Because we want to water a little bit each day to maintain soil moisture, you may want to invest in a timer. Many gardeners are busy people. Getting

to the garden one to two times a week is easy, especially if you really love this hobby. But going out every day can be a challenge for those with kids or full-time jobs. I'd rather see you add a timer to your irrigation system than accidentally leave the drip tube or soaker hoses turned on overnight or for several days! Yikes! And P.S. If you've done this, you are not alone. Why do you think I knew to mention it? Even us specialists mess up.

Need more information on managing drought in vegetable crops?

- Check out this article: Managing Drought in Louisiana Horticulture Crops: Vegetable Gardens
- Here is a great link to a video produced by Ed Bush on installing drip irrigation in a raised garden bed: https://www.youtube.com/watch?v=aNtgfHNpvAw

Where can I purchase drip irrigation?

Drip irrigation can be purchased at specialty irrigation stores and at most retail garden centers. Just be sure that wherever you buy your irrigation parts from, you can easily get back there. While most brands are similar, some don't quite fit with one another and you may need to return to the original purchasing location.

Now on to your favorite topic – planting vegetable crops. Let's never get so discouraged by the weather that we don't plant our gardens. The fall and winter months are a lot less challenging than the spring in terms of managing insects and disease. So, get out there and have fun! The garden should be your place to connect with nature and let the stress of the rest of life go away for a bit of time.

Kathryn Fontenot, Ph.D.
Extension Vegetable Specialist

Beehive Buzz: Honeybees and Drought

The AgCenter over recent weeks has been reporting on drought stress affecting various commodities including cattle, crawfish, soybean and sugarcane. Beehive Buzz looks at how the drought of 2023 is affecting beekeeping.

In a University of California, Davis, blog, Christine Casey, with the E.L. Nino Bee Lab, wrote about how beekeepers deal with droughts in California. The most critical advice from Casey was to provide an efficient water source.

She added that their "self-watering container made from a soaker hose runs on a timer. This provides water for our bees while reusing the water for irrigating the plant in the container." You can read more at https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=14798

Thirsty bees drink from a bee watering container made from a soaker hose. Photo by University of California, Davis, Bee Haven

Casey also mentioned the resilience of honeybees. "A study of bees in the southwestern U.S. desert found that they were able to reliably use environmental cues to enter diapause [a survival mechanism] when their plant resources were affected by drought," she said.

One other item of useful information from Casey was that multi-year droughts can reduce the reproductive rate of the varroa mite, a known honeybee parasite.

Please be aware that the research and image referenced in this article is not the AgCenter's work but the work of Christine Casey. The AgCenter believes that this work could be quite useful to Louisiana stakeholders and would like to recommend this resource to them.

If you want to contact Beehive Buzz, please email your questions and pictures to khawkins@agcenter.lsu.edu or call 337-463-7006. Also, you can be on the "beemail" email list by emailing your request to the address above.

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Classy Camellias: A Delightful Winter Ornamental for Every Garden

As we approach the holiday months, many gardeners are winding down. However, now is the perfect time to embrace Louisiana's mild winters and enjoy the beautiful blooms of camellia plants. This evergreen shrub is native to Japan and was introduced to the United States in the late 1700s. It has since become a staple in southern landscapes thanks to its glossy green foliage and a myriad of varieties boasting pink, red or white flowers.

Common types of Camellia plants include *Camellia japonica* and *Camellia sasanqua*. If you want to see colorful blooms during the winter season, the sasanqua is a reliable choice. A particularly pleasing and hardy choice for Louisiana is the Leslie Ann variety, which was named a Louisiana Super Plant in 2015. Other notable sasanqua varieties include Yuletide, Sparkling Burgundy and Bonanza.

Keep these plants happy with acidic, well-draining soil and partial shade. Alkaline soil can be amended with iron sulfate or aluminum sulfate to create the ideal conditions for your camellias. Applying a few inches of mulch around the base of the plant can provide extra organic matter and suppress weeds. If pruning is necessary, do so in late winter or very early spring, right after they finish blooming. Don't wait too long to prune, since summertime growth is essential for camellias to bloom later on. Fertilizer is best applied in the springtime, around March or April, when plants start to put on new growth.

