LOUISIANA Master Gardener™
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THE GARDENGOER

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ST. TAMMANY MASTER GARDENER ASSOCIATION
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Who loves the trees best?
"I," said the spring. "Their leaves so beautiful to them I bring."
Who loves the trees best?
"I," summer said. "I give them blossoms, white, yellow, red."
Who loves the trees best?
"I," said the fall. "I give luscious fruits, bright tints to all!"
Who loves the trees best?
"I love them best," harsh winter answered. "I give them rest."
The Pearl Story Book by Ada M. Skinner

Photo by Ansell Adams

To Everything There Is a Season

We plant and manage our gardens by the seasons: preparing beds and sowing seeds in spring, harvesting in summer, planting trees in fall, pruning in winter. Ever wonder what determines the season? Is it arbitrary? When does winter start? How long is this hot summer going to last? What determines the first day of spring?


Pine in Fall photo by J Blazek

There is both a meteorological and an astronomical way to answer these questions. The **meteorological** start date of a season is based on the 12-month calendar and the annual temperature cycle. Each season begins on the first day of the month and lasts for exactly three months. This definition was created by climate scientists and meteorologists to keep records of the weather. The meteorological first day of winter is December 1. Spring starts March 1. Summer begins June 1. And autumn starts September 1. The length and start date of each meteorological season is consistent every year. So, over the years, decades, and centuries seasonal temperature trends, rainfall, and other weather-related data can be collected and compared consistently.

The **astronomical** start date of each season is based on the position of the Sun in relation to the Earth. The seasons are of different lengths and can start on different days each year. Because the Earth is tilted as it revolves elliptically around the Sun, the length of time for daylight vs. night changes each day throughout the year. Seasons can range in length from 89 to 94 days.

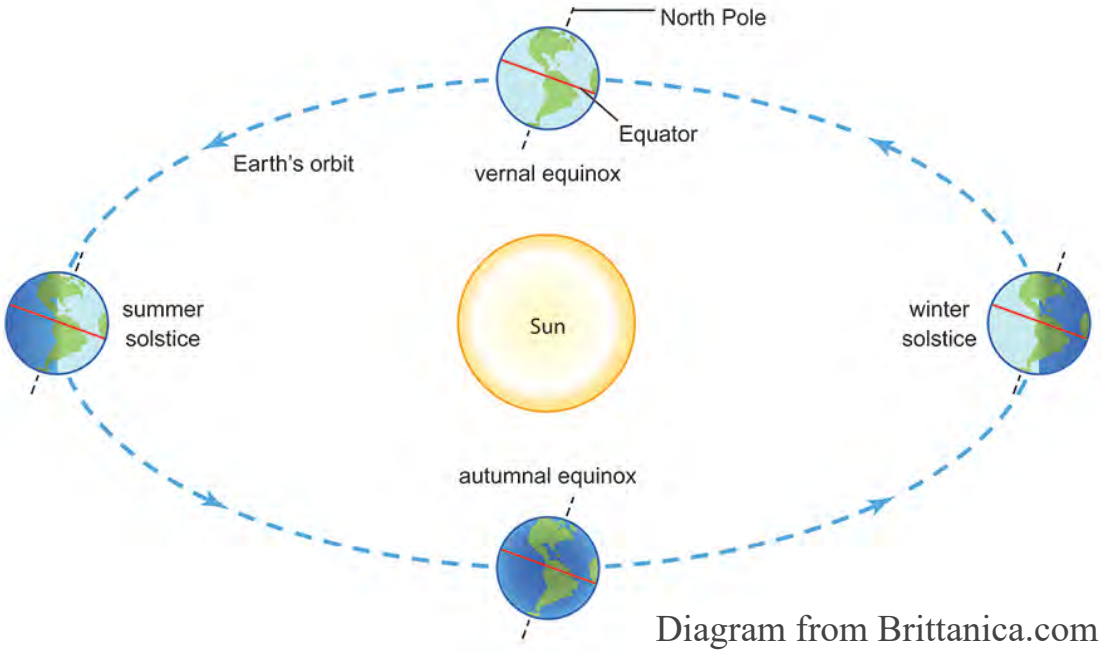


Diagram from Brittanica.com

To Everything There Is a Season, continued

The astronomical start of each season is marked by either a **solstice** (for summer and winter) or an **equinox** (for spring and fall). In Louisiana, the summer solstice (when the North pole is tilted closest to the Sun) is the longest day of the year. The winter solstice (when the South Pole is tilted closest to the Sun) is our shortest day of the year. The opposite is true for countries below the Equator. That is why the South Pole's summer occurs while we are in our winter season.

Equinox is a term derived from the Latin words *aequus* (meaning equal) and *nox* (meaning night). In other words, the length of day is nearly equal the length of night. Vernal equinox is the day in spring when daylight hours and night hours are almost equal in length. The same holds true for autumnal equinox which occurs in the fall. The actual date of each solstice and equinox can shift by a day or so each year due, in part, to leap years.

ASTRONOMICAL START OF THE SEASONS

	Year 2019	**Year 2020**
Spring	March 20	March 19
Summer	June 21	June 20
Fall	September 23	September 22
Winter	December 21	December 21

To Everything There Is a Season, continued


Pine in Summer photo by J Blazek

When the Earth is closer to the Sun, it travels faster in its orbit. When it is farther away from the Sun it travels a little slower in its orbit. It takes Earth less time to go from the autumnal equinox to the vernal equinox than it takes to go from the vernal equinox to the autumnal equinox. Another way to say that: fall and winter seasons have fewer total days than do spring and summer. Is that why the holidays seem to fly by? Maybe. But at least we have more days (and daylight) to enjoy our gardens in spring and summer while planting and harvesting.


