



The Master Gardening Bench

The Manatee County Master Gardener Newsletter
March 2016 - Volume 15 – Issue 3

Gotta Love Luffa!

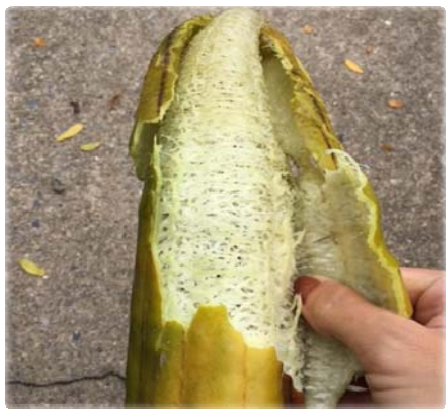
By Nancy Hammer, Master Gardener 2015



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Unlike what you may have been told as a child, luffa sponges (also spelled "loofah") do NOT come from the ocean. This popular fixture of bath and spa is actually a gourd from the same family as squash and cucumbers. And we Floridians, with our long growing season and warm temperatures have the perfect environment for growing them.

Smooth luffas (*Luffa aegyptica* Mill syn *L. cylindrical*) are very vigorous annual vines reaching lengths of 15-30 feet; its gourds can grow as long as 2 feet and weigh as much as 3 pounds! They are grown mainly for their fibrous tissue used as a sponge (they make great 'homemade' gifts). They are biodegradable, renewable, and can be tossed in your washing machine. When less than 7 inches, they are also used like squash and cucumbers in cooking.

After danger of frost, sow seeds 8-12 inches apart in full sun, along a fence or strong trellis where the vines will attach with tendrils. Seeds may be started in small pots, but seedlings do not transplant well, so great care must be taken with roots. A single plant may also be grown in a 5-gallon container where sturdy support for the vine is provided. Seeds may be scraped or soaked overnight to hasten germination. Be patient, seeds can take up to two weeks to sprout.

Follow similar moisture and fertilizer recommendations as for squash and cucumbers, and like squash and cukes, it's best to keep the vines and fruit off the ground to protect from rotting. You can expect to start harvesting gourds for sponges in about 4 months.

If growing for sponges, allow the gourds to ripen on the vines, and harvest only when they have turned yellow or brown, feel lighter, and are dried. There are a couple methods for making sponges. Cut the gourd from the vine, allow to dry for a few days, and when the skin is hardened, cut open the larger end, and shake out and save the dried seeds. Soak the luffa overnight in warm water, peel off the skin, and allow to dry. Another method is to soak the ripe gourd in water a few days until the skin easily comes off. Rinse out the inside and dry.

While supplies last, we invite you to stop by our Master Gardener Plant Diagnostic Clinic for several free luffa seeds.

For more information, refer to:

<https://edis.ifas.ufl.edu/mv073> or

<http://www.caes.uga.edu/extension/cobb/anr/Documents/luffa.pdf>



Scouting Makes Sense

By Kathy Oliver, Urban Horticulture
Program Assistant

"You can observe a lot by watching." Yogi Berra may have been talking about baseball but the advice certainly applies in gardening. In addition to finding and observing problems, scouting your plants helps you to "be prepared" and make decisions.

Scouting involves taking a close look at plants on a regular basis. It helps to know the plant's normal look so that you can quickly spot anything abnormal. A hand lens or magnifying glass is handy for observing tiny pests. Do not be surprised if you discover a whole new world at your fingertips!

Keep an eye out for spotted, chewed, distorted, or off-color leaves. Check both sides of leaves for insects or signs they leave such as frass (excrement), webbing, slime trails, or honeydew, which is often covered with black sooty mold. Tapping twigs and leaves on a white board or paper paper may reveal the presence of insects. Look along stems and trunks for scale insects. Scales resemble small bumps and may be well camouflaged. If juice comes out when you press them with a fingernail, they are alive and feeding on your plant.

