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### **UF/IFAS Extension Duval County**

March/April 2023

# **Extension Update** by Larry Figart

"Spring won't let me stay in this house any longer! I must get out and breathe the air deeply again"...Gustav Mahler (Austrian Composer)

#### "Here comes the Sun"...George Harrison (British Songwriter)

The warm weather is here. We have set our clocks one hour ahead. The grass needs mowing. It must be spring. However, time in the sun can bring on sunburn and heatstroke. When you go out, apply sunscreen, and wear a hat with brims. Don't forget sunglasses to reduce cataract risk.

Overheating can quickly develop into heat stress if we don't pay attention. Consider scheduling strenuous work for cooler times of the day. Wearing lightweight, light colored clothing will help you stay cooler. Finally, drink lots of water even if you are not thirsty.

Hydration, sunscreen, and proper precautions will ensure that as you delve into your landscape, you will stay safe and cool.

### What's That? White mycelium in leaf spots



Leaf spots on top of viburnum leaf



Image Credits: G. Richardson, UF/IFAS



Leaf spots on underside of a viburnum leaf



### Around the Yard by Tonya Ashworth

### **Companion Planting**

Spring has returned and now is the time to start planting your warm season vegetables. Part of the fun of gardening is trying new methods like companion planting. In the past, gardening wisdom would just declare that certain vegetables did not get along with other vegetables. There would be no hard research to back up these statements. But, thanks to recent University Extension research all over the country, we now have some strategies for companion planting that are proven to be effective. These strategies can help us reduce or eliminate our use of insecticides in the vegetable patch.

Living mulches are low growing plants that are placed between the rows in your garden to cover the soil. Any mulch-living or otherwise.. is a good idea, because the mulch acts as a barrier between the soil and the leaves of your crop. Many plant diseases spread when rain or irrigation water splash fungal spores up onto the plant leaves. With living mulches such as clover, you get added benefits like providing habitat for beneficial insects. They can also disrupt the lifecycles of some of our garden pests. Some insects like flea beetles and cucumber beetles lay their eggs in the soil. Others, like hornworms and cabbage worms drop off the plant and go into the soil to pupate. If they cannot reach the bare soil because of the living mulch, then you have made life difficult for them to continue.



Using Cover crops as mulch Image from Cornell Extension

Did you know that like us, insects have favorite foods? You can use this information in your garden to plant trap crops. A trap crop is a sacrificial plant that lures the insects away from the crop you intend to eat yourself and gets them to eat something else. The insect must find the trap to be tastier than the crop you are protecting. Once on the trap crop, you can annihilate the pests with insecticides or just pull them up, trap and all, and deposit them in a plastic bag. Two of my least favorite insects, the squash vine borer and the squash bug, both love blue Hubbard squash. If you plant the blue Hubbards along the perimeter of the garden, they will leave your yellow crooked necks alone. Make sure you plant the trap a couple weeks before the main crop so that it gets a head start. Radish plants have also been shown to trap flea beetles that love to munch on eggplant. That works for me since I prefer eggplant to radish. Flea beetles are smaller and less mobile than squash bugs, so the radish plants should be interspersed throughout the bed where the eggplants are growing.

Some flowers are very good at attracting beneficial insects that then eat the insect pests for us. Flowers with flat daisy-like faces that bloom in clusters are best for this. Consider zinnia, black-eyed Susans, cosmos, and even herbs left to flower such as dill, fennel, oregano, and lemon balm.

Many beneficial insects pose one problem. After they eat all the pests off your crops, they will fly away to find more food. But, a creative solution to this problem can be found in a banker plant. Banker plants are grown specifically to provide a food source for your beneficial insects. If you have ever grown a milkweed, you know that there is an almost constant supply of orange milkweed aphids that come along with it. When you plant milkweed near your veggies, you can keep those ladybugs around longer and have the added bonus of providing a host plant for the endangered monarch butterfly.

Intercropping is another way to use companion plants by mixing up all the different types of plants in the bed instead of growing things in sections and rows. Insects often rely on chemical cues to find the plants they want to eat. Having the plants and their chemical smells all mixed up makes it harder for the pest to find their preferred meal. There is also the "landings theory". This theory is that insects will land on a plant and "taste" the plant with receptors in their "feet". Insects need to land on the right plant a few times in a row before they will then lay an egg. If vegetable plants are all mixed instead of in groups, they are less likely to land on the host plant several times in a row. In a study, researchers noted that 36% of the study insects laid eggs on the host plant grown in bare soil, but only 7% laid eggs on host plants surrounded by companion plants.