Pine in Winter photo by J Blazek

Resources for more information:

https://www.almanac.com/content/first-day-seasons

https://www.britannica.com/story/whats-the-difference-between-a-solstice-and-an-equinox

https://www.weather.gov/cle/seasons

Jamie Blazek
Master Gardener & Vegucator
Editor, *The Gardengoer*

STMGA Project: Habitat for Humanity

On Saturday, August 3, 2019, STMGA members, Habitat for Humanity staff and four new home owners gathered together to plant new gardens. Thanks to our volunteers! Beautiful job!

Photo by D Langenhennig


Photo by D Langenhennig


Photo by D Langenhennig


Photo by D Langenhennig

Vegucator Notes:
Propagating Hydrangeas

Barbara Marino presented this lecture, Propagating Hydrangeas, at the September 4, 2019 meeting of the Vegucators.

As a new member of the Vegucators, I chose to present propagating hydrangeas, a topic I became interested in when we planned our move to Covington. I was living in a very old house built in 1857 in Bay Saint Louis. There was a beautiful hydrangea plant that I loved, *Hydrangea macrophylla*. I wanted to be able to bring it with me, but didn't want to dig it out of the garden. It was so beautiful and I wanted the new owner to enjoy it as much as I did.

I decided to take some cuttings (I took eight) and put them in water. About a month later, after our move to Covington, I looked at those cuttings (still in water). They looked frazzled to say the least! I decided I'd better hurry and learn how to get them to root before they died. So I did Internet searches and looked through gardening books to learn how to propagate hydrangeas. Here's the step by step process I used to turn those eight cuttings into 37 beautiful hydrangea plants thanks to a very helpful Youtube video. Links to the video, Internet references and books are cited at the end.

Photo from lecture by B Marino

Supplies

Rooting hormone
Plastics cups
Scissors
Potting soil
Large plastic container with cover

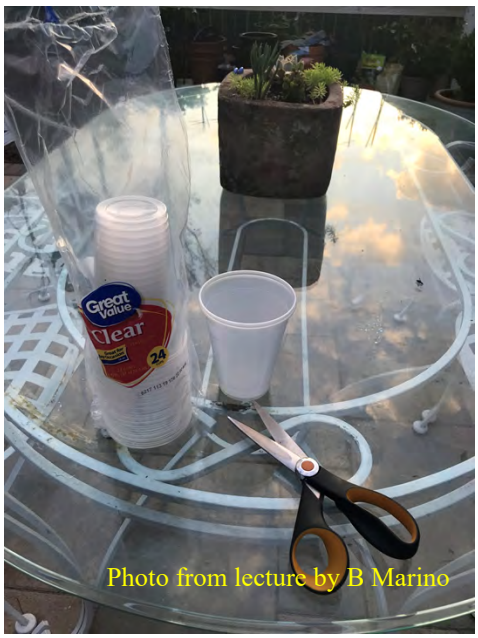


Photo from lecture by B Marino


Photo from lecture by B Marino


Photo from lecture by B Marino

Vegucator Notes:
Propagating Hydrangeas, continued

Step 1. Using utility scissors, trim several small slivers from the bottom of a plastic cup to allow for water drainage. Prepare as many cups as you need: one for each hydrangea cutting.


Photo from lecture by B Marino


Photo from lecture by B Marino

Step2. Fill the cups with potting soil.

Step 3. Take cuttings from the hydrangea plant.


Photo from lecture by B Marino

Vegucator Notes:
Propagating Hydrangeas, continued

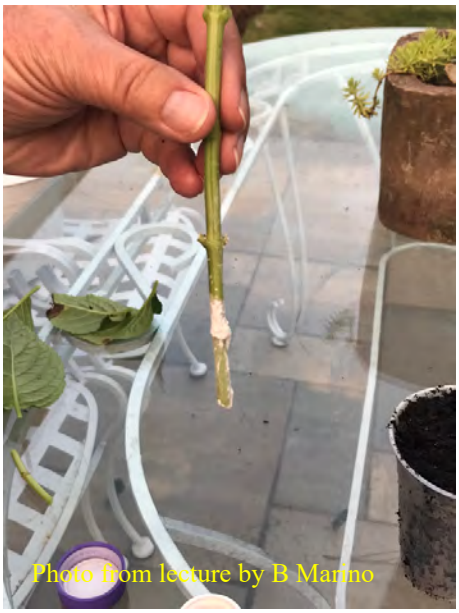
Step 4. Trim each hydrangea cutting to approximately five to six inches long.

Step 5. Trim excess leaves off the cuttings.

Step 6. You need at least two nodes to place under the soil.

Vegucator Notes:
Propagating Hydrangeas, continued

Step 7. Apply rooting hormone to cut end.



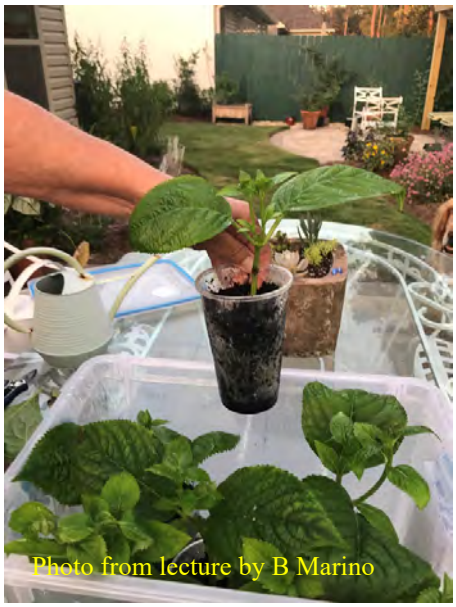
Step 8. Place each cutting in cup with potting soil.

Step 9. Water liberally.