Pests are not the only insects to watch for in the landscape. Many insects are predatory or parasitic and feed on other insects. These beneficial insects may already be working to keep pest populations low. It pays to learn the good bugs and protect them. The University

of Florida Entomology Department has excellent insect identification resources at

<http://entnemdept.ifas.ufl.edu/InsectID/index.html> or

you can bring samples to the Plant Diagnostic Clinic here at the Extension Service.

Disease, weed, and environmental issues are best caught early so scouting really comes into play here. Oftentimes an adjustment in cultural practices such as irrigation, fertilization, or mowing will solve the problem. Be sure to follow up any treatments with scouting to see if they were effective and to make decisions about additional or alternative treatments.

Keeping track of when, where, and what problems occurred allows you to anticipate problems down the road. Note any treatments or management practices and whether they work or not. Then you will be ahead of the game next time around and it will be like déjà vu all over again.

In Memoriam



Robert Alexander, Master Gardener 2010

Robert passed away in late January. As a contributor to "The Bench," he was a valued writer. He was also highly sought-after as a presenter of orchid culture and bonsai techniques. Robert will be sorely missed, but joyfully remembered.

--The editors



Leaf mottling



Stem and branch dieback

Cucumber Mosaic Virus in American Beautyberry

By Norma Kisida, Master Gardener 2012

American beautyberry (*Callicarpa americana*) is a popular native shrub used frequently in Florida-Friendly gardens. It is a relatively pest-free, fast-growing plant offering both beauty and food for wildlife. As it is one of the favorite shrubs in my garden, I was dismayed to learn that it is being infected with cucumber mosaic virus (CMV).

Symptoms include leaf mottling and distortion, slowed or stunted growth, partial defoliation, and stem and branch dieback. New branches may look normal in the spring but start to show symptoms by summer. Symptoms are more severe if the plant is infected at an early growth stage. The disease is slow to progress and may persist for years while the affected plant continues to flower and fruit.

The suspected culprit for this disease is a virus which was first found in cucumbers (thus the name) and has been found to infect a large variety of plants including many of our favorite vegetables, ornamentals, and bedding plants.

Transmission of CMV is mainly by aphids, but it can also be spread by mechanical means such as pruning tools, by propagation of infected plants or seeds, or by plant-to-plant contact. Unfortunately there is no chemical cure for CMV. Control measures include immediate removal of infected plants to prevent spreading. As the virus is systemic, pruning will not eradicate it and pruning tools, hands, or gloves may spread it to other plants.

Other measures include encouraging natural predators of aphids such as lady beetles, lacewing larvae, and parasitic

wasps. Avoid broad spectrum insecticides or neem oil which may harm these beneficial insects. Using only slow release fertilizers may be helpful since aphids prefer new growth stimulated by fertilizers. Control of aphids by dish soap and horticultural oil may be helpful. Infected plants or trimmings should not be put into compost or left on the property.

Disinfect tools when pruning other beautyberries or landscape plants (see: [Are You Spreading Problems in the Landscape?](#) in the October 2015 issue of *The Master Gardening Bench*). If you suspect that your beautyberries may be infected with CMV, bring in a sample to our Master Gardener Plant Diagnostic Clinic at the Manatee County Agriculture and Extension Service.

For more information:

http://lee.ifas.ufl.edu/FYN/FYNPubs/Beautyberry_FYN.pdf

Cucumber Mosaic Virus (CMV): A Growing Problem for a Popular Native, American Beautyberry (*Callicarpa americana*)



Winged aphid

Photos from http://lee.ifas.ufl.edu/FYN/FYNPubs/Beautyberry_FYN.pdf



Understanding Pot Sizes

By John Dawson, Master Gardener 2007

It's time to pot some plants. But what size pot do I need and how much soil should I buy? Plant pots come in a variety of sizes and styles. Style is your choice, but pot size is determined by the needs of the plant.

The size of the pot you choose should make your plant look like it fits without being squeezed into the container. The pot should be big enough and deep enough for the plant roots to grow and expand for at least one to two years. Too small of a pot will hamper proper growth. Never trim the roots to make a plant fit the pot. Conversely, if the pot is much too big for the plant, the soil will have a tendency to stay wet much longer causing potential problems while wasting soil.

