Trumpet Vine

Knowledge for the Community from Loudoun County Master Gardeners

Fall 2013

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LOUDOUN COUNTY MASTER GARDENER LECTURE SERIES

FREE AND OPEN TO THE PUBLIC, 7PM
RUST LIBRARY,
380 OLD WATERFORD RD, NW,
LEESBURG

Oct. 3. *What's That Tree? Tips for Winter Tree ID* with Debbie Dillion at the Extension Office

Nov. 7. *Holiday Arranging* with Kim Wright, Rust Library

Save the Date:

Loudoun County Master Gardener Gardening Symposium, March 29-30, 2014, Ida Lee Recreation Center, Lower Level

For more information, please visit our web site at loudouncountymastergardeners.org

Visit us on Facebook: Master Gardeners of Loudoun County, Virginia.

Fall is Here!

The Fall equinox occurs when the plane of the Earth's equator passes the center of the Sun. At this time the tilt of the Earth's axis is inclined neither away from nor towards the Sun. Equinox comes from the Latin words meaning equal night — days and night are of about equal length. From here on out, the temperatures begin to drop and the days start to get shorter than the nights as our Northern hemisphere tips away from the sun.

While we still have fall flowers such as goldenrod, asters and cardinal flowers to enjoy, the growing season is winding down and we start the transition to winter. But not so fast!

Use these wonderful fall flowers to provide a much needed boost of food for migrating hummingbirds and butterflies! For their long travels south, keep sunflowers and other bloomers as a nectar oasis. According to Nicole Hamilton of the Loudoun Wildlife Conservancy, "as many as 85,000 monarchs have been counted in Cape May, New Jersey, between September 22 and November 21. The last stragglers don't arrive at their overwintering sites in the Sierra Madre Mountains of Mexico until December."

This fall issue reflects on the past growing season and provides information on the many ways we prepare our soil, our gardens and our lawns for winter and the next growing season. And remember, fall is an excellent time to plant perennials and trees.

Master Gardeners are here to assist you with all your plant, tree and turf questions. This winter our Monday through Friday Help Desk will be augmented by "Garden Clinics" at some Loudoun County Libraries.

Have you thought about becoming a Master Gardener?

Loudoun County Master Gardeners (LCMGs) are gearing up to welcome the class of 2014, which starts in late January. If you are interested, come and see us in volunteer service throughout Loudoun. Stop by our Gardening Clinics at local farmers' markets, visit our award-winning Demonstration Garden (DG) at Ida Lee Park, or come to one of our free monthly evening lectures at Rust Library in Leesburg.

You don't have to be an experienced gardener to consider enrolling in the MG Training Program. The one characteristic of successful MG volunteers is the desire to share their specialized training and experience in service to the community.

Open House for interested applicants is November 12 from 7 to 8:30 pm at the Loudoun County Extension Office (EO), Wells Fargo Bank Bldg., 30 Catoctin Circle SE, Leesburg.

The cost to apply is **$200 for Early Bird Registration (application received by Nov. 1, 2013)** or **$225 for applications thereafter.** Applicants *who are accepted* will be asked to pay the tuition fee by January 1, 2014. We can take applications through December but will close registration when the 30 class slots are filled. Find the application at http://loudouncountymastergardeners.org/about-us/become-a-master-gardener/ . Return the completed form to the Extension Office.

Applicants will be interviewed by current MGs before being accepted into the Training Program. This helps us all to be sure the program requirements are understood before a commitment is made.

Your commitment as a ***Trainee*** starts at the Extension Office with classes beginning in late January and ending in April. Sessions meet 9am - noon on Tuesdays and Thursdays. You are expected to attend every class.

Virginia Tech instructors, industry professionals and experienced LCMGs are your teachers. More than 25 classes and labs are scheduled. Subject titles range from Soils and Botany to Fruiting Plants, Pruning, Landscape Design and Vegetable Gardening. Sound overwhelming?…it's not! Teachers are gifted and enthusiastic, the material is interesting and important, and you will meet new friends who share your horticultural bent and concerns about the environment.

In April, as a successful Trainee, you advance to ***Intern*** status and a 75-hour volunteer service commitment composed of: 25 hours working with veteran MGs at our Help Desk and Gardening Clinics; 25 hours working in the DG; and 25 hours in "other" service areas such as helping with plant sales, working our booth at the Leesburg Flower & Garden Show or on the LCMG Garden Symposium.

At the end of the 2014 year, with all hours satisfied, Interns become ***Tenured*** and certified as Virginia Cooperative Extension MG Volunteers (MGVs). To keep annual status as a MGV you must complete a minimum of 25 hours of volunteer work and eight hours of continuing education (easy to do by attending our monthly lectures).

Ready to heed the call of the Garden? Come, be a part of the LCMG Program.

Molly Converse, LCMG Class of 2011

Now is the Time for Garlic!

Now that most of the summer vegetable garden is almost done, the forlorn vegetable gardener wonders if there is not something else to plant in the empty soil. While you might consider lettuces, other types of cold-tolerant fast growing greens or transplants of broccoli or cabbage to replace summer vegetables, these need to be started in mid-late August to get a decent harvest before the very cold weather sets in. So what is left? Let's talk garlic!

As with most fresh grown produce, fresh garlic is a world's difference in taste from supermarket garlic. In this area garlic is planted in early- to-mid October and requires little care during the long growing season and could even be considered a lazy gardener's crop if such a crop really exists. It also does not need much space to grow. The downside of growing garlic is the growing season which runs from mid-October to late June and the need for a full sun, well drained location.

The first agenda item is to buy some garlic bulbs suitable for planting. Supermarket garlic is not recommended for growing because sprout inhibitors have been applied. The best way to select and buy a number of different varieties of garlic is online. Garlic is sold by weight rather than the number of cloves and generally 1lb. of cloves equals 10 pounds of fresh. It is separated into two main types: hardneck and softneck (also called common garlic). Softneck is the kind sold in supermarkets, stores well and has braidable stems when harvested. Hardneck is usually recommended for northern climates because it thrives in very cold winters and produces a long, firm central stem which curls at the top, also called a scape. Both kinds can be grown successfully in this area. In September many of the popular varieties are sold out online. Other options for purchasing garlic may be another vegetable gardener who has some extra cloves or buying fresh bulbs from an organic vendor at the Farmer's Market.

In addition the soil will need to be prepared for planting. If the soil is "worn out" from previous crops, add compost (preferable) or a dry, organic vegetable fertilizer to the soil and mix into the top 4 inches of soil with a garden fork. Water the soil with a hose and allow the soil to dry out before planting time. Do not add large amounts of fertilizer as garlic does not like. If soil is not well drained consider planting in a raised bed or a large container instead.

Planting garlic is easy but do not plant too soon in this area because of our temperature changes. Garlic should be in the ground around the time of the first light frost (average October 15) and thus should be planted the first half of October. Planting depth is usually 2-4 inches with the pointed tip about 1-2 inches below ground. Do not plant too deeply. Separate the garlic bulb into individual cloves leaving the papery skin intact and always plant pointed tip up. Discard any cloves which are too small or look to be rotted. Spacing should be 4-8 inches apart. Large cloves need more space and should be at the 8 inch range. A bulb planter may make the task easier along with marking the rows with string beforehand to keep a straight line or grid pattern if planting in a block. When planting is completed put a 1 inch layer of compost or leaf mold mulch over the area to help prevent drying out. Keep watered lightly during dry spells and weed carefully. After Thanksgiving a 3-4 inch layer of loose mulch must be placed over the garlic to prevent the cloves from heaving out of the ground from frost. Do not flatten the green tips with the mulch. Straw or shredded leaves are good options at this time.

In early April, the mulch should be carefully pulled back, any smashed green tips straightened and weeds carefully pulled. A light fertilization of fish emulsion should be applied along with another layer of compost. Keep up with watering but only if dry. Replace the mulch if the weather turns dry and/or hot in April and May. In May snip off any scapes from the hardneck varieties and use in your kitchen. Once the green leaves start yellowing/browning in late May into June, stop watering. Watch carefully and harvest the garlic when 2-3 green leaves remain. Green leaves represent the papery coverings of the bulb and to store well, these skins need to cover the cloves. When harvesting the soil should be dry and a large handled trowel is best to dig up the bulbs. Do not wash the bulbs off with water instead brushing off dirt off with a cloth or small whisk broom. Store the bulbs by braiding the stems or by tying the stems together with twine and then hanging in a cool, dry area to dry.

Enjoy your fresh garlic for the next 3-6 months but remember to save some cloves for your next planting season. Now that was not too hard…was it?

Denise Palmer, Master Gardener

Facts about Garlic

You'll need to dry your homegrown garlic before you store it for a prolonged time. After harvesting, carefully wash the bulb and roots. Let the garlic dry in a shady, well-ventilated, moisture-free area for a week or more. You can hang the freshly harvested bulbs from their stalks if you like.

Thoroughly drying garlic bulbs develops and concentrates their flavor, so don't rush the process. Once dry, trim or break off the roots and rub off the outer layer of parchment. If you've grown softneck garlic, consider braiding it for an attractive storage option.

Whole bulbs of store-bought garlic will keep for several months or more when stored at room temperature in a dry, dark place that has ample air circulation. Keep in mind, however, that garlic's lifetime decreases once you start removing cloves from the bulb.

Peeled cloves can be stored in the refrigerator for a week. Peeled, minced or crushed cloves can be frozen.