Vegucator Notes:
Propagating Hydrangeas, continued

Step 10. Place cups with cuttings into large plastic container leaving a little water in the bottom for humidity. Cover container.

Step 11. Place container of hydrangea cuttings in a warm place out of direct sunlight.



You have created a small terrarium. With little to no attention, your hydrangea cuttings will root and start growing in this environment. The length of time it takes depends on temperature and humidity. When you see the roots through the plastic cup, its time to plant in your garden.

Vegucator Notes:
Propagating Hydrangeas, continued

These are the hydrangea plants from those eight original cuttings that were propagated using this method. The original "mother" plant was in my yard in Bay Saint Louis.

My landscape helpers, Stella and Ralph, eight year old Golden Retrievers. They may decide to relocate some plants but mostly they approve.

Resources:

https://extension.illinois.edu/blogs/extensions-greatest-hits/2017-09-13-rooting-hydrangea-cuttings-five-easy-steps

Youtube.com/Getting those hydrangeas to root/Mike Kincaid/October 23, 2017

Sunset Books: Southern Gardens, January 2006

Dirr, M., *Hydrangeas for American Gardens.* Timber Press, Inc. 2004

Barbara Marino
Master Gardener
Vegucator

Vegucator Notes: Hydroponics

Barry Pierce presented his lecture on Hydroponics at the August 7, 2019 meeting of the Vegucators.

Hydroponics is the art of growing plants in a soilless medium using only water and nutrients. It is often referred to as soilless gardening. The art of hydroponic gardening dates back to 600 BC with the Hanging Gardens of Babylon and is growing in popularity with today's gardeners, both back yard and commercial.

Image from wikipedia.com

With less agricultural land available, European countries have been using hydroponics much longer than the United States. The earliest publication in this country was in 1929 by Dr. Gericke of UC Berkley. Then, in 1940 he published *The Complete Guide to Soilless Gardening* that is still in use today. The United States used hydroponics during WWII on several islands where growing fresh vegetables was difficult. Experiments in hydroponics are also occurring in our space program.

Roots on the Rooftop/Aeroponic Garden

Rouses Market on Baronne St, NOLA

The question arises, why do we need hydroponic gardens? It has been estimated that by the middle of this century, the world population is expected to be nine billion people and they will require 70% more food than is produced today. Yet, the land used for food production is decreasing every year. Agricultural scientists are working today to address this problem by developing hybrids, GMOs and hydroponic gardening.

Advantages of Hydroponics	Disadvantages of Hydroponics
No soil required	High initial cost
Better control of nutrients	Different skill set needed
Less water usage	Not forgiving
No weeding	Requires constant maintenance
No cultivating	Very temperature sensitive

Vegucator Notes: Hydroponics, continued

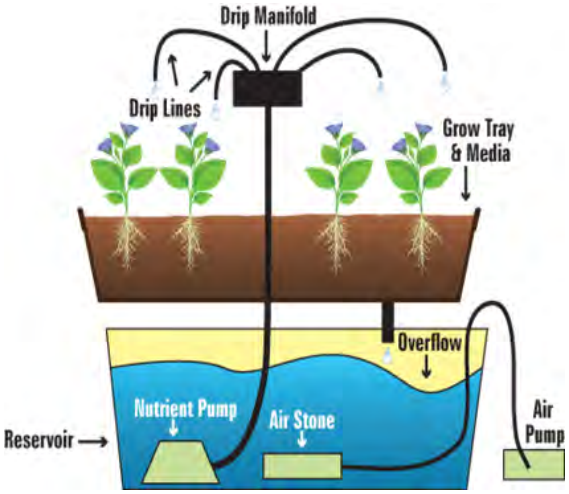
It is hard to get a good comparison on crop yield between hydroponic gardening and typical row gardening. If you compare acre to acre, the hydroponic garden will dramatically out produce the row crop.

This is due primarily to three factors:

- Spacing between plants can be reduced because the nutrient environment is controlled and constantly re-supplied.
- Hydroponic gardens can easily be grown vertically. Commercial applications extend 20 ft. up or more.
- Most commercial hydroponic gardens are in large green houses where temperature is controlled and there are multiple growing seasons each year.

Taste comparisons are a matter of personal preference. Many of the products found in the grocery stores are hydroponic grown, but they are not labeled as such. Also, many products in grocery stores are hybridized or GMO-corrected. It is hard to find a pure organic hydroponic grown tomato. So, look for a truly hydroponic tomato and taste test it against your homegrown tomatoes. See which you prefer.

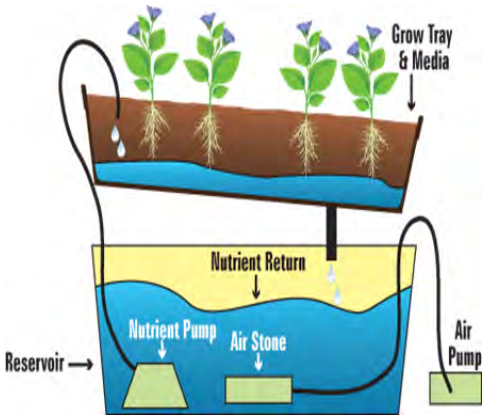
The popular types of hydroponic systems are: drip system, ebb-flow system, nutrient film technique, water culture, aeroponics, wick system, and aquaponics. Examples of each follow:



Drip system

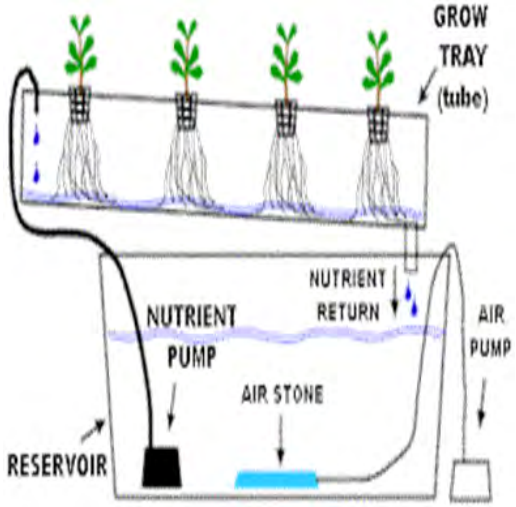
Most widely used. Small tubes pump nutrients through growth medium & drip it over plants.