Try mixing things up this year-literally. Plant your vegetables in a group with an herb and a flowering plant instead of in sections and rows. Cover the soil to prevent disease and think about using milkweed for more than butterflies.

### Out on a Limb by Larry Figart

#### **Common Misperceptions about trees**

My favorite part of spring is when the grey, baren branches of deciduous trees starts to come alive with new light green foliage. It is also the time when folks start to look at their trees with a new interest, seeing things they had not noticed in the past. As this curiosity about landscape trees reaches a peak soon, I figured it might be a good time to set the record straight on some misperceptions about trees that have been around a long time.

The first one is a biggie. Sometimes during presentations to adults, I ask them to describe to me what a trees root system looks like. Many of them describe something that looks akin to a carrot with little roots branching off to either side. This leads us to our first myth, that "trees have tap roots". Many are surprised to learn that tap roots are an exception, and not the rule. It is true that as tree seedling develops, a tap root forms. However as it gets 10-12 inches long, it soon reaches depths where soil oxygen is limited and it stops growing. Lateral roots then emerge and start to spread horizontally typically reaching depths of only 18-20 inches. These lateral roots then spread out 2-3 times the width of the branches if there is room. Many times, in urban areas there are lots of obstructions to root spread such as buildings, sidewalks and streets. This is why it is important to make sure that the tree you plant matches the space you want it to grow in.



When researching how to plant a tree we have often heard that we should "*plant the tree at the depth it is growing in the container*". If we follow this myth,

we are almost always planting the tree too deep. Typically, trees planted to deep have a hard time thriving. Instead, trees should be planted where the top most roots that emanate from the trunk should be placed slightly above the ground level. A forester friend of mine came up with a saying that I will always remember. It went "plant it high and it wont die. Plant it low and it sure wont grow". The reason you should plant a tree higher is that the growing medium in the contain-



After we plant the new tree slightly higher, we need to water it well until it becomes established. Hence our third misperception that "turf irrigation is sufficient to water a new tree". A newly planted tree needs a lot more water directed onto the rootball than an irrigation sprinkler can provide. They need a source of water that places water directly onto the rootball either by hand watering, or an emitter from the irrigation system called a bubbler. At each watering a tree should get 2-3 gallons for every inch in trunk diameter. For instance, a 2 inch diameter tree needs 4-6 gallons at each watering. This should be done every day for one month, every other day for 3 months, and then every week until it is established. Once it is established the tree can often make it on its own. For a great publication on planting and establishing trees, go to: https://hort.ifas.ufl.edu/woody/ documents/EP314.pdf.

#### ....continued on page 7

# From the New Leaf Archives

### Answers to Fertilizing Lawns by Terry DelValle Extension Agent Emeritus

When should I fertilize? Don't jump the gun and fertilize the lawn too early. Mid April is the target date to apply the first fertilizer application to warm season lawns in north Florida.



to get 46.67%.

What fertilizer should I use? Find a fertilizer that has a 2:1 or 1:1 ratio of nitrogen to potassium, which represents the first and third numbers on the bag. The middle number, phosphorous, should be 2 or less. Examples include 15-2-15, 16-2-8, etc. This represents the percentage of nitrogen, phosphorous and potassium based on a one hundred pound bag. A 100 pound bag of 15-2-15 fertilizer contains 15 pounds of nitrogen, 2 pounds of phosphoric acid, and 15 pounds of potash. A 50 pound bag of the same analysis contains 7.5 pounds of nitrogen and potash and 1 pound of phosphoric acid.

Next, look at the nitrogen source. Find a fertilizer that has 30% or more of the nitrogen in a controlled release (water insoluble) form. To calculate the percentage of slow release nitrogen in a fertilizer, take the number listed for slow release, divide by the first number on the fertilizer bag (total nitrogen) and multiply by 100. For example, if a 15-0-15 has 7% water insoluble nitrogen, divide 7 by 15 and multiply by 100

Then look at secondary plant nutrients and micronutrients. For lawns, iron and manganese are the most important, especially in soils with a pH over 6.5.

"Weed and Feed" type fertilizers are not the best product to apply at this time. It's a timing issue. The herbicide is traditionally a pre-emergence herbicide which should have been applied earlier (mid February to March 1), when weeds were germinating, to be effective. That is not the right time to fertilize because lawns are dormant.

How Much Fertilizer to Purchase and Apply? Only buy what you need for one application or at least this growing season because fertilizers do not store well. First, determine the overall square feet of lawn area by dividing the lawn into rectangles. Multiply the length by the width (60' x 30' = 1,800 sq. ft.) of each rectangle. For triangles use the formula area = 0.5 x base x height 0.5 x 40' x 80' = 1,600 sq. ft. Add these together to get v the total square feet of fertilized area.