Ancient Roman proverb: “One must be suspicious of anyone who does not eat garlic”

Assessment of the LoCo MG Vegetable Garden
September 2013

Every year we can count on some things being different in the vegetable garden than in previous years. That is one thing we can count on *not* being different, and the fact that we have fourteen 25' x 4' beds in rotation. It may be colder when we want to start planting, or some vegetables may do better or worse than they did in previous years.

All of that happened this year. We are used to being able to plant peas on or around St. Patrick's Day (a garden tradition) along with lettuces and radishes. Not only did we have to wait a whole 4 days, an eternity when you're itching to get your hands in the soil, but it was so windy and cold when we planted the small lettuce seeds, that there were no straight rows when the seeds started emerging. The wind and the fact that we were wearing our bulky winter gloves while planting didn't help. But it was good for a laugh and a memory.

The next week it snowed and we cancelled work. That was a first in the 6 years I've been involved with the DG.

All this brings me to say that most seeds and plants we planted were put in a bit later than we have in the past few years. I'm usually a bit frantic to get things in, but I let the weather dictate my emotions, and all has turned out well. We actually have some veggies now that some home gardens have finished harvesting. Summer squash is one of those, although they are rapidly winding down. And there are quite a few winter squash hanging on to plants that definitely look ready to be donated to compost. One more week and they should be ready.

For the first time since the present veggie team has been in place, we used a mulch on the squash beds. We use straw as mulch on over half the beds, but not on squash or cucumbers, as that just gives squash bugs and cucumber beetles a home. We used 'solar mulch' on the two squash beds. It was developed for heat loving plants, suppresses the weeds and also allows infrared light to pass through to warm the soil. Our biggest concern was to keep the squash bugs down, which come up from the soil. I did not see any squash bugs this year. The only drawback I noticed was the fact that the irrigation lines couldn't cross all the mounds where squash were planted. That made hand watering a bit difficult.

Floating row cover

We have used 'metallic silver mulch' on the pepper bed for many years. People ask why we use aluminum foil, but is 1.0 mil plastic. It repels disease carrying insects and cools the soil. It also disorients many insects (except stink bugs) and reflects light up to the understory of the plants. This year we decided to try the metallic mulch on the cucumber bed. Instead of using the flat 5' trellis, we got an A frame trellis that fit the bed width of 4' perfectly. We also rigged up a trellis from an old reinforced wire round tomato cage.

For the squash and cucumbers, we covered the beds with 'floating row cover', which we support over hoops we bent from electrical conduit (EMT). We use that for protection from insects, but have to remove it when the plants start to flower so they can be pollinated.

So with the two oddball shaped trellises for the cucumbers, we had to

get creative with the hoops and row cover. But it worked and we had a more prolific crop than I have seen in 4 years. But here it is, the start of the second week of September, and the cuke vines were just pulled out last week.

When the row covers come off the squash and cucumbers, the sprayer comes out and we start with the Surround, a wettable powder of kaolin clay. It covers the leaves and stalks and acts a barrier or deterrent to insects. It is purely organic. You must be careful not to spray on or in blossoms.

Sunflowers in squash bed

For mulch on the tomato and cabbage beds this year, we planted directly into the cover crop that had been planted fall 2012. We repeatedly cut back the oats and hairy vetch in the tomato bed and the oats and crimson clover in the cabbage (brassica) bed. When it came time to plant them in the beds, the cover crops were only several inches high. This is called a living much. As the season has gone on, they have died, providing green manure for the beds.

Harvest on the tomatoes has been very good this year. There has been some stink bug damage on some of the fruit, but not as bad as in previous years. Right now, there are quite a few beautiful round *green* tomatoes. The smaller Juliet's and black cherries are ripening faster than the larger tomatoes.

We are on our second crop of cabbages and we've planted some broccoli, Bok Choy and cauliflower. First crop of cabbages yielded 40 fine heads of two different kinds of green and one kind of red.

We also had a wonderful first harvest of potatoes. We dug some for a few weeks and then the final harvest of the whole bed brought 118 lbs. for Interfaith Relief. We do have another crop in, but half of one row didn't come up.

Bush beans…two years ago we had our last attempt at pole beans. Every year it became harder and harder to control the bean beetles, so we switched to bush beans, which we can keep under row cover as they are self pollinating. Last year we planted 4 rows of beans per bed and found they were way too thick. So we went for three rows this year. Still too thick. It will be two controllable rows next season. The major (embarrassing) situation we had this year, was the one and a half bean beds were completely over run with morning glory vines. Did you know that bean leaves and morning glory leaves look a lot alike? They do. We harvested away, and when the vines started growing over the hoops, we realized something was amiss. The main bed is situated next to the deer fence in between veggies and the Heritage garden, and morning glories grow there every year. So, we pulled out the bean plants and laid a sheet of clear plastic over the bed. This is to solarize the bed. Four weeks of heat should kill all the weed seeds, and two weeks after it's off to allow the microbes to reestablish themselves and we will be ready to plant cover crop.

Carrots and onions did very well this season. We have another crop of carrots coming up.

Pepper plants didn't get as large as they have in years past, but we've had a good crop. The stink bugs have been very attracted to them this year. Last week we composted probably ten damaged fruits. Every time we go on stink bug patrol, we only find a few, if any. Sly suckers.

One insect we did see this year that hasn't been around in three or four years, was the Japanese beetle. They were a menace, but they ran their cycle and were gone by early July. They especially liked the grape vines. We had a lot of white coated plants this summer (Surround).

Our square foot garden had two new leaders this year, Carol Simon and Elaine Hawn. You may remember Elaine from seven years of tending the Shade garden. They took on the task of learning sq. ft. principles and have done a fine job.

The veggie team had our crop rotation and selection meeting early September. Next year's beds were planned and cover crops were chosen to benefit the plants chosen. Our cover crops are *grains* - winter rye and oats; *legumes* - field peas and crimson clover; and *green manures* - oilseed radish. They add nutrients to the soil, bring nutrients up from deep in the soil, and protect the soil from erosion in the winter.

Next year we are going to plant sweet potatoes again. It has been 3 years since our last attempt when we had trouble with voles. We will use a small fencing buried about 6" around the inside edge of the bed, and some kind of netting over the top of the bed.

We will also plant half a bed of tomatillos for the first time. When we think of new crops for the veggie garden we always keep Interfaith Relief clients in mind. We are sure tomatillos will be popular.

The Demonstration Garden closes to work after the Fall Farm Tour, which is the third weekend in October. The official last work day will be October 22. But the vegetable garden will probably have a few extra days.

It has been another good year, with a happy group of interns who were seeking and sharing knowledge and not afraid of getting their clothes or hands dirty.

Calculations have it that the Master Gardeners' Vegetable garden has produced 1,238 pounds of produce donated to Interfaith Relief this year, as of this writing.

Time really does fly when you're having fun.

Normalee Martin-DG Leadership Team

Preparing Your Soil Over Winter: Let Nature Do The Work

Now that the cooler weather is here and the summer gardening season is winding down, it's an appropriate time to note and evaluate the successes (and, sadly, the failures of your garden). To do so it's always a good idea to maintain a garden journal so you can remember exactly which beans you like, where you planted the cucurbits so you can rotate your crops, and what not to grow again. (For my garden, eggplants are in the Do Not Grow Again column – the flea beetles were horrible).

As any gardener knows, much of the success in the vegetable garden comes from great soil and fall is the perfect time to improve your soil. The first thing to do is to pull up all dead and diseased plants. Do not leave diseased plant matter in your garden over winter as the diseases and insects will probably become active again in the spring as the soil warms. Remove all wooden stakes, baskets, and other rubbish which may harbor disease or insects.

Next, consider soil compaction. Our clay soils are prone to becoming hard and difficult for roots to penetrate. Tilling the top 4-5 inches or using a broadfork to loosen the soil will help keep the soil friable and expose garden pests living near the surface. Make it your Golden Rule to never ever walk on your soil. Designate paths or use stepping stones. Now add compost to the garden. Nitrogen travels through the soil rapidly and needs constant replenishment. Compost is an excellent source of nitrogen and a soil builder. You can purchase bags of compost from the store or you can make your own (see article on making compost within this publication). Work the compost into the top few inches of your soil in the fall so that the heaving and thawing of the ground in winter will incorporate the materials into your soil, saving you the work!

Some gardeners plant cover crops in the fall, such as barley, clover, and winter rye. The seeds are sown, left to grow over the winter, and then plowed under in the spring before planting spring crops. These "green manures" are high in nitrogen and help prevent soil erosion during the winter. For more information on cover crops refer to the VCE/Virginia Tech Publication # 2906-1381.

It is suggested that you take a soil sample of your vegetable garden and send it in to Virginia Tech to be evaluated every three years or so. A soil sample will tell you the pH level (the acidity or alkalinity) of your soil as well as the other nutrients a plant needs to prosper, such as potassium, phosphorous and the micronutrients. Most garden vegetables prefer a slightly acidic soil, around 6.5, and you may need to add lime to raise the pH level, or sulfur to lower it which the test results will indicate. Again, fall is the best time to add the amendments so they are incorporated thoroughly into the soil and you are ready for planting in the spring. A free soil sample test kit can be obtained from the Loudoun Extension Office on Catoctin Circle. The instructions are on the box and the only costs are to VT for the analysis and the price to mail it there. You will notice that nitrogen is not indicated on the soil test report because it is used up quickly. You can never add too much compost.