Vegucator Notes: Hydroponics, continued



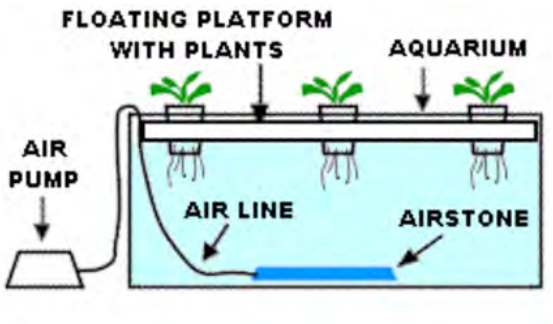
Ebb Flow System

Similar to drip system.
Nutrients pumped up through a single source.
Nutrients flow through growth medium.



Nutrient Film Technique

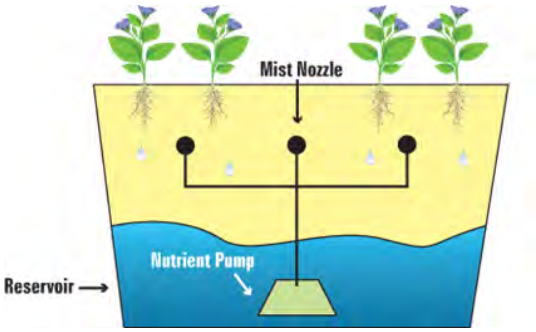
Used by most commercial growers.
Nutrients flow through plastic lined channels which contain plant roots.



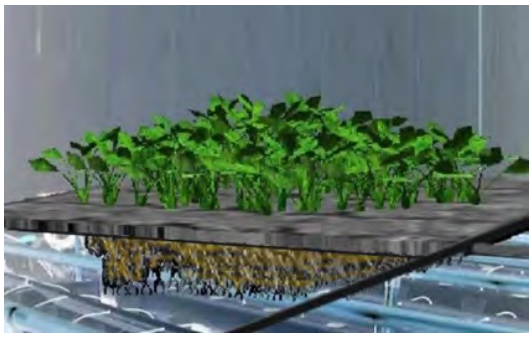
Water Culture

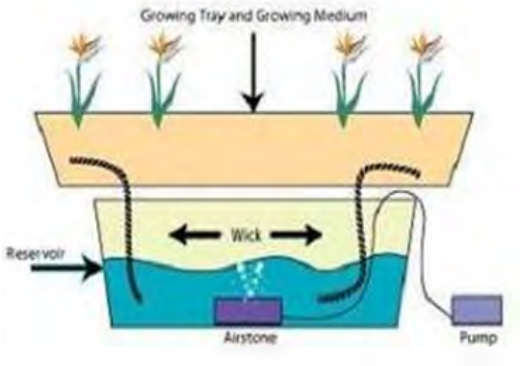
Suited for the family farmer.
Large plastic box with cover.
Container is filled with nutrients.
Holes are cut into cover to support plant filled pots.

Vegucator Notes: Hydroponics, continued



Aeroponic system
Roots hang above nutrients and are misted by a pump.





Wick System
Good for family gardener.
Full container of medium and plants on top.
Full container of nutrients on bottom.
Wicks are inserted through the medium and hang into the nutrients to bring them up to the plants.

Aquaponics System
Combines conventional aquaculture (raising aquatic animals such as snails, fish, crayfish or prawns in tanks) with hydroponics (cultivating plants in water) in a symbiotic environment.

There are four different types of **growing medium.** The choice of medium depends on the specific crop:

Expanded clay

Coco coir

Perlite

Rockwool cubes

Vegucator Notes: Hydroponics, continued

The nutrient supply for hydroponic systems can be found at some feed and seed stores or ordered through the internet. It comes in pre-mixed powders or individual nutrients to be diluted and mixed to support the specific needs of the vegetable crop grown.


Image from greenhousefarming.blogspot.com

Pollination is just as important in hydroponic gardening as it is in row gardening. Fans are normally used in large green houses. But is considered the least effective means to cross pollinate. Mechanical shakers are better than wind. But not the best method. The best pollinator is our friend the bee. Research at Penn State University showed that beehives in a greenhouse can increase crop productivity by 25%.

You can grow anything hydroponically that can be grown in a typical row garden. You probably have eaten all kinds of salad greens, tomatoes and other vegetables from the local groceries that were grown hydroponically and not even be aware of it. Root vegetables, such as, carrots, beets, and potatoes can easily be grown hydroponically. You can even grow melons, such as, watermelons hydroponically.

The concept of hydroponics may appear inconceivable to some. Others will see it as just another fad. Some will be curious, interested, even amused. Whatever your reaction, do a little research and experiment. Your grandchildren may need it one day.

Barry Pierce
Master Gardener
Vegucator

Editor's note: More information on hydroponics from Barry's lecture can be found in his powerpoint presentation on the LSU AgCenter classroom computer.