For those who have yet to cultivate camellias, there are numerous public collections to explore throughout Louisiana. The LSU AgCenter Botanic Gardens and the AgCenter's Hammond Research Station both boast large, well-kept collections of camellias where you can enjoy a colorful wintertime walk in the garden. The sasanqua camellia's minimal maintenance and wintertime blossoms make it a wonderful choice for a seasonal ornamental.

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Garden Maintenance After a Frost or Freeze

After the first frost or freeze of the season there is much to be done in the landscape. Marigolds, zinnias, periwinkles and lantana can be left to bloom until burned down by the first frost or freeze. Summer flowers catch their second wind in the fall and provide us with deepened colors and rejuvenated growth as the temperatures become milder. However, after that first freeze, the landscape dramatically changes and requires some attention to maintain that tidy and manicured look.

Frost injured foliage of perennials should be cut back to the crown of the plant; annuals can be pulled up. Photo by Marcie Wilson

A light frost or freeze will let you know which plants need cutting back or removing and which are frost-tolerant. Here are some flowerbed tasks for after a frost or freeze:

- Most summer flowering annuals and bedding plants are not frost-tolerant and will need to be pulled up.
- Collect seed from annuals if desired, shake off excess soil from roots and discard.
- Frost-sensitive summer blooming perennials, such as lantana and Mexican heather, will need to be cut back.
- Perennial foliage damaged by frost will persist through the winter and can be cut back to maintain a tidy look or left in place to provide shelter and food for overwintering wildlife. Be aware that this will also harbor unwanted wildlife like mice very near your home.
- Once all frost damaged foliage has been removed, it is a good time to take inventory of what remains and what can be added.
- The gaps in your flowerbed can be filled with all the beautiful and enticing bedding plants that are

available at your local garden center including pansies, snapdragons, petunias, chrysanthemums, dianthus, dusty miller and ornamental cabbages, just to name a few. Fall is also the ideal time to plant spring blooming bulbs, perennials, trees and shrubs to allow roots to settle in through the winter before spring growth appears.

- Your frost-tolerant plants will likely require some upkeep at this point:
    - Remove daylily stalks and dead foliage. Remove and discard any plant material with daylily rust.
    - Deadhead or prune back leggy plant material of perennials such as blue salvia, blanket flower, guara, daisies, mums, coneflower, rudbeckia and verbena.
    - You may even have some snapdragons or petunias that made it through the summer. These will likely need some trimming.
    - Do not prune or cut back hydrangea, crape myrtle, roses or azaleas at this time.

Evergreen perennials and shrubs are very cold tolerant but may require some tidying up. Photo by Marcie Wilson

- Incorporate compost into the soil, apply a slow-release fertilizer, put down a fresh layer of mulch, and enjoy a beautiful winter flowerbed all the way until spring.
- Fall is also a great time to sow wildflower seeds like bachelor's buttons, sweet peas, alyssum, poppies, toadflax and forget-me-nots. The cold winter months will break seed dormancy of any cold stratification requirements. You'll see blooms in the spring.
- Dig up and divide spring blooming bulbs and clumping perennials, as needed, to encourage more blooms. This includes daylilies and irises.
- Dig up and store caladium bulbs as these usually will not survive the winter.
- Evergreen perennials and shrubs are very cold tolerant but may require some tidying up.

Marcie Wilson
Area Horticulture Agent, Northeast Region

Proper Pruning: Making the Right Cut

Pruning is the practice of removing certain parts of a plant to stimulate new growth and increase the quality or production of flowers and fruits. Even as I draft this article, I know it sounds a little confusing. I am going to cut something off a plant, and it will grow better? Yes!

I was not sure I genuinely believed this until last year. I have a climbing rose plant that surrounds my mailbox and for the last couple of years it has not been producing the quality and quantity of rose as it once had. I talked with other agents, and they suggested pruning the rose. In February last year, I took out my pruning shears and started cutting. I had to get over my initial fear of hurting the plant. I did my homework before I started. As I began cutting, I removed parts that were old or unproductive and by the time I finished my poor rose bush had two or three main parts left. I thought to myself, "Well, I either just killed it or helped it." As it turned out, I helped it. It was the best year of rose production I had in about five years.