In planning next year's vegetable garden, keep crop rotation in mind. Vegetables can be divided into several broad groups and crops in the same family should never be planted in the same spot year after year. The families are the cucurbits (melons, cucumbers, zucchini, pumpkins and winter squash), the legumes (peas and beans), the solanaceae (tomatoes, peppers, potatoes and eggplants), and the cruciferae (cabbage, radish and broccoli). Rotating crops keeps the soil from being depleted of specific nutrients and helps to reduce insect and disease pressure. It seems to me that I am always so busy in the spring and having my vegetable garden soil already prepared means I am ready to plant my peas and lettuces in mid-March.

Linda Ward, Master Gardener

Compost? Oh yes you can!

As gardeners, we all agree compost is key, compost is black gold and compost is full of organic yumminess for your plants. But how many of us actually partake in the act of composting? Is it easier said than done? You don't have the space, time or inclination to throw your clippings into a bin, stir and make this deep dark brown earth? I'm here to tell you it is quite easy or I wouldn't be doing it myself!

This spring I purchased a mesh composting ring that I put together in a matter of minutes - so far so good! Then I read a couple of publications on the proper mixture of brown and green materials to add in order to create the organic perfection. I was used to working in our MG Demo Garden at Ida Lee and we use a chipper/shredder out there – not the same as what I would do at home so I felt it necessary to read a couple of publications just to be sure! Here is one of ours that is quite helpful: MG Composting Flyer.

I spread out the compost ring to about 3 feet in diameter and stationed it in the backyard behind my rhododendrons. Not too far away and garden hose accessible. (The rhododendrons shield the view from my house as well as the neighbors so no worries there). Now it was time to get started. The green material is nitrogen and the brown material is the carbon. So for a green layer to start, I added the grass clippings from my yard (no chemicals) to four inches inside the ring. Easy enough…now to find some 'brown' as the winter leaves were already gone. We were slim on brown material around the yard so I shredded up the box the compost mesh came in. Then I found some more untreated cardboard and layered it in up to four inches on top of the original grass clippings. I watered it a little so it was moist but not saturated. They say it is to be like a sponge, if that helps!

Another round of mowing the grass and some perennial clippings went on top of the eight inches already in the compost ring a week later. And this time for the brown, my husband had some wood shavings (untreated) from some furniture he was making so I added four inches of that on top of the grass clippings. And I watered it a little again.

The spring was wet this year so I didn't have to get the hose out to water the pile that was decomposing. I checked on it a couple of times and knew it was 'baking' as the level was quickly decreasing. I waited a full month before I turned it and could feel the heat coming off the material. I was so excited! I then turned it every 2 weeks after that. Once it stops putting off heat, it is finished decomposing and there was no odor.

I am very proud to say I used my finished compost already – less than 3 months later. It was pretty easy and looked just like an ad in a magazine - dark, rich brown with an earthy smell. I can start to make another batch over the fall/winter for spring use. The fallen leaves are just begging to become compost.

Of course there are bigger bins you can use and more accurate proportions of green and brown material when you read about it. You can also throw in certain kitchen scraps. But I am very happy with what I produced for my own use. Try it yourself, you just may get hooked!

To make it even easier on you, the MGs have the bin I mentioned (and pictured) available for purchase. Just call the office at 703-771-5150 to secure yours and get started producing your own black gold! Perfect time to scoop up the leaves while you are still mowing your grass!

Barb Bailey, Master Gardener

Corn Gluten Meal – A (Not so Brief) Primer

Weeds! We all have them and want to get rid of them. And we're always searching for new (or at least new to us) ways of foiling them.

One weapon in the arsenal against weeds is corn gluten meal (CGM), an organic, non-toxic substance which has received a lot of attention from gardeners, universities and lawn care professionals. What is CGM? How does it work? Is it really safe for our children, pets and the environment? How is it used?

What is CGM?

CGM is the byproduct of the wet milling process used in the production of a number of consumer products. During the process, corn kernels are separated into three component parts: the outer skin or husk (bran or hull), the germ (where most of the oil is) and the endosperm (starch and gluten). From these various components, a number of consumer products are made including cornstarch, corn syrup, high fructose corn syrup, dextrose, corn oil and ethanol. Corn gluten meal (CGM) is one of the byproducts of this process and is frequently dried and used in feed for livestock, dogs and fish.

In 1988 Dr. Nick Christians, a professor of horticulture at Iowa State University, accidentally discovered that corn gluten meal is also a weed suppressant. After years of testing, Dr. Christians and Iowa State patented the substance. Today, several companies manufacture and sell corn gluten meal weed killers.

Dr. Christians specializes in turfgrass management and physiology; most of his work has concentrated on using CGM on lawns and turfgrass. Other researchers are now investigating its use with other crops.

Photograph Courtesy of Pamm Cooper

CGM is available in three forms: as a powder, in pellets (spread with a lawn spreader or by hand) or as a liquid spray. The pellets are easier to use than the powder. I haven't used the spray, but if the area being treated is reachable by garden hose, this should also be fairly easy to use.

How does it work?

Corn gluten meal is a pre-emergent weed killer; any weeds which are already established are immune to its effects. With CGM, weeds actually germinate but their root development is inhibited and the seedlings die. To achieve this affect, a dry period is necessary following germination so the rootless seedlings can dehydrate and die. If a rainy spell occurs, the seedlings may form new roots and recover.

CGM also acts as an excellent lawn fertilizer. Any weeds which survive will get a good dose of nitrogen and grow quite nicely! With its fertilizer action, CGM naturally makes existing grass healthier and stronger; this alone helps the grass crowd out any weed seedlings which do manage to survive.

What weeds does it control?

Different weeds have different sensitivities to CGM. Generally, CGM kills seedlings of such weeds as dandelions, smart weed, redroot pigweed, plantain, lambsquarters, purslane, curly dock, clover, and a wide variety of grasses including crabgrass, foxtail and barnyard.

Is it Safe?

CGM is not considered harmful to people, pets, insects, soil organisms, aquatic life or the environment. People who are allergic to corn, however, should avoid it.

How should we use it?

Always spread CGM according to manufacturer's directions and be sure to always read the directions on the product. They may vary by brand name. Following are some general guidelines:

- CGM should be applied twice a year: once in the spring, when forsythia is in full bloom[1], and again in late summer to early/mid-fall to kill fall-germinating weeds[2] such as deadnettle and chickweeds. Timing depends on the weather. During a warm spring such as we experienced in 2012, application would be made earlier. During a warm fall, application would be made later.

- Since CGM is 10% nitrogen by weight (or 2 lbs. of N per 1,000 square feet), you may need to make adjustments in your phosphorous and potassium applications. A soil test and consultation with your extension office is in order. (Lawn soils ideally should be tested every 3 years to determine what, if any, fertilizer and lime applications you need to make regardless of whether you use CGM.)

- According to Fairfax County's *Conservation Currents*, you should apply 10-20 pounds of CGM (the equivalent of 1-2 pounds of nitrogen) per 1,000 square feet twice a year. (Note: Dr. Christians prefers 20 pounds per 1,000 square feet twice a year.) In any case, I repeat: follow the instructions and amounts given on your product label!

- After applying in beds and borders, lightly rake the powder or pellets into the soil.

- Next, water it in to activate it or apply shortly before a rain storm (but not a downpour); .25 inches of rain are sufficient. If the expected rain doesn't arrive on schedule, you can wait up to five days before you water it in but eventually it must be watered in to activate it.

- After the initial watering, the area needs to be kept dry - the longer the better. Newly germinated seedlings need to be drought stressed to die.

- CGM is safe to use on established lawns, in perennial beds, around shrubs and with transplants.

- Do not use CGM on newly seeded or reseeded lawns or in garden beds which will be sown with vegetable or annual flower seeds. It will kill many, if not most, of the seedlings. With vegetables, those seedlings which survive will be weakened and crop yields reduced.

- Generally, CGM has a residual action of 4-6 weeks; seeding of the area should not take place during this period.

Dr. Christians recommends that you try it in a small area first. If CGM acts as you expect and want it to act, then you can treat a larger area the next season.

So What are the Pros and Cons?

Pros:

- It is nontoxic to humans and pets.

[1] Crabgrass germinates in the spring when soil temperatures are at or above 55° F. for several days; you want to have the CBM down at that point. This is about when the half the forsythia blooms have started to fall, so if you spread when it's in full bloom, you're covered for crabgrass germination.

[2] According to Virginia Tech, winter weeds germinate when air temperature is below 75° F. for an extended period. You want to have CGM down before this occurs.

- It is environmentally safe.
- It does not burn or otherwise damage existing plants.
- It is approved for use in certified organic production systems.
- It does work, albeit not as well or as rapidly as synthetic products.
- It is an excellent lawn fertilizer. The nitrogen releases over three-to-four months, constantly feeding the grass. At least one company sells it for that purpose instead of as a weed killer.