40'

80'

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Another option is to look at the total area of your property. Then subtract the area for the house, deck, driveway, sidewalks, and garden area (all non-fertilized areas) to get the total yard area.

Once you have the square feet and know the fertilizer analysis, calculate how much fertilizer to purchase. If the fertilizer has 30% or more water insoluble nitrogen, apply at a rate of 1 pound of nitrogen per 1,000 square feet. A 50 pound bag of 15-2-15 with 30% or more water insoluble nitrogen will cover 8,000 square feet. If less than 30% water insoluble nitrogen, apply 0.5 pound nitrogen per 1,000 square feet. A 50 pound bag of this type fertilizer (15-2-15) will cover 16,000 square feet.

The fertilizer bag will state how many square feet can be covered based on the analysis. Another option is to use the University of Florida publication 'Homeowner Best Management Practices for the Home Lawn' at <u>https://edis.ifas.ufl.edu/publication/ep236</u>. This includes a table that gives the pounds of fertilizer to apply based on nitrogen content and square feet of lawn area.

**How often should I fertilize?** Know what type of lawn is in your landscape. The number of pounds nitrogen per 1000 square feet per year in north Florida based on lawn type is as follows: 2 to 3 for bahiagrass, 3 to 5 for bermudagrass, 1 to 2 for centipedegrass, 2 to 4 for St. Augustinegrass, and 2 to 3 for *....continued on page* 7

### Growing in the Garden written and photo credits by Beth Marlowe

As I write this in early March, <u>it is clear that spring</u> has arrived, regardless of what the calendar says! Some of our cool season crops, like cilantro, mustard and radishes are bolting and flowering. We often let them do this so our honey bees and native bees have a ready food source in early spring when many warm season flowers may not be out yet.

We are in the process of transplanting our tomatoes, peppers and eggplants out into the garden. We started them from seed indoors in January, and now that we have passed our <u>last average date of frost</u> we are checking the forecast daily to be sure there are no predicted cold snaps and getting those plants in our beds. If you are unsure of your last average date of frost, March 15 is a safe date recommended by UF/IFAS for putting your spring crops out.

We are also beginning to direct seed crops such as beans, cucumbers and squash. They don't like to be transplanted, so we sow them where they will grow. They germinate best when soil temperatures are above about 60°F., so we don't put them out too early. Our raised beds and in-ground plots are all in the 60-65°F. range, so it's time to get them started as well.

If you are new to gardening in general, or new to gardening in Florida, beans are a great spring crop to start with. They grow in most any well-drained soil, do well in large containers, and don't require trellising or staking. Florida-friendly snap bean varieties include 'Bush Blue Lake', 'Contender', 'Roma II', 'Provider', and 'Cherokee Wax' (a yellow wax type). If you're interested in growing shell beans, try 'Horticultural', 'Pinto', 'Red Kidney', 'Black Bean', or 'Navy' varieties. Keep the soil consistently moist while the seeds are germinating, and once they come up water when the top inch or so of soil feels dry. Be careful not to over-fertilize. Beans are legumes that fix their own nitrogen. If you add to much nitrogen, you may get beautiful leaves but not many beans. See the Florida Vegetable Gardening Guide for more detailed planting information.

Consistently warmer weather in April allows us to plant some of our heat-loving and more tropical crops that need a long growing season. If you have a lot of space, think about Seminole Pumpkin, sweet potatoes or luffa gourds. All grow well over the summer with minimal disease or insect pressure and very little care.

April can also bring the first of our early tomatoes. There's nothing better than scouting the garden in the spring sunshine and popping cherry tomatoes into your mouth as you go! Unfortunately, we are not the only ones that love the spring plants and fruits.

Remember to observe your plants daily and look for insects or caterpillars near the growing tips or on the undersides of leaves. Planting resistant varieties and planting the right crops in the right place at the right time goes a long way toward minimizing insect problems. Most problems that do arise are fairly easy to solve by hand picking or with horticultural soap or oil, especially if they are caught early. No matter how you slice it, it's a great time to be a gardener in northeast Florida!