Before you start pruning, there are different tools you will need:

- A pair of hand clippers to remove small parts of the plants.
- A large set of set of loppers to remove branches from trees.
- A saw if you are cutting extremely big parts of a tree.

Remember to clean your tools between cuts to ensure you do not spread diseases or fungus in the plant.

After you have gathered the proper tools for the job, examine the plant to identify parts that are dead, diseased, damaged or broken. Once you have identified the parts you want to remove, cut the unwanted part at a 45-degree angle. Cutting the plant at an angle keeps rainwater from collecting on the freshly cut piece, which can lead to disease or fungal infection.

There are general rules of thumb you need to go by while pruning a plant. Most trees, shrubs and roses should be pruned during their dormant time of the year. Dormancy usually occurs during late November until early March. There is an exception to this rule: Plants that bloom in early spring, such as dogwoods, tulip trees and azaleas, will lose their flower production for the year if pruned during the winter months. When pruning these plants, prune them as soon as bloom production is done with for the year.

John Monzingo
Assistant County Agent

Getting Ready for Grafting: Collecting Scion Wood

Grafting is an asexual propagation technique in fruit and nut cultivation that ensures uniformity and consistency in production and yield. If you have bought fruit trees from a nursery, it is very likely that what you purchased is a grafted plant. That is one reason that fruit trees generally cost a bit more than other trees because that is an extra step that must be taken before they make it to market. Grafting itself is normally done in the early spring to late winter depending on the method being used. One critical component of the process that is often overlooked is scion wood collection.

Pecan scion wood trees. Photo by Michael Polozola, PhD

Let's take a moment to review grafting a little bit more. The basic process of grafting is taking a rootstock and combining it with a scion. The rootstock is the bottom part of a plant that's used for its root system. The scion is a part of the plant you want to propagate and is used for the upper part of the plant. There are many reasons why this propagation strategy is employed for fruiting plants, but one of the most common ones is ensuring that orchards produce uniformly. If you were to plant a whole orchard using seeds, there is a very good chance that you would end up with fruit that has many different characteristics. The reason behind this is most fruit trees are genetically heterozygous and cross pollinated which means that their offspring will be a totally different genetic composition than their parents. This same principle is why children may resemble their parents and have many of the same traits but are not truly identical to them.

One of the first things you should check in scion wood collection is making sure that the plant you are collecting scions from is true to type and in healthy condition. If possible, collect your initial material from a plant with known provenance and ideally that you have seen the fruit from. Collecting scion wood that is healthy and vigorous is the next most important step after confirmed identification. You will have the best grafting success with wood from the previous growing season when dormant or bud grafting. To have high quality scion wood, you need to adopt practices that promote vigor such as regular pruning, irrigation and fertilization. Those that graft commercially will have dedicated scion wood orchards that are pruned drastically every year to ensure that they have a steady source of scion wood. On a residential level, you might want to prune one portion of a plant you want to propagate a bit hard to encourage it to produce new wood for grafting. Though it can vary based on the grafting technique you are using, you should aim for scions that are about 6 to 8 inches long and between a pencil to a quarter in diameter.

Pecan scion wood tree. Photo by Michael Polozola, PhD

When you are ready to collect your scion wood, make sure you have your labeling supplies ready. One unfortunate thing I have seen is beautiful scion wood that was not labeled. Some may be able to rely upon their memory for cultivar identification but if I am working with more than one cultivar, I am utterly reliant on labels to keep me on track. I would encourage having the name of the variety on the packaging and on a separate label bundled with the scion wood within that packaging.

Without proper storage conditions all of your efforts collecting scion wood and grafting can be for naught. If possible, seal the ends of your scions with either wax or shellac to prevent them from drying down. Keep the material moist, as they need moisture to survive, but not wet as that can encourage rotting or disease. One way some do this is wrapping the material in a moist paper towel or cedar shavings before placing it in a sealed plastic container or plastic bag. Also keep your scion material in cool conditions to prevent it from wasting its sugar reserves before grafting. Most growers accomplish this by keeping material in large coolers, but you can do the same thing in a refrigerator at home. Make certain that your scion wood does not accidentally make its way to the back of refrigerator where it might freeze. If your material freezes, it will not be viable, and any grafts done with it will not be successful.