Cons:

- Its effectiveness is variable; timing and cooperating weather are critical.
- It is non-selective and effective for 4-6 weeks, during which time it can prevent germination of any seeds in the treated area. You can't plant that area unless you are using transplants.
- Excessive moisture can reduce its effectiveness. This is problematic in our Virginia climate with its frequent, sometimes torrential spring rains. A sufficiently long drying period may not occur.
- It is more expensive than synthetic weed-and-feed products. Initially CGM was quite inexpensive, but in the past six years the price has increased. For most of us, it may no longer be cost-effective to treat a large area.
- It is less effective than synthetic products. (However, over a three year period, good control of weeds in lawns can be achieved if used twice a year for three years. In 1993, Dr. Christians had a 60% reduction in lawn weeds the first year, 80% the second and 90% the third.)
- Perhaps most important, spring time application of nitrogen fertilizer is absolutely contrary to preferred fertilizer timing recommendations for cool season grasses, which ideally are fertilized in the fall. In fact, it can be disastrous, prompting rapid, lush growth which is then susceptible to diseases and drought in the depths of a hot, humid summer. Make no mistake about it: CGM *is* a fertilizer as well as a weed killer. According to Virginia Tech, if you feel you must use CGM on your lawn in the spring, "…reduce the rate to 10 pounds, and supplement the program by hand pulling escaped crabgrass and other weeds. This prevents turf harm from excess fertility and still avoids or reduces the use of synthetic herbicides."[3]

Several years ago I used CGM in one of my flower beds (but not our lawn – it's too big). I was pleased with the results. Unfortunately, I can't use it extensively in my own beds as nitrogen is detrimental to my daffodils, which need a low nitrogen fertilizer and then only occasionally. So will I use CGM again? Short answer: Yes! I'm planning to treat a small section of one non-daffodil flower bed which has developed a serious crabgrass problem next spring!

Lina Burton, Master Gardener

[3] From *Pest Management Guide: Home Grounds and Animals, 2013* by Dr. Shawn D. Askew at http://pubs.ext.vt.edu/456/456-018/Section_5_Lawn-2.pdf , page 5-11. Virginia Tech has an entire series of lawn care publications available on line at http://pubs.ext.vt.edu/category/lawns.html

Fig Trees in Your Backyard (or Front Yard!)

I remember when I was new to Northern Virginia and was walking in my townhouse neighborhood to get to my ride to DC. That was when I was introduced to fresh figs. A townhouse's backyard facing the walkway had a huge fig tree that blocked part of my path. I would dodge it routinely until one day I noticed it was teeming with purplish green fruits. Much of what I had known about figs was grocery-bought Fig Newtons, but around that time fresh figs with feta cheese was trendy, both in bistros or fine dining.

So I started imagining the treat that was within reach. Oh, what temptation! Then one afternoon, a low branch that was in my way had the tempting figs barely hanging on. In a quick instant, I had a ripe fig in my mouth … heaven! And I was hooked.

Figs (*Ficus carica*), especially fresh figs, are wonderful to eat and a healthy treat (good source of calcium, iron, potassium, magnesium, B vitamins, antioxidants, and dietary fiber). And lucky for us, we can grow fig trees in our own yards in our hardiness zones 6-7. The Loudoun County Master Gardeners' Demonstration Garden in Leesburg has two large fig trees that produce reliably. They are thriving. And so could your very own fig tree. Figs do not store well fresh, so it is such a treat to have some growing close by. With just a little care of young fig trees in the beginning, the reward will come.

If you have established fig trees, you are now merely enjoying the bounty, as they can be bountiful. But let me share this for a fascinating side story: One late summer, a neighbor (where I now live) who always had bountiful figs to give away suddenly had none to share because she said the fruits were awful-looking, with holes and insect nibbles. This was before I was a Loudoun County Master Gardener, but I wanted to try figure out what was causing it. My initial research brought me a wonderful education on something else — the symbiotic relationship between figs and fig wasps (*Blastophaga psenes*), as old as time, even considered a "coevolution."

Entrance and exit point for female wasps—the apex of the fig or ostiole.

Female fig wasp entering the inverted fig flower to pollinate it.

Larvae to hatch and leave fig cavity as wasps or die inside

Provided in the following links are a more detailed look at this relationship, also called mutualism, both from a scientific perspective and from a layman sense that would be fun to relay to kids. To grab your interest, here is the title of the Cornell University article: "Trees retaliate when fig wasps don't service them." Fascinating!

http://news.cornell.edu/stories/2010/01/figs-kill-wasp-larvae-when-wasps-do-not-pollinate-figs
http://www.esa.org/esablog/field/the-story-of-the-fig-and-its-wasp/
http://blogs.smithsonianmag.com/food/2009/08/fresh-figs-and-bugs/
http://www.figweb.org/Interaction/How_do_fig_wasps_pollinate/index.htm
http://www.botgard.ucla.edu/html/botanytextbooks/economicbotany/Ficus/

It then turned out that the domesticated common fig varieties we can purchase commercially and easily grow in our backyards are female parthenocarpic (seedless or sterile), and do not need to be pollinated by fig wasps. No wasps on those. The ones that do, such as Smyrnas or Calimyrnas, are marketed as most desirable specialty figs.

So, how about the original reason for my research, Why are my neighbor's figs full of insect holes? I found the most likely culprit to be birds pecking the fruits … and fig beetles (*Cotinis mutabilis*) that swarm overripe fruit left on the trees or get attracted to those that have fallen and are left rotting around the trees. Spraying is not recommended; the most compelling reason is that no chemical sprays are found by experts to be effective in fig beetle infestation, and, from an organic perspective, are best avoided. Mechanical and physical controls such as beetle traps, or simply cleaning up around the trees, or keeping up with harvesting the figs during ripening time (and sharing the harvest!), are the best options.

If you already have fig trees, either potted where they can also thrive and bear fruit or are newly planted in the ground, remember that there is a two-season ritual involved in their care. Fig trees are best grown in warmer climates, zones 7 to 11, so, in our zone 6b/7a climate, they are marginally cold hardy. In most of Virginia including Loudoun, winter protection is suggested for survival of young trees from year to year.

Established trees can manage fine in the ground in zone 7, but young potted trees should be brought into a sheltered environment (e.g., an unheated garage, shed, or basement) in the winter. If planted in the ground eventually, they should be protected from harsh winter winds and temperatures (e.g., wrapped and insulated).

The ritual is easier if the fig tree is kept in a large container filled with a light growing medium (with compost at least and good drainage). The ritual involves moving it in and out of a sheltered environment — brought inside when dormant about November and brought outside around May when temperatures are frost-free.

In the fall, allow the potted fig tree to go dormant. Reduce watering and stop fertilization, and let the leaves drop or remove them before bringing inside. Also check the soil for insects or insect eggs; call the Extension Master Gardener Help Desk (703-771-5150) if you find any and need guidance on what to do about them. Bring the dormant fig tree inside a sheltered (from hard freezing) and dark, dry location. The soil need not be watered but prevented from being completely dry (keep slightly moist, a little watering if soil appears powdery).

The harder ritual is if the tree has been planted in its permanent location in the ground. This requires winter protection using several methods. One is to cover the tree with burlap, cloth, or blanket, and to provide insulation (dried whole leaves or straw). The different ways to cover and insulate fig trees are as varied as fig tree owners can think up or devise.

Be relieved, however, that even if a fig succumbs to a harsh winter, it does not die; it will come back from the roots and still bear fruits.

The second part of each ritual comes in the spring when the potted fig tree is brought out, located in a sunny location, and watered. For the in-ground young tree, the ritual is in removing the cover and insulation and readying the tree to take in sun and water for spring growth.

If you are just thinking of having a fig tree growing in your yard, start with a wise choice of variety for cold hardiness or size. Those readily available for the home garden are of the common fig variety. No, not the fig wasp-pollinated ones that are supposed to be tastier and nuttier, and something to fascinate the kids with, but the seedless ones that self-pollinate. Consider Chicago Hardy (hardy to zone 6), Celeste, Brown Turkey, Black Mission, Negronne or Violette de Bordeaux, LSU Purple, Italian Everbearing, and Kadota or Peter's Honey Fig.

Maria Daniels, Master Gardener

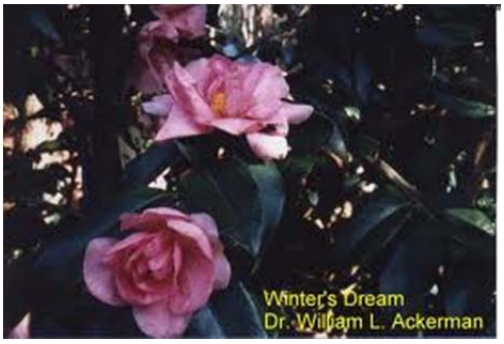
Fall Blooming Shrubs

Fall elicits a sort of calm in a gardener. It is a time of change, reflection and perhaps some slowing down. What fun to have shrubs in your garden that will bring more smiles and joy into your life during the late summer and into the fall! Here are some of my favorites.

Azalea Encore Series *(Rhododendron sp. 'Encore Autumn Twist').*
Encore azalea names all begin with the word "autumn," such as Autumn Amethyst. Bloom times are April-May and July-September. Generally Zones 7-9. Optimum PH levels in the soil are between 5.5 and 6.5. Removing spent flowers (tedious but rewarding work on large specimens) makes for a better show the following spring; take care when removing flowers not to damage new buds at the base of the old flower stems.