Three popular styles are "standard," "azalea," and "bulb." A "standard" pot (think everyday clay pot) is one that has a top diameter equal to its height. An "azalea" pot has a height that is three-quarters of its diameter. A "bulb" pot (or pan pot) has a height that is one-half of its diameter. There are round, square, and a host of others to choose from, but the only thing your plant needs is the proper volume of soil to grow in.

Unfortunately for many years, pot manufacturers varied widely in how they designated their pot sizes, with no two seeming the same. Besides top diameters, larger pots were categorized in gallon measures. A 1-gallon pot before 2004 usually only held a little more than 1 quart of soil and does not hold exactly 1 gallon of water. Which begs the question: "A gallon of what?"

It turns out that there are liquid gallons and dry gallons,



both measuring volumes - and the two are not equal. So when a bag of soil reads four quarts, it is a dry gallon of soil. Soil can also be sold in bags measured in cubic feet or liters.

The American National Standards Institute (ANSI) in 2004 standardized nursery pot sizes. Table 1 referenced in this article is from the ANSI standard:

http://americanhort.org/documents/ansi_nursery_stock_standards_americanhort_2014.pdf.

Even with the new standards, indicating the pot's width, such as an 8-inch pot, doesn't tell you the exact volume of the pot. One supplier could use a taller 8-inch wide pot than another supplier, resulting in different volume "8-inch" containers. Manufactured pots now have to fall within the ranges that define their classes. This allows for variations in heights and widths from different manufacturers to suit different growers' needs, but still standardizes the volume.

If you are going to buy pots for specific volume requirements, ask the supplier for actual top and bottom diameters and height to make sure they fit your needs. Manufacturers indicate large container classes by the pound sign, #, followed by a number 1 through 100. Manufacturers used to call these containers various sized "gallon" pots. The larger the number, the larger volume of the container.

A #1 container which was earlier known as a 1-gallon pot must hold between 152 to 251 cubic inches of soil; a #5 container which was more commonly known as a 5-gallon container must hold between 785 to 1,242 cubic inches of soil. As you can see, there are still large variations in diameter in each class specification. A cubic foot of

continued on page 5

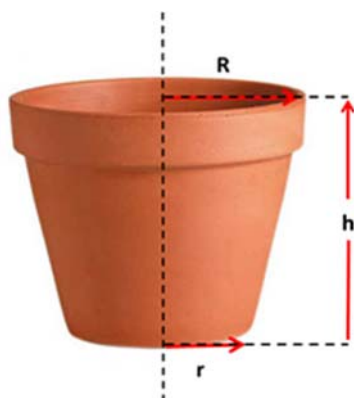
soil (1,728 cu. in.) would easily fit in but not fill a #7 container.

Small plant containers, usually holding perennials or annuals, are indicated by "SP" followed by the length of the side of the pot for square pots, or the diameter for round pots, measured in inches. Since the length of the pot's side determines which category it falls under, manufacturers are limited in the pot heights they can produce and stay within the allowed volume.

You still need to calculate pot volume to determine what size pot you need. If you are transplanting a plant, remove the plant and measure depth and diameter of the existing roots and add 1" or less (depending on growth rate) to each measurement if the roots seem crowded.

Using the formula below, depth will be **h** and your diameter/2 or radius will be the same for both **R** and **r**. This will give you a volume your plant will be comfortable in. Knowing the volume you can determine the correct container size. For stepping up plants, go up to the next container size.