EDIBLES TO PLANT IN North Central South				
EASY TO TRANSPLANT	Boniato, Gingers, Roselle, Tomatillo, Tomatoes	Boniato, Chinese Cabbage, Gingers, Roselle, Sugarcane, Swiss Chard, Tropical Spinaches	Boniato, Chinese Cabbage, Gingers, Roselle, Sugarcane, Tropical Spinaches	
TRANSPLANT	Amaranth, Calabaza, Long Squash, Luffa, Papaya, Seminole Pumpkin, Sweet Potatoes	Amaranth, Calabaza, Long Squash, Luffa, Papaya, Pigeon Pea, Pineapple, Seminole Pumpkin, Sweet Potatoes, Yucca	Amaranth, Papaya, Pineapple, Sweet Potatoes, Yucca	
USE	Beans (bush, lima, pole), Cantaloupes, Chayote, Corn, Cucumbers, Okra, Peanuts, Peas (southern), Squashes, Watermelon	Beans (bush, pole), Chayote, Corn, Okra, Peanuts, Peas (southern), Squash	Beans (bush, lima, pole), Chayote, Peas (southern)	

# Clean Pruning Tools By Larry Figart

There are diseases in the landscape that are spread by the very tools that we use to take care of them. When we prune out diseased limbs and branches we could be moving the disease from sick plants and spreading it to healthy plants. In this article we will discuss some of these diseases as well as how to clean our tools.



Sphaeropsis Gall in Holly Larry Figart UF/IFAS

**Sphaeropsis Gall** is a disease that has been slowly increasing in our landscapes. It is a disease that affects hollies. The reason for the increase is not that the disease is changing, it is that we are starting to use more and more holly in the landscape. Most of our hollies are susceptible. The disease is first noticed when the leaves at the end of branch tips turn yellow. Then as the disease progresses the branches start to become thicker than the surrounding tissue. In advanced cases a witches broom forms on the diseased branch. Eventually, the diseased branches will die. While this disease can be spread naturally with rain splashed spores, transmission from tree to tree can be reduced by ensuring our pruning tools are clean.

**Fusarium wilt** in Queen and Mexican Fan Palm was first noticed in Northeast Florida around 2008. It is a devastating disease that can kill a seemingly healthy palm in a few weeks. The symptoms start in the lower fronds and quickly move up the crown until all the fronds are dead. The disease is so quick, the palms often look "freeze dried", meaning the dead fronds do not droop. Like Sphaeropsis Gall, this disease can naturally spread as spores are carried on windblown rain. However, it typically is spread within landscapes through the use of contaminated pruning tools. There have been many instances where a homeowner looses all of their Mexican fan, or queen palms within

Using clean equipment is key to keep from spreading this disease.

The fungi that causes **Botryosphaeria Canker** is considered an opportunistic fungi. That means it looks for the "opportunity" to affect a stressed or weakened plant. It is typically described as a weak pathogen. Think of it as the predator that looks to take out the old and diseased plants. So the best way to prevent it is to keep our shrubs and trees healthy and vigorous. Part of that is to prune out any diseased branches. However, if we do not sterilize our tools, we run the risk of spreading this fungus to healthy portions of the plant.

Other diseases that are commonly spread by infected pruning tools include fire blight, and tobacco mosaic virus.



Botryosphaeria Canker Dennis Hamilton , Phillips Garden Center

So far we have read about <u>why</u> sterilize pruning tools, now we will discuss the <u>how</u>. There have been several studies to determine what works best. Diluted alcohol, a 10% bleach solution, trisodium phosphate, and Lysol all work well. One of the studies also found that Lysol was least corrosive and bleach was most corrosive. The method that is recommended is to have a small bucket of solution nearby and two pruning tools. Alternate pruning tools, leaving one to soak, and switch them when moving to the next plant. Some folks carry spray bottles with the solution in it spraying the tools between cuts. By disinfecting our tools we can avoid spreading disease in our landscape.

# Fertilizer Answers continued from pg. 4

zoysiagrass. Notice there is a range. Lower amounts of nitrogen are for lower maintenance lawns versus larger amounts are for a higher maintenance lawn. For lawns that require two pounds of nitrogen per 1,000 square feet per year, the most critical application times are mid-April (at the beginning of the growing season) and September (going into the winter).

#### Are there other fertilizer tips?

Do not apply fertilizer prior to a heavy rain. Much of the fertilizer will be lost due to runoff or leaching if a heavy rain occurs within 8 to 12 hours of a quick release urea application.

Lightly water-in fertilizer with one-quarter inch of water to prevent nitrogen loss and burning the grass.

Do not apply fertilizer within ten feet of a body of water unless using a spreader with a deflector shield. If using a deflector shield, stay three feet away from water.

Keep fertilizers on lawn areas and avoid application to hard surfaces like sidewalks, driveways and roads. If fertilizer is accidentally applied to hard surfaces, blow or sweep material onto the lawn or put it back in the bag.