Azaleas can be severely damaged by deer. At my house they are surrounded by 'lovely' cages. How can we resist azaleas in spite of all of their problems? I enjoy trimming flower branches for indoors and pruning at the same time. Like other azalea species, these shrubs may be affected by fungal diseases like leaf spot and petal blight being the worst but usually not enough to worry about control. They are favorite hosts for lace bugs and spider mites; planting them in part shade may alleviate these pests or spray with Neem oil on the undersides. See the best performers:
http://www.gardenality.com/Articles/855/Plants/Shrubs/The-Best-Of-The-Encore-Azaleas/default.html

Cold-Hardy Camellia *(C. hiemalis* 'Peach Puff' *x C. oleifera).* Yes, there are cold-hardy camellias I was thrilled to learn! And we even have a Camellia Society of the Potomac Valley, many developed by Dr. William Ackerman for Zones 7-9. *C. japonica* is the most commonly grown species. I have chosen 'Peach Puff' hybrid to focus on because the bloom is Oct.–Nov. and it has a 3¾" traditional anemone bloom. Other species like *C. sasanqua* also flower in autumn but there are some that bloom through winter in Nov.-Jan. The *C. sasanqua* form is more compact and typically hardier than *C. japonica* with smaller blooms. The flower forms can be singles, doubles, peony or anemone. They can be perfumed or not. Early application of suitable fertilizers like cottonseed meal or other slow-release will provide the nutrients that actually determine the number of petals on flowers. A reliable water supply is critical for normal development of leaves & stems and for flower opening. Pest management is a must. This one takes a substantial amount of work if you feel up to a challenge. Protection from winter winds has a critical impact on flowering and the plant itself.



Dr. Ackerman has developed varieties especially for our area and provides all of the details for culture at American Camellia Society: http://www.americancamellias.org/display.aspx?catid=3,9,23&pageid=713. For a list and photos of our Potomac Valley camellias see http://cspv.org/cold-hardy-camellias/.

Bluebeard/Blue Mist/Spirea (*Caryopteris x clandonensis* 'Blue Mist'). A low-mounded, fast growing mostly deciduous shrub valued for its aromatic foliage, late summer flowers and attraction for bees and butterflies. Zones 5-8. Drought tolerant. Spring cutback of foliage encourages new growth. Generally 2-3' tall and wide. 'Blue Mist' is the cultivar known for producing powder blue flowers July to September. Very effective in masses. Easily grown in average soil and full sun as this plant does not like wet feet.
See http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/e232/caryopteris-x-clandonensis-blue-mist.aspx.

Coral Drift rose *(Rosa* 'Meidrifora'*)*. Part of the Drift rose series - for a mass of color to draw your eye. Hardy to Zone 4. At a height of 1-2' and 2-3' wide, this spreading shrub is useful as a ground cover, a border, mass planting or hillsides. Like most roses it prefers full sun to provide full season blooming starting in spring thru fall. I only 'do' carefree roses and this one certainly qualifies since it can tolerate drought, heat and mildew similar to the 'Knockout' roses. Sure sounds like our summer. I love the old-fashioned look of these roses with the single blooms. Note that these are fast growers if you are averse to pruning. This is a Florida site but still useful:

http://gardeningsolutions.ifas.ufl.edu/giam/plants_and_grasses/flowering_plants/roses_drift.html and
http://www.lsuagcenter.com/news_archive/2011/august/news_you_can_use/Drift-roses-offer-new-landscape-options.htm

Scotch Heather (*Calluna vulgaris* 'Blazeaway' aka common heather or ling). One of the hardiest flowering shrubs with very specific growing conditions required. Heaths (Erica Genus) are very similar in appearance and growth, having a greater choice of colors but being less hardy. Grown in zones 4-8 into low-growing evergreen groundcover. Expected height range can be from 4" to 2'. Avoid nitrogen fertilizer and windswept sites. The color of winter foliage varies depending on the cultivar. Culture should be in full sun, moist but well drained acidic soil. This particular cultivar 'Blazeaway' is said to be more drought tolerant. Heather foliage has very narrow scale-like leaves but grows into a dense upright spreading habit with yellow color until the fireworks start in the fall turning orange and red. Covered with lavender blooms thru summer through fall.

Deer do not like this plant. See http://www.hort.uconn.edu/plants/c/calvul/calvul1.html or http://en.hortipedia.com/wiki/Calluna_vulgaris and the following for pruning directions: http://www.heathsandheathers.com/cart2/cart2_Page4016.htm

Their small individual flowers appear as racemes several inches long. Wikipedia defines a raceme as "a type of inflorescence that is unbranched and indeterminate and bears *pedicellate* flowers - flowers having short floral stalks called pedicels - along the axis." The oldest flowers start at the base with new flowers produced as the shoot grows. Maybe easier to remember: from the Latin 'racemus' meaning a bunch of grapes. Heather also has showy and edible fruit described as brown septicidal capsules.

Pat Quinn, Master Gardener Intern

Fall Care of Your Cool Season Lawn

It's fall and, to your great pleasure, your lawn is green and happy. Global warming seems to have spent its wrath elsewhere this summer, sparing Northern Virginia those frying temperatures that last year turned our lawns into desert wastelands. Moreover, we got more precipitation than usual. July's rainfall was nearly twice normal. Cool season grasses like fescues and Kentucky blue grass were appreciative. Generally, they did not "brown out," but kept growing all summer long. Those of us who have to push lawn mowers probably saw this as a mixed blessing. Those with riding mowers were able to cruise smugly past their unmechanized neighbors.

Now it's time to take advantage of that mild summer and move that lawn of yours to a new level:

- If you haven't done so for a few years, test your soil. If you're intimidated by the hassle – getting a test kit, digging the soil samples, mailing it to the lab, and interpreting the reports – then take the easy way out. For $20 (not really enough to jeopardize your kid's college fund) you can have the Master Gardeners do it for you. They'll even send you their report in plain English, accompanied by a step-by-step procedure to make your lawn look great! Just call the Help Desk at 703-777-5150 and tell them you want the Grass Roots program.

- Aerate. Even if you did it last year, do it again. The ground is soft and aeration should be that much more beneficial.

- If you need lime, spread it now – in appropriate quantities. Again, the Grass Roots soil test will tell you just the right amounts.

- Fertilize, but remember that more is not necessarily better. If you use too much you can pollute our local watersheds. Grass Roots will give you the proper amounts for your lot.

- Overseed and keep lawn moist until the seeds sprout.

If this is all just too sketchy, here's a VCE publication that provides lots more information about fall lawn care: http://www.pubs.ext.vt.edu/430/430-520/430-520.html

Now comes the hard part. What to do about all those weeds that popped up due to the added rain? If you live in a townhouse with a small plot of grass, the answer is simple: pull them by hand. If, however, you have a quarter acre or more and really don't regard yanking out weeds as quality time, then a chemical herbicide may be the answer. But what kind?

The answer is a bit complicated. On one hand, most common weeds are annuals, i.e., they sprout and die in the same year. That means they are going to die with the first frost, so why use expensive herbicide to kill them now? On the other hand, some weeds are perennials. They persist for two years or more and will likely show up in your lawn again next spring. We would like to kill them now, but they have built up their strength during the summer and killing them now would likely require multiple applications of herbicides. Too expensive, too polluting. So the answer about what to do to control most weeds in the fall is pretty simple: nothing. Wait until next spring.

That is, unless your problem is "winter weeds." They sprout in the mid-to-late fall, survive the winter, and are lurking there next spring, waiting to disfigure your lawn when the weather warms. They include annual bluegrass (poa annua), wild garlic/onions, common chickweed, henbit, and dandelions.[i] You can control them with herbicides containing, atrazine, 2, 4-D, or dicamba. Remember: (1) this applies to cool season

lawns only, (2) don't get the herbicide near ornamental plants, and (3) read the instructions on the label TWICE before you use it.

A nice lawn is a great advantage to a home's curb appeal. This should be a pleasant fall, a great time to spend time outdoors. Take a few hours to improve your lawn. Grass Roots can help you to do that — in a healthy, sustainable way.

Jim Kelly, Master Gardener

[i] A guide to identifying weeds can be found at: www.msuturfweeds.net

Mulching Your Lawn

A recent study done at Michigan State University shows that you can forget about raking, blowing, and bagging leaves. Instead, just mulch them with your lawn mower. Simply mow over the leaves on your lawn. You want to reduce your leaf clutter to dime-size pieces. You'll know you're done when about half an inch of grass can be seen through the mulched leaf layer. Once the leaf bits settle in, microbes and worms get to work recycling them. Any kind of rotary-action mower will do the job, and any kind of leaves can be chopped up. With several passes of your mower, you can mulch up to 18 inches of leaf clutter. Microbes do a better job recycling carbon from leaves when they have nitrogen so if you lightly fertilize after mulching you'll get better results.

When spring arrives, you'll notice something. The leaf litter you mulched up in the fall will have disappeared. And your grass will look greener than ever. Mulching leaves simply recycles a natural resource, giving you richer soil for free.

Trees for Fall Color

Fall in Loudoun County can be an ever-changing riot of scarlet, burnt orange, amber, brilliant yellow, bronze, and striking purple leaves. Or everything can change to brown overnight, it seems, and drop to the ground. Why do leaves change color in the fall and what affects the quality of the autumn display?

According to the **Arbor Day Foundation** (http://www.arborday.org/), whose purpose is to "inspire people to plant, nurture, and celebrate trees," scientists haven't quite figured it out. There are several factors that affect when and how leaves change color and what helps to determine the colors they produce:

- shortening of the day length
- cooling temperatures
- organic pigments in the leaf cells
- sunlight intensity
- moisture
- tree genetic traits
- site characteristics
- latitude and elevation

Factors affecting the *quality* of the fall foliage extravaganza are these:

Photo credit: Chris Glass

1. **Cool night temperatures** – an extended period of night-time temperatures below 45º but above freezing helps to bring out more intense colors
2. **Sunny days** – sunlight allows the leaves to trap sugars from the dwindling chlorophyll, creating more brilliant fall colors
3. **Calm days** – windy days encourage the leaves to fall more quickly. An extended period of calm increases the time we can enjoy the show[1]

So when choosing trees for your property, what are some selections for the best potential fall color? Here are a few notables:

Kousa Dogwood (*Cornus kousa) – under 30' in height*

Although a native of Asia, Kousa dogwood has been planted widely in Virginia as an anthractnose-resistant alternative to our indigenous flowering dogwood (*Cornus florida)*, which has been attacked by this fungal disease. Several cross-bred varieties—*C. florida* x *C. kousa* hybrids—have entered the market, such as 'Aurora', 'Constellation', 'Star Dust' and 'Celestial'. Beautiful burgundy fall color.