Table 1 – Container class volume ranges			
Container class specification	Container volume range		Box size equivalent
	Cubic Inches Min - Max	Cubic Centimeters Min - Max	
#SP1	6 ½ - 8	106 - 131	
#SP2	13 - 15	213 - 246	
#SP3	20 - 30	328 - 492	
#SP4	51 - 63	836 - 1033	
#SP5	93 - 136	1524 - 2229	
#1	152 - 251	2492 - 4115	
#2	320 - 474	5246 - 7770	
#3	628 - 742	10285 - 12164	
#5	785 - 1242	12860 - 20360	
#7	1337 - 1790	21913 - 29343	
#10	2080 - 2646	34090 - 43376	
#15	2768 - 3696	45376 - 60589	
#20	4520 - 5152	74096 - 84457	20-inch box
#25	5775 - 6861	94669 - 112472	24-inch box
#45	9356 - 11,434	153317 - 187377	36-inch box
#65	13514 - 16517	221456 - 246051	42-inch box
#95/100	20790 - 25410	340686 - 416394	48-inch box



So, let's end the confusion or add to it for those not mathematically inclined. This will require some math and a calculator.

Example: I have 3 "standard" pots measuring 4" in top diameter, 2" in bottom diameter and 4" high. How much potting soil do I need to buy?

We need to find the volume of a single pot and multiply by 3 to get the total volume required. The mathematical formula for the volume (V) of any plant pot is:

$$V = \pi \times h \times [(R^2 + r^2 + R \times r)] / 3 \text{ where: } R = \text{Top radius, } r = \text{Bottom radius, } h = \text{height, } \pi = 3.14$$

$$\text{Radius} = \text{diameter} / 2; R^2 = R \times R; r^2 = r \times r$$

$$V = 3.14 \times 4 \times [(4 + 1) + (2 \times 1)] / 3 = (12.56) \times [4 + 1 + 2] / 3 = 29.32 \text{ cu. in. /pot} \times 3 \text{ pots} = 87.96 \text{ cu. in. total}$$

Given: **1 US dry quart = 67.2 cu. in.**, you will need 87.96/67.2 = **1.31 US dry quarts of soil.**

A four U.S. dry quart bag of soil will fill nine of these pots with just a little left over.

If you aren't into math, go to <http://www.aqua-calc.com/calculate/volume-truncated-cone> and plug in the numbers.

Of course this does not account for the volume of roots and any attached soil, which will reduce the amount of new soil you will need. Also the bigger the pot, the more the soil will be compressed by the added weight. In both cases subtract or add a guestimated 10 to 15%.

If you use containers over and over again, keep note of how much soil you actually use. That's the best way of knowing how much you will need next time. Don't worry if you have any unused soil left over, just re-seal the bag tight and keep it in a dry place.

Note: For our Canadian friends, U.S. dry measures and Canadian imperial dry measures are not the same. An imperial dry quart is 69.355 cu. in. One U.S. dry quart equals approximately 1.1 liters. For those using the metric system, a one liter pot holds one liter of soil. (How simple is that?)



Banker Plants for Pest Control

By Jim Haupt, Master Gardener Trainee 2015

It's so easy to reach into your chemical arsenal to try to free your garden of those annoying and destructive insect pests that keep coming back. To date, maybe your efforts haven't worked all that well; and remember, many pests have evolved a resistance to pesticides. An alternative is a method of biological control called the banker plant system. You may have such a system already at work in your garden on crape myrtles, ornamental peppers, milkweeds, or papaya.

The banker plant system is a sustainable insect rearing system, consisting of:

- (1) a plant - the "banker" - with a population of beneficial insects and insect pests they prey upon; and
- (2) different plants you are trying to protect. The role of beneficial insects is to prey (predate) upon pest insects that are harming your landscape.

Banker plants, interspersed in a garden, greenhouse, or field, provide shelter as well as a food source like pollen and nectar for the beneficial insects. The banker system becomes an ongoing biological control system as the beneficial insect reproduces and multiplies. Once the beneficial insect has established itself, it moves about, feeding on unwanted pests throughout the garden.

Beneficials can be purchased, but unless you have some way to hold them in place, they will move to another location once their food source is gone. The banker plant system ensures they will stay put.