Season of the Bee

If you love honey and you've been thinking about getting some bees, now is the time. You may ask, why would I want a bee hive? The reasons are endless. Bees are enjoyable just to watch flying in and out of their hive as they travel out to pollinate your flowers, gardens, and trees. You are doing your part to assure these little guys stay strong, healthy, and abundant (nationwide their numbers are on the decline). They are a great (and pretty simple) backyard science project in which your children and grandchildren can participate. Studying bee history, entomology and ecosystems is fascinating! For instance, did you know that raising bees dates back to before the Egyptians. In China, they have found mead (honey wine) remnants in pottery dating back to 6,500 BCE.


Honey bee on African blue basil flower

Photo by J Blazek

Photo by J Blazek

Adding a beehive or two to your garden can also increase your seed, vegetable and fruit yields. But really, we all know the real reason we should keep bees: they give us gold in three forms. Liquid gold, raw honey, contains enzymes, antioxidants and trace amounts of vitamins. And store bought honey tastes nothing like raw honey. In fact, store bought honey is processed and may be diluted and contain other sweeteners.

The second form of gold they give us is more solid: the wax. Bee's wax is used for making balms, natural moisturizers, wood polish, and uniquely scented candles. Of course, if you don't plan on making these just leave the wax near the hive. The bees will happily re-cycle the wax and incorporate it back into their combs.

Bee's wax


Image from moonvalleyorganics.com

Season of the Bee, continued

The third type of gold that bees give us is the pollen they collect from the flowers they visit. If you install a pollen collector, you can gather the pollen separately. Or if you choose not to install a pollen collector, some of it will be mixed into the honey they make for you. Many people buy and ingest this pollen for health reasons with claims that it improves seasonal allergies (results of scientific studies by US medicine are at best inconsistent).

Other products that have been harvested from bees include royal jelly (secreted by the queen and used in cosmetics) and propolis (a sticky substance that worker bees secret to seal the hive. Propolis is used in humans for its claims as an antioxidant and anti-inflamatory for healing skin lesions. Of course, all these products should be avoided by people who are allergic to bees.

So where do you start after making the decision to build your own apiary. There is a local beekeepers' club called The Beekeepers of Tangi-Tamington. Bruce Scharwath is the current president. Meetings are the first Thursday of every month at 7PM and are held at the Abita Springs Town Hall at 22161 Level Street. Visitors are welcome and dues are minimal. Each meeting includes educational presentations on topics that help prepare you for the next several months. This gives you time to get the supplies you may need to prepare for the next bee season. There's time for questions and there's lots of experience in the room. After the meeting, the beekeepers congregate and share ideas, tips and suggestions. They love to teach newcomers.

The club will soon be ordering nucs (short for nucleus) which is a small bee colony with a queen and several thousand worker bees. So it is important to go to a meeting soon to order yours. Don't worry. The delivery date is after the first of the new year. So you have time to prepare. Each nuc will become a full colony after you place it in your hive. Be sure to place your hive in a safe protected place to ensure hive viability. In the picture on the right, the queen is depositing an egg into each wax cell. Her attendants quickly wax over the egg-filled cells to protect the developing larvae.

Season of the Bee, continued

If you are in need of bee equipment, such as, hive box, suit, gloves, hats, and other incidentals, there are several options. Locally, Smith's Hardware in Covington on Columbia Street has most of what you will need. There are also websites sites, such as, Walmart, Dadant or Mann Lake that can ship you anything you need to start-up. Each has beginner kits (everything but the nuc) that usually include hive boxes, a suit, a beginner book, tools, and other incidentals. Prices vary depending on whether you go "basic" or "delux". So shop around.

Bee keeper's suit

Image from Mann Lake.com

Wait a year or two after installing a new nuc before you harvest honey to ensure a healthy and thriving colony. The local club and books will advise you how often to inspect the hive. There is special equipment needed to harvest, such as, an extractor, a special knife to cut the wax caps off the frames, containers, strainers, jars and labels. If you decide to sell your honey, you should be able to re-coup your investment in a few years depending on the number of hives and the cost of equipment.

Photo by J Blazek

By starting an apiary you are improving your environment and its ecology. You are investing in your future gardens and harvests. Selling honey and bee products may not be your goal. But, as a master gardener, getting the most out of your gardens should be.

My favorite bee product is raw sweet honey. I enjoy it every morning in my cup of coffee while I sit out and watch my busy little bees do their magic in my garden. Join me!

Resources: Louisiana Beekeeper Association
https://www.labeekeepers.org/

Elizabeth Berzas
Master Gardener &
Vegucator

Beekeepers of Tangi-Tamington
Bruce "Schawee" Scharwath, President 225-806-2655
Email: schawee@yahoo.com
FB: www.facebook.com/beekeepersoftangitamington/
Meeting Date: 1st Thursday of the month, 7:00 PM
Location: Abita Springs Town Hall, 22161 Level St., Abita Springs 70402

Suggested Reading

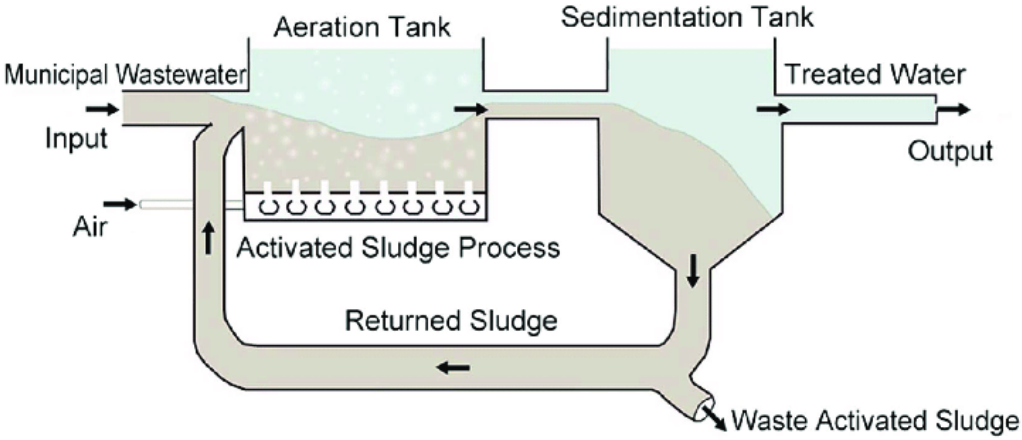
Sludge (AKA Biosolids) is a waste product from municipal water treatment plants that has been advertised (and classified by the EPA) as an organic fertilizer. The use of the term organic can be confusing. Sludge is derived from living things. So, it is technically organic. However, its use is not allowed in certified organic agricultural production according to US Department of Agriculture regulations. The following links are articles about this product, how it is processed, how and to what degree contaminants are removed, and potential problems with its use. Learn more about these products available for your use.