Photo credit: Ernie Wiegand

Witch Hazel* *(Hamamelis* x *intermedia* 'Diane') – *under 30' in height*

A small tree/large shrub with multiple interests. Fabulous fall color, followed by early spring flowering (March) in a flaming scarlet. Bonus: an incredible scent. A true stunner! (Other cultivar colors vary.)

Photo credit: The Gardener's Eden

1 http://blog.arborday.org/why-leaves-change-color/#more-501

More small tree options: **Eastern Redbud*** (*Cercis canadensis)* **-** yellow autumn color; **American Smoketree*** (*Cotinus obovatus)* or **European Smoketree** (*C. coggygria)* – range of colors; **Japanese Maple** (*Acer japonicus and A. palmatum) – range* of colors. ***Note:*** although this small tree can have spectacular fall color, be aware that some Japanese maples are escaping cultivation and are on a watch-list for being invasive in Virginia.

Black Gum/Black Tupelo* *(Nyssa sylvatica) – 30' to 50' in height*

Can't say enough about this native beauty, the pollen-source for delicious Tupelo honey. During the growing season, this tree's strong central leader has attractive, glossy dark green leaves on horizontal branches. In autumn, the foliage has many shades of yellow, orange, red, scarlet, and/or purple, often with different colors appearing on the same branch.

Photo credit: Northscaping.com

Photo credit: Will Cook

Red Maple* (*Acer rubrum)* and **Sugar Maple*** *(Acer saccharum) – 30' to 50' in height*

Maples are what pop into most people's minds when thoughts turn to autumn foliage; truly the quintessential source of amazing colors against clear blue skies come October. But remember, ***not all "red maple" leaves turn red.*** The variation is marked from tree to tree, from pale yellow to fire-engine red. If you want a red maple with dependable fall color, choose a cultivar that has been bred for consistency ('October Glory' and 'Red Sunset' are two).

Photo credit: St. Olaf College

Sassafras* *(Sassafras albidum) – 30' to 50' in height*

Photo credit: Betty Hall

A native understory tree with a variety of naturally occurring leaf shapes, from simple unlobed to multi-lobed on the same branch. (*Hint*: look for the "mitten" shape among them—it's a definite I. D. giveaway!) A rainbow of fall colors to delight, especially in the early morning and late afternoon light…

Gingko *(Gingko biloba) – over 50' in height*

The beautiful fan-shaped leaves of gingkos make it a favorite of mine year-round. Its golden foliage in the fall makes a striking statement and the leaves persist until the first cold snap. Then often every leaf remaining will drop from aloft at once, leaving a golden "tree skirt" around the base of the tree! A tough tree that will handle lots of site conditions others will not. ***Caution:*** be certain to purchase a **male tree** from a reputable source. The female gingko produces a very foul-smelling fruit after ~25 years, which can make it a less than desirable neighbor.

Photo credit: MaryAnn Fink

Sweetgum* *(Liquidambar styraciflua) – over 50' in height*

This is a photo I took of a beautiful native Sweetgum at Blandy Arboretum in Virginia. The multicolored leaves make it a fabulous fall tree; its seedpods, or "gumballs" as they are known, make it less attractive to some. *L. styraciflua* 'Hapdell' is a fruitless cultivar that is commonly sold under the trade name of 'Happidaze.' It grows the same size as the species; the fall color is an attractive maroon. Another fruitless cultivar is *L. stryraciflua* 'Rotundiloba'. The leaves have rounded lobes and the foliage is yellow to burgundy in autumn.

Photo credit: George Weigel

Additional medium to large tree options: **Katsura** *(Cercidiphyllum japonicum)* – apricot colored leaves that smell of cotton candy(!) in the fall; **Northern Red Oak** *(Quercus rubrum)* – clear red color; **Sourwood*** *(Oxydendron arboreum)* – scarlet to burgundy; and **Yellowwood** *(Cladrastis lutea)* – yellow foliage.

Wishing you a colorful fall!

Edye Clark, Tree Steward

*- native trees marked with an asterisk *(*)*

Air Drying the Flowers of Summer

If you haven't started to preserve flowers and leaves for fall and winter bouquets, now is the time to do so. Although it's getting late in the season, there are still many possibilities available.

There are several methods of preserving botanical materials: air drying (by hanging or by placing upright in dry buckets or jars), drying in water, drying using desiccants (such as Borax, silica gel, or sand), glycerinizing, microwave drying, and pressing. Of these, the fastest, easiest, and least expensive are air drying and drying in water. Glycerinizing is also fast and easy to do, but there is some expense involved. Drying in desiccants, microwave drying, and pressing are all more time consuming, and again, there is some expense involved.

If you're just starting out, I recommend you stick to the fastest, easiest, and least expensive method - air drying and drying in water.

Air drying

Nothing could be easier than air drying. Although the directions may seem lengthy, it's actually fast to do once you have your drying area set up and you get into a "drying routine".

Flowers that lend themselves particularly well to air drying include celosia, dock, goldenrod, heather, yarrow, baby's breath, and of course, the everlastings (statice, gomphrena, strawflowers, acroclinium, xeranthemum, and ammobium). Cattails (cut in June) and pussy willow (cut in the spring) are examples of materials which can be dried upright in heavy containers without water.

Seed pods of all sorts can be dried by simply laying them on old window screens elevated from the floor with bricks. Large, tough okra pods dry wonderfully on screens and are one of my favorites.

Grasses and grains are also good candidates for drying if picked at the right stage. Most can be dried upright in cans, although you may want to hang some. Wheat is particularly nice.

Celosia and goldenrod dry in a dim hallway

- Setting up the drying area: The area in which you dry flowers needs to be warm, dim-to-dark, dry, well-ventilated and clean. A clean attic, barn, or an unused guest room with room-darkening window shades or draperies are perfect. Temperature-wise, 70° to 90° is ideal, with a preference for the higher temperature range if possible. Never dry flowers in the kitchen or bathroom. The humidity level in these two rooms is much too high for proper drying.

- Gathering: Flowers can be cut at any time during the growing season. Most flowers are best cut when they are just opening although there are always exceptions. Use only cut flowers which are close to perfect and have no insect, disease, or weather damage. Never process flowers that have wilted. Be sure to dry more than you think you'll need; dried flowers by their very nature are fragile. Inevitably you'll have some breakage.

- Cutting: Cut flowers for drying after the dew has dried. Never cut when they are damp. Stems 12-15 inches long are good to work with and it's best to process the flowers as soon as possible, immediately after picking, but in any case within a few hours.

- Preparing: Strip all large foliage from the stems. (Small foliage can easily be rubbed off later after the flowers are dry.) Gather the flowers into small bunches and secure with a rubber band. Hang the

bunches from a clothesline, drying rack, or clothes hanger in your drying room. Flowers will be dry in 8-10 days depending on the weather. Stems will snap easily and flowers will feel stiff to the touch.

- Wiring: A few flowers, such as gomphrena and strawflowers, have very fragile stems which tend to crumple when dry. These should have their natural stems replaced with wire. This is very easy. First, nip the natural stem off about ¼ to ½ inch below the flower head when you cut them. Place the flowers in a plastic container without water. To make it easier to wire the flowers, refrigerate them for a few hours and wire them while the stem stubs are cold and crisp. When ready, push a 8-10 inch length of #20, #21, or #22 florists' wire (available at most craft stores and florists) up through the remaining stem and into the head (but not through it). It is not necessary to form a hook on the end.

Push the wire through the stem.

As the flowers dry, the stems will shrink and adhere tightly to the wire. Stand the flowers upright in containers, such as tin coffee cans, to dry. And that's all there is to it!

- Storing: Dried flowers can be left where they dried - hanging, in their containers, or on their screens - until needed. Or you can remove them from the drying line or container, wrap each bunch in newspaper or tissue paper to prevent tangling, and place in a shallow box, being careful not to crush the flowers. Moths can be a problem with stored flowers. To prevent damage, use a moth repellant in each box.

Drying in Water

You may have already had an experience with flowers drying in water when you received or made an arrangement and forgot to add water to it. You probably noticed that while most of the flowers wilted, others dried in place in the arrangement. This is an example of drying in water.

The white flower at the left is too young for drying.

Simply put, flowers are cut, placed in about two-to-four inches of water in a bucket and left in a warm, dry, dark, well-ventilated place until the water evaporates and the flowers are dried. Any room suitable for drying flowers is perfect; however. you can also arrange them in a vase and enjoy using them in your home while they dry. Flowers which are suitable for this treatment include hydrangeas, yarrow, bells-of-Ireland, and gypsophila. It takes one-to-two weeks to process flowers by this method.

It's fun to experiment and see what you can do with whatever material you happen to have available. So grab those clippers, go out outside, and start cutting!