If you want to see how I collect and process pecan scion wood, take a look at these video resources I created on the topic.

- **Pecan Scion Wood Collection:** https://www.youtube.com/watch?v=UQ6ykXnwVFw
- **Processing Pecan Scion Wood:** https://www.youtube.com/watch?v=-K71miyjgHs

Michael Polozola, Ph.D.
Assistant Professor, Horticulture Agent

Louisiana Vegetable Gardening Tips

Vegetables to Plant

December

- Scout lettuce, strawberries and all cole crops for insects. Aphids, slugs, snails and worms tend to cause problems 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 – about 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 F. If your plants are not in bloom, there is no need to cover.
- Order spring vegetable seed now if you want the first pick of the great varieties. If you wait too long, other gardeners will order all of the good varieties.

January

- In early January, continue to plant onions sets. Bulb onion varieties that perform well include but are not limited to Texas Grano, Mr. Buck, Texas 1015Y, Pinot Rouge, Red Burgundy and Miss Megan.
- From mid-January through the end of February, you can transplant broccoli, cabbage, cauliflower, chard, kale and lettuce into the garden. You can also direct seed carrots, radish turnips and other rooting vegetable crops.
- From mid-January through mid-February, plant Irish potatoes in the garden. Cut the potatoes a few days before planting. Cut larger potatoes into 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, meaning adding 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 or cultivate with a tiller or hoe. Get weeds out of the garden. Small insects such as 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 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 will be here soon!

Kathryn Fontenot, Ph.D.
Extension Vegetable Specialist

Fertilizing Your Garden the Natural Way is the Way to Greaux!

The usage of animal manure as a soil amendment for food production is a technique as old as gardening itself. However, lately it has become of interest among home gardeners and farmers due to the array of benefits that the implementation of this practice provides which go beyond nutrient supply. Also, an increase in the demand of food products grown under organic, environment-friendly production systems has triggered the interest in exploring more sustainable farming and gardening alternative practices to reduce inputs costs and potential negative environmental and health effects.

Before applying animal manure to your home gardens, it is important to first know some of the benefits provided by the implementation of this practice:

- **Nutrient content:** Animal manure contains macro- and micronutrients which are essential for plant growth and development. These include nitrogen, phosphorus, potassium and other nutrients which support crops´ growth and boosts their yields. The nutritional content of manures is influenced by a variety of factors, including what the animals are fed and what bedding material is used. It is important to know your source of manure.
- **Soil organic matter content:** This can be increased with the application of animal manures to soil. Increasing the soil´s organic matter content enhances soil structure increasing water holding capacity and porosity and stimulates the activity of microbial communities which are responsible for the mineralization of nutrients to make them available for plant uptake.
- **Reduction in production inputs costs and usage:** Due to the manure's nutrient content, it can be a partial substitute for synthetic or organic fertilizers to supply the crop's nutritional requirements at a lower price.

Unfortunately, there are several considerations and precautions that need to be taken when applying animal manure to your home gardens:

- **Manure source:** It is important to know where your manure comes from. Pig, dog, cat and human manure should never be used in home gardens because they may contain parasites. Manure from cows, horses, chickens, sheep, goats and rabbits are recommended for application in vegetable gardens.
- **Nutrient content:** Be aware of the manure's nutritional content to determine application rates to prevent crop burning (especially when applying chicken manure) and impairment of seed germination.
- **Environmental concerns:** Consider animal manure application timing and rates to prevent environmental pollution caused by leaching and/or runoff.
- **Pathogen content:** Animal manures have been found to contain pathogens, such as *Salmonella* spp. or *E. coli* which are naturally present in the animals´ gastrointestinal tracts. It is important to consider this when handling and applying the manure, as well as when harvesting the vegetables.
- **Herbicide residues:** Animal manures can also contain herbicide traces which might kill your vegetable crops. Make sure you know your manure source and their handling and production techniques and practices.
- **Weed seeds content:** Animal manure, especially from horses, might also contain weed seeds that weren't digested by the animal. This could increase the weed pressure in your home garden.