https://www.theguardian.com/environment/2019/oct/05/biosolids-toxic-chemicals-pollution?CMP=share_btn_link

https://www.pccmarkets.com/sound-consumer/2012-03/biosolids_hit_the_fan/

Factsheet from Cornell University on one commercial brand: https://ecommons.cornell.edu/bitstream/handle/1813/2858/Milorganite.pdf;sequence=3

Image of the diagram of a waste water treatment system from Researchgate.net



Suggested reading submitted by
Jerry Balanco
Master Gardener
Vegucator

Pumpkin Time: No Guts, No Glory


Photo by L Franzo

Fall has arrived and with it, pumpkin season! There are so many pumpkins around Halloween. Many families are opting to paint or marker their pumpkins to avoid the mess involved in carving. Yes. I will admit that each year, for just a few seconds, I think maybe we won't carve a pumpkin this year. But then I quickly decide that tradition wins.

Maybe it's because of the memories of my dad carving a pumpkin with my sibling and me. A few days before Halloween he would bring a huge pumpkin home for us.

I always insisted it have a great distinctive handle on top and be perfectly smooth and orange.

He would carve the most interesting, gorgeous faces in the pumpkins. It was my job to scoop out all the seeds. Then we would put a large candle inside. Fit the stem back on top. Place it on our front porch and watch it glow. Magical! After we would go inside and bake the seeds.

I carried this tradition on with my three sons and now my grandkids. We don't just carve one pumpkin, though. Everyone picks and carves their own. We have lots of pumpkin seeds to roast. We used to carve on top of newspaper. But the wet, gooey seeds stick to the paper. I find it best to use a huge plastic tablecloth. The seeds slip and slide, but don't stick.


Photo by L Franzo

With the help of an adult, even the smallest child can hold the tools from a pumpkin carving kit. Hold the pumpkin on the side and cut a circle about three inches around the stem.
This will give a nice size hole to get your hand inside. Use a metal spoon or the spoon from a pumpkin carving kit to scoop out the seeds and guts. Each year my kids get more creative with their designs.

My youngest son and daughter-in-"love" now host a pumpkin carving dinner party for their newly married friends. If you don't want to carve a face into a pumpkin, consider using the hollowed-out shell as a vase for flower arrangements or as a bowl for soup or risotto. Or just bake the pumpkin flesh until tender, mash and freeze to use later for recipes. It also makes a nutritious treat for your dogs and chickens.

Pumpkin Time: No Guts, No Glory, continued

Place the pumpkin seeds in a colander and run water to separate the seeds from everything else. Don't worry about rinsing off all the pulp. It caramelizes in the oven, adding sweet flavor and texture. Roasted pumpkin seeds are an easy, healthy snack. I love to eat them shell and all. They are wonderfully crunchy. The seeds have two parts: a crunchy white shell and the green seed inside. Both are edible and full of minerals, protein and fiber. Eat up! For years I roasted the seeds in olive oil and Kosher salt. But get creative and try coconut oil. Or coat seeds in a beaten egg white for a crispy lighter finish. Butternut and acorn squash seeds roast well, too.

Try growing your own pumpkins. Plant the seeds in the spring. I was successful with the Tiny Tom Thumb seeds. The pumpkin plants require a lot of water and some afternoon shade would be nice. Place pine needles on top of the soil so the pumpkins won't get mushy and rot. The small pumpkins will even grow on a trellis. Here are some fun recipes to enjoy your autumn treats!


Photo by L Franza

BAKED PUMPKIN SEEDS
Pre-heat oven to 325 degrees.
Coat a baking sheet with a teaspoon of olive oil. Spread seeds in a single layer and toss or stir a little to coat with oil. Bake, stirring a few times, until seeds are light brown and crunchy. This takes about 30-40 minutes. Watch closely to prevent burning. Cool. Then eat, shell and all. Purist will want only salt as a seasoning. If you are feeling adventurous, experiment with seasoning blends. Sprinkle herbs and spices with a light even dusting. Be adventurous and try these out:

SWEET: 1 teaspoon each, cinnamon and sugar.
SWEET& SPICEY: 1 teaspoon each sugar and salt, ¼ teaspoon cayenne pepper.
INDIAN: ¼ teaspoon Garam Marsala (or more to taste) and 1 teaspoon salt. Mix with raisins or currants after roasting.
SPANISH: 1 teaspoon salt and ½ teaspoon smoked paprika. Mix in almonds after roasting.
HERB: 1 teaspoon salt and 1 teaspoon oregano, fennel or anise seed. Add grated parmesan after roasting

Pumpkin Time: No Guts, No Glory, continued


Photo by J Blazek

If your crowd is still squeamish about cleaning out pumpkin guts, you can still celebrate with this popular autumn seed. Pumpkin seed trail mix is just the fix! This is so good you will want to make it all year round. I like to keep small snack bags packed with this treat, ready to go. Munch a bunch all day long!