Lina Burton, Master Gardener

First Frost Reminder: October 16-October 31

ABCs of Trees

Botanical Name: *Rhus typhina*

Common Name: Staghorn Sumac

NATIVE

Zones: 4 – 8

Family: *Anacardiaceae*

Habit: deciduous

Form: shrub or small tree to 25 feet, with a short, often poorly formed trunk and wide spreading very open crown; branches repeatedly and widely fork

Height: to 25 feet

Spread: 15 to 25 feet

Growth rate: medium

Texture: soft, light in weight and brittle, with very prominent ring pores

Leaf: alternate, pinnately compound, 16 to 24 inches long, with 11 to 31 lanceolate leaflets with serrate margins each 2 to 5 inches long, rachis fuzzy; green above and paler below

Flower: species is usually dioecious; small, with yellow-green petals, borne on upright dense terminal cluster up to 8 inches long, appearing in mid-summer

Fruit: round (1/8 inch diameter), red, fuzzy drupe; borne on upright dense clusters; mature in late summer, but persist through winter

Bark: remaining fuzzy for several years, turning gray-brown and smooth with numerous lenticels, much later becoming a bit scaly

Site Requirements: grows in well drained to dry soils in open areas and old fields, at forest edges, and along roadways.

Diseases and Insects: All sumac species, including staghorn sumac, may be susceptible to several diseases. These include leaf spots, powdery mildew, cankers and armillaria root rot. One of the best defenses against disease is proper care of the shrub. Plant the staghorn sumac in an area with well-drained soil and full sun so that it can thrive. Removing diseased leaves, limbs or debris from around trees as soon as they are spotted helps reduce the infections.

Landscape Uses: In the wild, staghorn sumac grows along sunny forest edges or in open fields, forming large colonies of either male or female plants. While often forming pure stands, it can also be found growing with chokecherry (*Prunus virginiana*), black cherry (*P. serotina*), viburnums (*Viburnum* spp.), and hawthorns (*Crataegus* spp.). In coastal areas, it is commonly found with

bayberry (*Myrica pensylvanica*) and wild rose (*Rosa virginiana*).

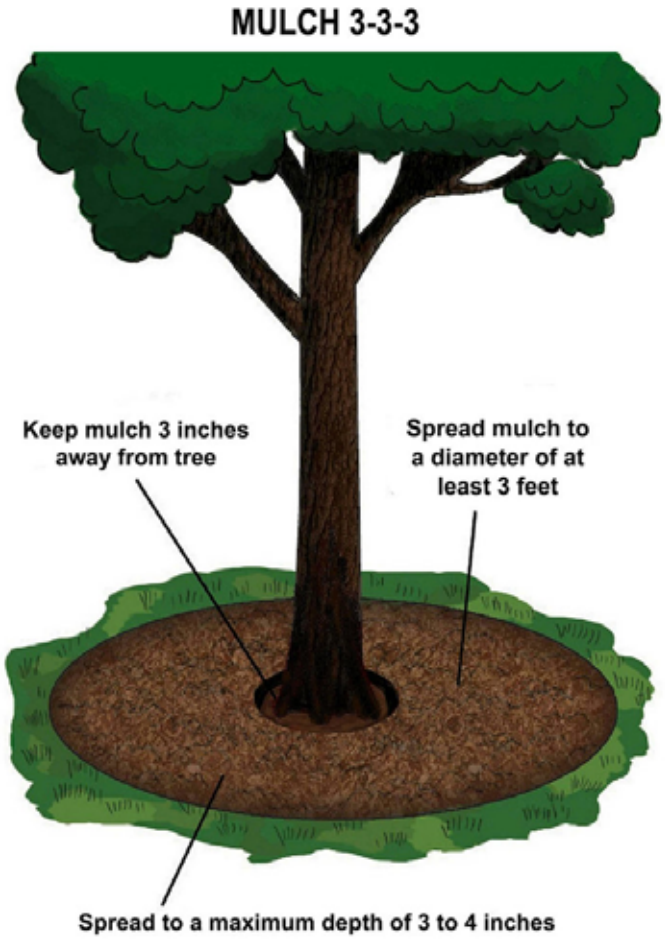
Difficult to manage in small garden spaces, this shrub or small tree is best naturalized along the woodland edge or otherwise used where frequent mowing or paving will control its spread. Avoid planting *Rhus typhina* in shady or wet areas.

The showy, pyramidal spikes of deep red fruits are borne only on female plants. Purchasing plants in fruit will ensure that this feature is a part of your landscape.

Noteworthy: Staghorn sumac provides nectar for several butterfly species, including banded and striped hairstreaks. It is also a larval host of spring azure butterfly. The colorful fruits persist into late winter and serve as emergency food for many species, including turkeys, bluebirds, robins, catbirds, and others. The tree colonies also provide nesting and shelter sites for many bird species.

Janette Sawyer, Master Gardener, Tree Steward

Proper Tree Mulching



ABCs of Trees

Botanical Name: *Sassafras albidum*

Common Name: Sassafras

NATIVE

Zones: 4 – 9

Family: *Lauraceae*

Habit: small to medium deciduous

Form: irregular; narrow, spreading crown of short stout branches. Branching is whorled from the trunk and sympodial from the angled branches on young trees, becoming more irregular in pattern on mature trees.

Height: 30 to 50 feet

Spread: 25 to 40 feet

Growth rate: rapid growth rates relative to a number of other common Virginia trees; can grow a meter in height during a single year when light conditions are favorable in forest gaps.

Texture: medium

Leaf: 3-5" long, 11/2-4" wide. Sassafras trees are unusual among trees because they have three distinct leaf shapes-1) a simple, unlobed leaf, 2) an asymmetrical leaf resembling a mitten, and 3) a three-lobed leaf.

Flower: 3/8" long; yellow-green; several clustered at end of leafless twigs in early spring; Sassafras is a dioecious species, having male and female flowers on different trees.

Fruit: 3/8" long; elliptical shiny bluish-black berries; each in red cup on long red stalk, containing 1 shiny brown seed; maturing in the fall. The fruit are called drupes.

Bark: bark of young trees is smooth and green, while older trees have reddish gray furrowed bark

Site Requirements: Moist, acidic, particularly sandy, soils of uplands and valleys, often in old fields, clearings, and forest openings. Shade intolerant. Can be found in rocky habitats that are marginal for other species. Sassafras is a fire-adapted species that prospers in areas of forests that have burned in the recent past because fire creates gaps in the canopy which provides light for the sassafras to grow.

Diseases and Insects: Sassafras can have several diseases and pests, but these are usually minor or cosmetic in nature.

Landscape Uses: Sassafras trees are valued for their fragrant spring bloom, interesting horizontal branching pattern, and striking fall color. The small trees are medium to fast growing and work well for landscape use as specimen trees and mass plantings. They are easy to culture and require little care. Gorgeous yellow, orange, red and red purple fall colors.

Noteworthy: Sassafras is an important plant to many animals. The fruits are readily eaten by wildlife. Birds, such as quail, wild turkeys, kingbirds, crested flycatchers, mockingbirds, sapsuckers, pileated woodpeckers, yellowthroat warblers and phoebes eat the fruits and disperse the seeds. Black bears, beavers, rabbits and squirrels eat the fruit, bark and wood. White-tailed deer browse the twigs and foliage. Caterpillars of butterflies, such as the Eastern Tiger Swallowtail, also eat the leaves. In addition, various parts of the sassafras plant have been used medicinally by the Native Americans. Sassafras root was once used as one of the flavorings in root beer. The compound that gives sassafras the distinctive flavor and odor is safrole. Because safrole has been identified as a carcinogen, the FDA now prohibits its use in food but is still used in soaps. The sassafras tree is a native perennial.

Holly Flannery, Master Gardener, Tree Steward

Virginia Overhead Line Safety Act – a reminder

Virginia's Overhead High Voltage Line Safety Act went into effect July 1, 2003. From https://www.dom.com/about/safety/virginia-overhead-high-voltage-line-safety-act.jsp:

"The law prohibits work within 10 feet of an overhead line carrying 600 or more volts. If anyone wants to work within the 10-foot limit, the law requires that mutually acceptable safety arrangements be made between the person performing the work and the utility that owns the line. The law provides an added incentive for compliance. If someone does not follow the law's requirements and an accident occurs, the burden and liability will lie with the party performing the work - not the line owner."

- Dominion Tree Trimming Management: https://www.dom.com/dominion-virginia-power/customer-service/your-service/tree-trimming.jsp
- Access NOVEC info: http://www.novec.com/Safety/VALinesafety.cfm. NOVEC's long-term goal is to "completely eliminate any trees that exist within THEIR 30 foot utility easement."

Autumn Landscaping Activities

As many seasoned gardeners know, the autumn months are often the best time for adding trees, shrubs and perennials to your landscape. **What are some of the advantages of fall installation over the springtime?**

- **Warmer soil temperatures –** when a plant is installed in the ground or a container, it's first order of business is to establish roots in its new location. Roots grow best when the soil temperature is between 55º and 75º F. Planting in the fall ensures that your tree/shrub/perennial has several weeks of steady root growth before the soil temperature drops below 40º.
- **Cooler air temperatures** – less extreme temperatures during the day mean less stress on the plant material, allowing more energy to go into root development.
- **Less supplemental water needed –** with the days cooling down and getting shorter in the autumn, photosynthesis is slowed and the plant needs less water to function. Also, we can usually count on fall rains to reduce the need for trips to the garden hose.
- **Planting efforts are simplified** – putting new plants in the ground is easier when you can see your already established herbaceous plants (plants whose foliage dies back to the ground in winter). In springtime, we sometimes have difficulty remembering the location of existing plants. Spring-flowering bulbs need to be installed in the fall, so you can plant bulbs and perennials at the same time.
- **Bonus reason: many trees, shrubs and perennials are on sale this time of year!** *(Who doesn't love a great sale?)* Most nurseries and garden centers are trying to reduce or eliminate their inventory for the winter, so it's a great time to find bargains. Most things will be out of bloom and looking a little tired, but they'll do just fine after you give them a new home in your special garden.
- **September** and October—and some warm November weeks—get plants off to a healthy start, with the focus on root development rather than new roots + new leaves + flowers. Remember to amend your **planting beds** with compost and organic matter as you plant and add some slow-release fertilizer, to help the new roots along. (Research *does not* support adding amendments to individual planting holes for trees or shrubs. It can discourage the roots from moving beyond the cozy, rich soil around the initial planting area; we want the roots to grow and establish in the native soil.)