For more Florida-Friendly tips on managing lawns, go to <u>https://edis.ifas.ufl.edu/</u> <u>publication/ep236</u>



# Tree Misperceptions continued from pg. 3

Finally, we come to our last misperception. I hear this one often. It is that "thinning out the canopy so that wind blows through it makes a tree more wind resistant". After the numerous tropical storms that hit Florida in 2004, a lot of research went into how to prune trees to make them more wind resistant. Researchers even blew trees around with large fans https://hort.ifas.ufl.edu/ woody/blowvideos.shtml. What they found was that thinning out the interior of the canopy made the trees much LESS wind tolerant. They even gave this type of pruning a name. It is called lions-tailing and gets this name by the look of overly thinned tree canopies with lots of growth concentrated at the ends of the branch looking like the tail of a lion. When the interior of tree canopies get thinned out, the weight of the branch is now concentrated towards the outside of the canopy. This puts more strain on the branch. Add something like wind, and it often results in broken and damaged limbs. The most wind tolerant trees are the ones that are maintained by pruning cuts called reduction cuts that appropriately shorten the length of branches and leaving interior branches at the same time. For more information on proper tree pruning, go to: https:// hort.ifas.ufl.edu/woody/documents/ch 13 mw06.pdf



Lions-tailed Tree Image by Larry Figart UF/IFAS

As we notice our trees leafing out this spring and gain a new appreciation of their contributions to our landscape, try and find the most up to date information on how to take care of them. A great place to start is at the University of Florida/ IFAS Extension search page. You can search for lots of great information on trees, plants, and even vegetables at <u>https://edis.ifas.ufl.edu/</u>.

#### <u>What to Plant</u> March & April

Annuals - warm-season annuals such as angelonia, wax begonia, and zinnia. April: new Coleus varieties

**Bulbs** - dahlia, canna, and gloriosa. April: consider blood lily, caladium, Louisiana iris

Vegetables - Transplant tomatoes, peppers, eggplants; Direct seed beans, corn, cucumbers, squash, okra; peas, watermelons and radishes

**Herbs** - ginger, turmeric, basil, mint, thyme, sage

Keep your eyes out for pests, populations will start to build rapidly! Don't forget to put in some floral nectar sources to encourage the beneficial insects!

Upcomi	ing	Classes
Sca	an Čo	de
for cu	rrent ]	list of

ALL Duval Extension Classes



Date, Time, Cost	Event & Registration	Location
April 17th	Getting Started Farming: What to Do and	Extension Office
2-3:30 pm	Where to Get Help	1010 N McDuff Ave.
\$10.00	Do you own land? Are you looking to purchase land? Want to learn more about your options for farming on it? .	
April 27th	April Backyard Hen Training	Extension Office
2-3:30 pm	This informational course is on caring for	1010 N McDuff Ave.
\$5.00	a Backyard Hen Permit from Duval County.	
April 14th	Duval County 4-H Spring Dinner and	Diamond D Ranch
6:00 pm	Auction	5903-1 Solomon Road
\$40.00	Join us for the Duval County 4-H Foundation Dinner and Auction, and help us raise funds to reach more youth with 4-H programs in Duval.	Jacksonville, FL 32234
April	Jacksonville public libraries "Life Lit"	April 4th - "Habits of
Various times &	Life Lit Programs Life are free workshops	Highly Successful Gar-
locations	offered by trained professionals and volun-	deners
Free	teers that focus on improving your day to day	
	life. These programs cover a wide range of workshops from gardening to small business	April 10th - "Containor Cordoning
Library branches	needs. Go support our UF/IFAS Extension	with Native Plants"
Willowbranch	staff and volunteers!	
Maxville		
Beaches		
Highland Regional		

# What's That? Answer!

Downy mildew disease on viburnum is prevalent right now. It can be a devastating disease causing severe defoliation. The disease is triggered by cooler, moist weather, especially foggy nights and mornings. Downy Mildew causes light green to reddish-brown leaf blotching, yellowing and defoliation. On the underside of the leaf, you may see white mildew growth. Elimination of overhead and nighttime watering, excessive fertilization, overcrowded plantings and other stresses can go far in prevention. Once the hot weather returns in April, the disease tends to dissipate. For more info:

https://blogs.ifas.ufl.edu/orangeco/2018/01/24/on-the-lookout-downy-mildewon-viburnum-awabuki/



Downy Mildew on Viburnum Photo Credit: G. Richardson, UF/IFAS



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