PUMPKIN SEED TRAIL MIX
3 cups pumpkin seeds (pepitas)
1 cup raw sunflower seeds (no shells)
6 tablespoons maple syrup (Grade B), honey or brown rice syrup
1 tablespoon olive or coconut oil
½ teaspoon kosher salt
1½ cups dried cranberries or cherries (add after roasting seeds)

Preheat oven to 300 degrees. Line a baking sheet with parchment or foil.
Paint oil on parchment/foil.
In a large bowl, toss seeds and syrup to evenly coat. Spread mix evenly on sheet pan.
Sprinkle lightly with salt. Bake the seeds, stirring several times with a spatula.
Cook about 15-20 minutes until golden. Cool completely, then add cranberries or cherries. Store in an airtight container

PUMPKIN SEEDS, ARUGULA, AND ROASTED SWEET POTATO SALAD


Photo by L Franzo

Cut raw sweet potatoes into one-inch cubes. Place on a sheet pan in a single layer. Drizzle a little olive oil over potatoes. Sprinkle a little chopped fresh rosemary over. Bake at 400 degrees until lightly brown. Sprinkle some Parmesan cheese over the potatoes and bake until crisp, about 5 more minutes.

Blackberry balsamic vinaigrette: mix ¼ cup of balsamic vinegar, ½ cup of olive oil, and ¼ to ½ cup of blackberry preserves (adjust to taste). Add salt and pepper to taste.

Place arugula greens and roasted sweet potato croutons in a salad bowl. Sprinkle roasted pumpkin seeds over the greens. Drizzle vinaigrette on top.

PUMPKIN TIRAMISU


Photo by L Franza

2 cups pumpkin puree
½ cup light brown sugar
¾ tsp ginger
¾ teaspoon cinnamon
¼ teaspoon Kosher salt
½ teaspoon nutmeg
¾ cup granulated sugar
1½ cups mascarpone cheese
2½ cups heavy cream
2 cups brewed coffee, cooled
2 packages (7 ounces each) dry ladyfinger cookies
Chocolate shavings, crumbled ginger snaps or crystal ginger for garnish.

In a large mixer bowl, whip 1¼ cups heavy cream to soft peaks.
Set aside in another bowl.
Use the same mixer bowl. Don't clean it. Add the brown sugar, ½ cup granulated sugar, spices, and mascarpone cheese. Cream together until light & fluffy. Mix in pumpkin. Fold in the whipped cream. Do not over mix.
In a medium bowl, whisk the brewed coffee with 2 tablespoons of the granulated sugar until dissolved.
You can add 2 tablespoons of Honey Bourbon, Amaretto, or Bailey's if you like.
Dip both sides of the ladyfingers into the coffee and arrange in a single layer in a four quart trifle dish or a 10 inch pan.
Spread 1 cup or more of the pumpkin mousse to cover the ladyfingers. Repeat layers, ending with mousse on top.
In another large bowl, beat remaining ¼ cup of heavy cream with 2 tablespoons of sugar.
Dollop the whipped cream over the tiramisu.
Garnish with chocolate shavings, crumbled ginger cookies or candied ginger.
Place in the freezer to firm up or refrigerate overnight.

Linda Franzo
Master Gardener
Slidell Library Herb Garden Chair

Vegucator Notes:
"Safe" Chemicals for Sustainable Gardening
Part Four: Spinosad

On March 27, 2019, Mimi Padgett presented a lecture to the Vegucators on Safe Chemicals for Sustainable Gardening. The following is part four of a series based on her lecture. She covered insecticidal soap, neem oil, and pyrethrum in previous *Gardengoer* issues.

Spinosad is a natural substance made by a soil bacterium that can be toxic to insects. It is a mixture of two chemicals, spinosyn A and spinosyn D. It was discovered in 1982 in a soil sample taken from an abandoned rum distillery. Spinosad is produced by fermentation. It can be used on outdoor ornamentals, lawns, vegetables, and fruit trees to control thrips, leaf miners, borers, spider mites, mosquitoes, ants, fruit flies, slugs, caterpillars, and other insects. Use as directed on the label.

Image from walmart.com

Spinosad works by attacking the nervous system of insects that eat or touch it. It causes uncontrollable muscle contractions in the insect that leads to paralysis and ultimately death within one to two days. It is practically non-toxic to fish and birds. It is moderately toxic to earthworms and aquatic invertebrates (such as, mollusks and crawfish). It is highly toxic to eastern oysters and bees. Evidence suggests that it has little or no effect on honeybees and other beneficial insects AFTER the spray has dried.

In the environment, Spinosad is broken down rapidly by sunlight. In the presence of sunlight, its half-life (the number of days it takes to reduce the amount by 50%) is two to sixteen days on leaves and less than one day in water. It binds rapidly to sediment where no oxygen is available and where its half-life ranges from 161 to 250 days.

Spinosad sticks to soil and has a very low potential to move through the soil to ground water. In field studies, none of its breakdown products were found in a soil depth of two feet. In top layers of soil, Spinosad is broken down by microbes and is reported to have a half-life of nine to seventeen days. After it is applied to plants, it is not likely to become airborne.

Vegucator Notes:
"Safe" Chemicals for Sustainable Gardening
Part Four: Spinosad, continued

Image from homedepot.com

Spinosad has been registered for use as a pesticide by the US Environmental Protection Agency since 1997. It is classified as an organic substance by the USDA National Organic Program (NOP) and by the Organic Materials Review Institute (OMRI). Spinosad has been deemed safe for pets and children when applied according to label recommendations.

It is important to wash hands thoroughly after handling Spinosad or plants that have been treated with it. Prior to ingestion, it is recommended to thoroughly wash fruits and vegetables sprayed with Spinosad.