Dr. Russell F. Mizell, Professor of Entomology at the University of Florida contends "for southern gardens, crape myrtles (*Lagerstroemia indica*) are an excellent choice for banker plants. Crape myrtles attract aphids that are host-specific and they do not feed on any plants other than the crape myrtle. The crape myrtle aphid and their sugar-laden honeydew serve as food for beneficial predators."

Establishing a banker plant system for specific pest issues can be technical. But for general purpose pest control, planting milkweed is a good start. Milkweed has host-specific aphids that prey on few other plants and which are favorite snacks of lady beetles. Lady beetles, in the Coccinellidae family, both adult and larvae, are beneficial predators of soft-bodied insects of aphids and scale insects, mites, and insect eggs. As an added plus, milkweed is a pollen/nectar and larval food source for the monarch butterfly.

For more information, start at <http://mrec.ifas.ufl.edu/iso/banker/media/>.

*Dr. Russell F. Mizell, Professor of Entomology at the University of Florida contends "for southern gardens, crape myrtles (*Lagerstroemia indica*) are an excellent choice for banker plants."*





Tour Our Award- Winning Gardens

By Nancy Hammer,
Master Gardener
2014

Queen's Wreath
Photo taken April 13, 2013

The Manatee County Master Gardeners are pleased to offer free guided tours of our award-winning educational gardens to the public. The gardens are designed to showcase different ways residents can be successful gardeners using Florida-Friendly Landscaping™ principles.

Our extensive gardens include a state-of-the-art greenhouse, nursery area, vegetable garden which includes a raised bed, table, and container gardens, butterfly garden, children's garden, A to Z garden, sensory garden, goldfish pond, maze/group seating, rainbow color garden, fruit trees, sun dial, and wetlands.

The educational gardens are located on the grounds of the Manatee County Agriculture and Extension Service at 1303 17th Street West, Palmetto. Tours will be offered at 10:00 a.m. on the 3rd Tuesday of each month beginning March 15th. We encourage you to call the Master Gardener Plant Diagnostic Clinic at 941-722-4524 on Monday, Tuesday, Thursday, or Friday between 9:00 a.m. and 4:00 p.m. to reserve a spot.

Saving Water in Your Landscape? Let Us Know!

The Water-Wise Landscape Awards program is designed to recognize attractive, water conserving landscapes for homes and businesses. The program recognizes examples of outstanding Florida-Friendly, water-wise landscaping within the community. Winners will be announced April 15th. This program is being offered through the Manatee County Utilities Water Conservation Division and the UF/IFAS Manatee County Extension Service.

For more information **941-722-4524**

Winners receive a stepping stone!