So, if you are a home gardener looking for alternatives to reduce production inputs while obtaining a wide variety of benefits and producing your vegetables in a more sustainable way, the application of animal manures to your soil might be of interest to you. However, it is important to take these recommendations into consideration when doing so to prevent the negative effects that improper handling or application of manure might cause. And remember, it is not only about growing and cultivating plants and vegetables, but also about growing and cultivating a connection with our Mother Earth and fellow gardeners and food producers to sustain us all now and in the future.

Daniel Leiva
Graduate Student

Black Twig Borer

The black twig borer, *Xylosandrus compactus* (Insecta: Coleoptera: Curculionidae: Scolytinae), is a tiny ambrosia beetle that can infest healthy host plants. The adult beetle is shiny black in color and less than 2 mm in length. Currently, it is known to occur in Hawaii and coastal regions of the southeastern United States.

An adult female black twig borer. Photo by Raghuwinder Singh, PhD

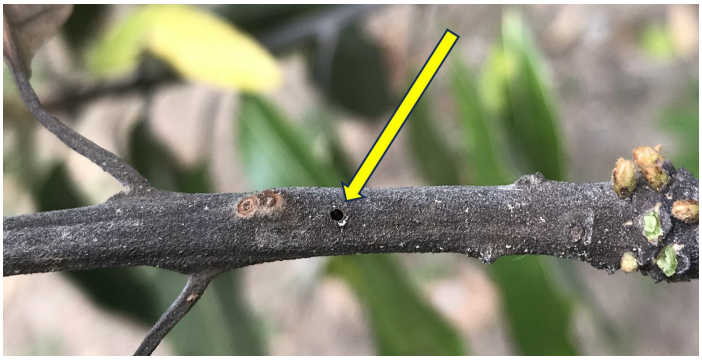
The black twig borer has a wide host range and can attack more than 200 hardwood species. Some of the economically important and common host species include avocado, dogwood, grape, live oak, magnolia, orchid, pecan, redbud, red maple and many other shade trees. In Louisiana, Italian cypress was also reported to be infested with black twig borer in 2021.

A southern magnolia tree heavily infested with black twig borers. Photo by Raghuwinder Singh, PhD

An Italian cypress infested with black twig borers exhibiting flagging of dead branches. Photo by Raghuwinder Singh, PhD

Adult beetles overwinter in infested twigs or branches and emerge during early spring. After emergence, adult female beetles initiate infestation and bore into the pith of new, small diameter branches through a tiny entrance hole approximately less than 1 mm in diameter. Small branches that are less than 7 mm are usually attacked by a single female beetle, but large diameter (up to 22 mm) twigs can be attacked by as many as 20 adult female beetles. The female beetle constructs a brood chamber/gallery in the pith and lays small, white translucent, oval eggs. Beetle grubs (larvae) are legless and creamy white in color. Grubs feed on white ambrosial fungus (*Fusarium solani*) introduced by adult beetles in the brooding chamber. The black twig borer completes its life cycle within 28-30 days during the growing season.

The ambrosial fungus introduced by the adult beetles is also a pathogen of trees. The fungus clogs the water conducting channels (xylem vessels) resulting in wilting and death of the infested twigs. Leaves tend to stay attached and appear as “flagging ” of dead twigs.



An entrance hole of a black twig borer on a southern magnolia branch. Photo by Raghuwinder Singh, PhD

Creamy white legless grubs (larvae) of a black twig borer in the brooding chamber. Photo by Raghuwinder Singh, PhD

An entrance hole of a black twig borer on an Italian cypress branch. Photo by Raghuwinder Singh, PhD

A twig infested with black twig borers exhibiting flagging injury symptoms. Photo by Raghuwinder Singh, PhD

Management of black twig borer starts with pruning and destroying infested twigs. Prune dead twigs several inches below the beetle entrance hole and dispose of them properly. Adopting cultural practices that promote good tree health and vigor including adequate fertilization, proper mulching and avoiding drought stress may help the infested trees to recover from beetle damage. If a tree is heavily infested and chemical control is warranted, insecticides containing permethrin or bifenthrin as active ingredients may be sprayed on regular intervals during late winter or early spring to manage the newly emerging adult beetles. Once the beetles bore into the twigs, insecticides are ineffective.

For more information on black twig borer, contact the LSU AgCenter Plant Diagnostic Center at www.LSUAgCenter.com/plantdiagnostics.

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