After Spinosad has been applied to fruit and vegetable plants and trees there is a recommended wait time to delay harvest. These times vary depending on the specific produce. See the EPA reference link following this article for specific harvest delay recommendations following application of Spinosad.

Image from walmart.com

References:

https://www.omri.org/ubersearch/results/spinosad

www.gardeningknowhow.com

http://npic.orst.edu/factsheets/spinosadgen.html

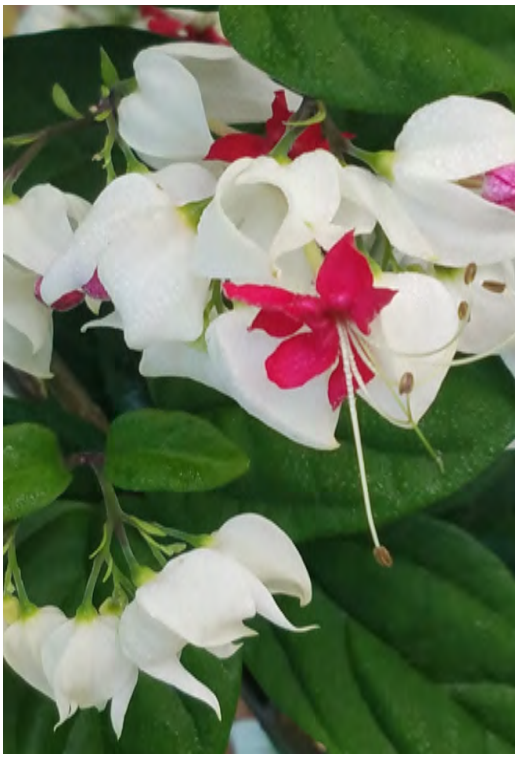
Florida Department of Health statement on safety of product: https://www.fdacs.gov/content/download/24059/file/fdoh-spinosad-diazinon-qa-0705.pdf

EPA fact sheet with recommended harvest delays after application: https://www3.epa.gov/pesticides/chem_search/ppls/000004-00471-20081003.pdf

Mimi Padgett
Master Gardener
Vegucator Co-chair
STMGA Educational Outreach Chair

2020 Plant Sale

Time to start planning the 20th Annual Northshore Garden & Plant Sale which is scheduled for Friday, March 20, 2020 and Saturday, March 21, 2020 from 9:00 am to 4:00 pm at the St. Tammany Parish Fairgrounds in Covington. Set up will occur Thursday, March 19, 2020 from 9:00 am to 6:00 pm. Please mark your calendars.



Gate admission sales into the plant show endow our scholarships given to students from St Tammany Parish who plan to major in Agricultural fields. The plant sale is STMGA's biggest fund raiser and furthers our mission of education, not only through these scholarships, but also with speakers, table talks, and the master gardener booth during the event. Most importantly, it's fun!

The first opportunity to sign up as a volunteer will be at the STMGA general membership meeting on January 15, 2020 . Jan Pesses, the Volunteer Coordinator, and the chairmen of the committees will be available to answer your questions then.

We look forward to seeing all our master gardeners volunteer and to another successful plant sale in 2020!

Julie Deus
Master Gardener
Plant Sale Co-chair

Mistletoe
The Science

Mistletoe (*Phoradendron serotinum*) with its green leaves and white berries is a parasite that can best be spotted as the green patches seen this time of year in an otherwise leafless tree. It can be found in Louisiana in oak, pecan, ash, elm, sweet gum, hackberry, hickory, tulip, and sycamore trees. As the mistletoe grows into the branch, it robs the tree of water and nutrients. While it usually doesn't kill the host tree, it can weaken branches causing structural damage and loss. In times of stress, such as during a drought, it can kill the branch.

Image from LSUagcenter.com

Image from audubon.org

Birds readily feed on its berries and spread the sticky seeds by wiping their beaks on other branches.

There is no effective chemical treatment to control mistletoe. It can be cut from the branch. But will eventually grow back. It is best to keep the tree healthy by watering it during periods of low rainfall .

Mistletoe has been used throughout history as a medicinal remedy for infertility, to induce labor, as an aphrodisiac, and for its mystical powers to ward off evil and bring good luck. But in fact, if any part of the plant is consumed by humans, it can be dangerous. Some mistletoe species are more toxic than others. Symptoms can include blurred vision, fever, vomiting, abdominal cramping and pain, even death. It is especially toxic to children. Contact Poison Control (800-222-1222) if ingested. It is recommended to wash hands well after handling the berries.

Mistletoe, continued
The Myth: A Symbol of Winter Solstice


Photo from almanac.com

In ancient Celtic times, mistletoe was thought to house the friendly little spirits of the woods. So, it was brought into homes to keep the spirits warm and safe. Thus it became a symbol of hospitality and protection. Ancient Romans associated mistletoe with Saturn, the god of agriculture. It was during the feast of Saturnalia on winter solstice, that the practice of kissing under the mistletoe began, signifying peace and the leaving of old grudges behind.

Mistletoe became associated with rebirth and love in old Norse legend. Baldur, son of Norse gods Frigga and Odin, was killed by an arrow made of mistletoe shot through his heart. But, being a god, he was miraculously reborn. And to celebrate his rebirth, his mother Frigga declared mistletoe should become a symbol of love and commanded all to kiss beneath it.

References for more info:


Photo from southernliving.com

https://www.farmersalmanac.com/mistletoe-facts-and-lore-11667

https://www.almanac.com/news/gardening/gardening-advice/plants-winter-solstice

https://www.lsuagcenter.com/portals/our_offices/parishes/east%20baton%20rouge/features/lawn_garden/mistletoe-in-trees

http://www.rnr.lsu.edu/plantid/species/ammistletoe/ammistletoe.htm

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THE GARDENGOER

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