For more details or to apply
online by April 1st visit

<http://manatee.ifas.ufl.edu>





Date	Time	Event
2 nd & 4 th Saturday	10:00 a.m.-1:00 p.m.	Ask a Master Gardener – Rocky Bluff Library – 6750 US Highway 301 N., Ellenton. Visit the Extension Master Gardener information table and get answers to your gardening questions.
Wednesday March 9	10:00-11:00 a.m.	Introduction to Florida-Friendly Landscaping™ - The 9 Principles - Florida-Friendly Landscaping™ means using low-maintenance plants and environmentally sustainable practices. Learn how you can have a beautiful landscape that could save you time, energy, and money while protecting our future. Class will include a tour of the Master Gardeners Educational Gardens. Register online at http://manatee.ifas.ufl.edu or call the Extension Master Gardeners (941) 722-4524.
Saturday March 12	9:00-11:00 a.m.	Extension Master Gardener Plant ID Tour – Emerson Point Preserve - Stroll through Emerson Point Preserve to learn more about Florida's native plants and inhabitants of a coastal habitat. Suitable for all ages. Tour begins in tower parking area at 5801 17 th Street West, Palmetto. Call the Extension Master Gardeners at (941) 722-4524 to register.
Saturday March 12	9:00-11:00 a.m.	Extension Master Gardener Plant ID Tour – DeSoto/Riverview Pointe Preserve - Stroll through DeSoto National Memorial and Riverview Pointe Preserve to learn more about Florida's native plants and inhabitants of a coastal habitat. Suitable for all ages. The hike begins in the parking area of the DeSoto National Memorial Park and enters into the Riverview Preserve at 8250 DeSoto Memorial Highway, Bradenton. Call the Extension Master Gardeners to register (941) 722-4524.
Saturday March 19	10:00 a.m.-1:00 p.m.	Rain Barrel and Home Composting Workshop Combo 10-11:30am - Storing rainwater aids in the reduction of storm water runoff. Learn how to install, paint, and maintain a functional rain barrel. Start conserving today. Workshop is free. Rain barrel and kit offered at the workshop for a fee of \$33, (cash or check only; make checks payable to Friends of Extension). Register online http://manatee.ifas.ufl.edu or call the Extension Master Gardeners (941) 722-4524. 11:30am-1pm - Learn to turn your kitchen scraps and yard waste into useful soil amendments, along with details on how to set up a home compost bin. Workshop is free. Compost bins will be available for purchase at the workshop for \$40, cash or check only; checks made payable to Manatee County Government. Register online http://manatee.ifas.ufl.edu or call the Extension Master Gardeners (941) 722-4524.
Sunday March 20	9:00-11:00 a.m.	Extension Master Gardener Plant ID Tour – Robinson Preserve - Stroll through the Robinson Preserve's salt marshes to learn more about Florida's native plants and inhabitants of a coastal habitat. Suitable for all ages. Tour begins in parking area by main entrance at 1704 99 th Street Northwest, Bradenton. Call the Extension Master Gardeners at (941) 722-4524 to register.
Wednesday March 23	9:30 a.m.-Noon	Faerie Gardening with Friends - This is a fun workshop to do with your friends or family. Bring in a container no bigger than a gallon size and leave with a magical garden! Learn all about setting up and tending your tiny garden as well as adding decorations. You are encouraged to bring small plants and other natural and man-made miniature items to share. Registration and advance payment of \$10 for materials due by March 16 guarantees your spot in class (cash or check only, payable to Friends of Extension). Register online http://manatee.ifas.ufl.edu or call the Extension Master Gardeners, (941) 722-4524.
Tuesday March 29	1:30-3:30 p.m.	Taking The Mystery Out of Micro-Irrigation - This class satisfies the irrigation educational requirement for the Manatee County Outdoor Water Conservation Rebate Program. Learn how to select, install, and operate your own water-saving irrigation system, the pros and cons, parts and pieces, and how to put it all together. He will discuss why it is important to water shrubs and other landscape plants separately from your lawn. Register online at http://manatee.ifas.ufl.edu or call Joann (941) 722-4524.
Wednesday March 30	10:00-11:30 a.m.	Dazzling Florida Friendly Landscape™ Designs - This interactive, hands-on class demonstrates how to implement the nine principles of a Florida-Friendly Landscaping™. We will highlight dazzling landscape designs by Manatee County homeowners. Register online at http://manatee.ifas.ufl.edu or call the Extension Master Gardeners (941) 722-4524.
Wednesday March 30	9:00 a.m.-Noon	Propagation Workshop - Grow your own plants from seeds and cuttings and save money! Learn several ways to propagate plant material, proper timing, and materials needed to have successful propagation. Techniques demonstrated include seeding, cuttings, and air layering. Attendees will receive one cutting to take home to propagate. Presented by Lisa Hickey, Extension Agent and Barbara Davis, Master Gardener. Register online at http://manatee.ifas.ufl.edu or call the Extension Master Gardeners (941) 722-4524.
Thursday March 31	1:30-3:30 p.m.	Ground Covers – Plants That Work This class satisfies the irrigation educational requirement for the Manatee County Outdoor Water Conservation Rebate Program. Valrie Massey, Horticulture Program Assistant, will present how landscaping with low-growing ground cover plants has become a popular trend in landscape practices because once they are established, these plants need little or no water. Learn noteworthy plants, site considerations, and management of these plants. Register online at http://manatee.ifas.ufl.edu or call Joann, (941) 722-4524.