So invite a special family member or friend to join in an afternoon of fall planting, for a beautiful spring to come. And remember:

Someone's sitting in the shade today because someone planted a tree a long time ago. *(Les Brown)*

Edye Clark, Master Gardener

Aralia spinosa – What's in a Name?

Any plant with the common name "Devil's walking stick" or "Hercules club" may have a perception problem with gardeners accustomed to beautyberries, snowbells and other friendlier sounding flora.

If you look closely at the plants growing along the edges of wooded areas you have probably noticed these distinctive-looking woody natives. Stout, sharp spines are found on its leaf stalks, stems and branches. This is a large, upright, suckering, deciduous shrub that typically grows to 10-15' tall, but can grow into a small flat topped tree as much as 35' tall.

Alternate, bipinnate to tripinnate, medium to dark green leaves grow 2-5 feet long and 2-4 feet wide, with individual leaflets (2-4" long) having toothed margins. Foliage turns pale yellow to dull purple brown in fall. *Aralia spinosa* have no branches, only these very large, elaborate leaves growing directly out of the stem.

When these leaves fall the only thing left is the thorny "trunk" with very large leaf scars, hence the common names, Devil's walking stick or Hercules club. *See the drawing on the right.*

Showy white flowers in mid-summer provide pollen and nectar to attract bees and butterflies. These are followed by clusters of fleshy, juicy black drupes that ripen in late August-October. The drupes are a favorite of cedar waxwings and other birds, as well as other frugivores and omnivores, including black bears. This plant is considered to have very high wildlife value.

Dirr in his *Manual of Woody Landscape Plants* notes that this shrub has distinctive and unique ornamental interest with its handsome and soft textured summer foliage and its coarse, thorny "clubs" in the winter.

Consider finding a spot for this wildlife friendly native. ***Aralia spinosa*** are easily grown from seed, division of suckers or root cuttings. Plants will spread somewhat rapidly by self-seeding and suckering to form thickets. Promptly remove root suckers to prevent unwanted naturalization.

Carol Ivory, Master Gardener

What I Did on My Winter and Spring Vacations

Like many Master Gardeners candidates, after I retired from a hectic career and long commutes, I found myself increasingly interested in gardening beyond dead-heading a few mums, and shearing off my azaleas once a year. Mowing my yard was about the most consistent and energy-consuming outdoor activity that I had and my garden philosophy for plants of any kind was: "It has to have the will to live," since clearly I was not going to be helping them along besides sporadic watering. After signing up in November last year for the MG training and completing sixty hours of class time I realize that, just like raising a family, it is possible to control the trajectory of gardening success from Eeyore to Tigger if you have a little bit of hope and a bouncy tail.

Starting in January, a couple of dozen of us attended the 3-hour long classes twice a week. There was homework for each class that including reading materials that were up to 150 pages a chapter. We were constantly reminded by people with Masters and Doctoral degrees that these topics covered in 3-hour increments took an entire semester in real-world schools. By the time we finished with class work in April, I was beginning to think: "What hope could I have to be a Master at anything?"

Then I realized what I had learned:

- That pruning is a satisfying art form, once you've "seen the light."
- That sharpening and cleaning tools regularly will not only make a yard prettier, but reduce the spread of diseases from plant to plant.
- That rotating veggies by type (nightshades, legumes, squashes, etc.) will reduce disease and improve yields.
- That tomatoes get ugly from lack of consistent watering, not simply lack of calcium.
- That I can identify some trees by the overall shape and texture of the bark, even without its leaves.
- That I can make “Free Money” by using water and compost I collect myself.
- And, most importantly, I learned I can make new friends.

Now the members of the Class of 2013 are in our internship period and this is where the 'mastery' part really begins. Whether working in the Demo Garden (25 hours) on the Help Desk (25 hours) or in other activities (25 hours) we will be crafting all the surface-scratching theories we learned in class into lush yards, gardens and landscapes (our own and our friends of course!). After 75 hours of internship work this long, hot, summer and fall, we will be deemed Master Gardeners. I hope my tail will still be bouncy!

Debby Newman, MG Intern

Notes from the Help Desk:

Q: What is the best way to improve the soil in an established perennial bed?

A: One of the best ways to amend soil in an existing garden is by top-dressing the bed with an inch or two of compost. The compost will break down, improving soil structure and fertility. Make sure you rake it in a bit if the existing mulch has formed a tight layer that water cannot penetrate (do this even if you are not top-dressing with compost). You can do this in the fall or in the spring. If done in the spring, then top compost with three inches of mulch for the season. Check out the article within this publication on how easy it is to make your own compost and try it!

Q: Fall is a great time for garden clean-up, should I also prune my azaleas?

A: It is not a good idea to prune spring bloomers in the fall. These shrubs have already set their buds to bloom and you will be sacrificing the beauty for the next year if you prune them now. It is ok to prune dead, dying or diseased limbs out but if you want to shape it up, it is a better idea to wait until they have finished blooming in the spring. These shrubs include azaleas, rhododendrons, forsythia, camellias as well as the flowering fruit trees.

Q: How do you know when pumpkins are ready to harvest?

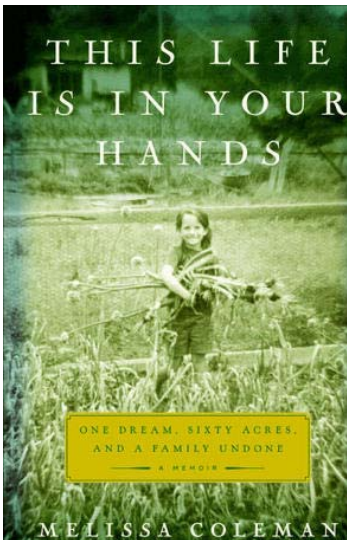
A: Pumpkins are usually harvested in September and October to get ready for Halloween and Thanksgiving. And most pumpkins are grown for ornamental reasons. The maturity date for pumpkins depends on their variety. Some are 90 days while others can be 125 days when grown from seed – something to remember if you want to plant pumpkins next year.

A good rule of thumb (literally) is to check the stem and rind with your thumbnail and when it begins to harden, it is ripe. The color will turn orange. Always harvest pumpkins prior to the last frost date in your area (early October here). Most folks like the pumpkin to have a stem so when harvesting, cut about 5 inches of stem with the pumpkin. Try to refrain from carrying it by the stem as it will be heavy and the stem is likely to break off. It is also important to allow the pumpkin to cure at a high temperature (75 to 80 degrees) for a week so it hardens further. That makes it easier to carve!

For more information on pumpkins, read the VCE Publication:
http://pubs.ext.vt.edu/438/438-100/438-100_pdf.pdf

Barb Bailey, Master Gardener

"This Life is in Your Hands: One Dream, Sixty acres, and a Family Undone" by Melissa Coleman



In 1968 newlyweds Eliot and Sue Coleman moved to the coast of Maine with $5,000 and a dream to live on the land. They bought 60 acres of forest from Scott and Helen Nearing, their mentors, and built a small cabin. They cleared the land by hand to start their farm, and hauled in loads of horse manure and seaweed to enrich the poor soil. They grew vegetables and fruits without chemical fertilizers or pesticides, and sold their produce at a farm stand.

In the course of the next eight years Sue Coleman gave birth to three daughters. The family's living conditions were very primitive: they hauled water from a spring, used an outhouse, and heated, cooked and preserved thousands of jars of garden produce on a wood cookstove. Eliot expanded the farm year by year, with the help of unpaid interns, and became a leader in the organic farming movement. He learned through experience that good soil produced healthy plants, better able to resist pests and diseases.

In 1976 tragedy struck, and the Colemans separated. They both left the farm for other pursuits, but in 1991 Eliot returned with his third wife Barbara Damrosch (garden columnist for the Washington Post). They are still there at the renamed "Four Season Farm", writing, teaching and giving workshops on sustainable agriculture. Their website, www.fourseasonfarm.com, gives helpful gardening information and links.

Melissa, their eldest daughter, has written a memoir of the early days of her family's life at Greenwood Farm. She has vivid memories of the Nearings, leaders of the back-to-the-land movement, and the free spirits who came to Maine to learn from them and formed a sort of colony. The book brings you back to the era of the 70's with vivid, lyrical prose. Melissa loved growing up on the farm, oblivious to the hardships her parents experienced. Her writing takes you back to being a six-year old without a care in the world. Each chapter starts off with a family photograph.

I highly recommend this book for those who want to learn about the development of the sustainable agriculture movement, and for those interested in a heart-breaking story of a family trying to make a go of it in difficult circumstances, while holding fast to their principles.

The book is available through the Loudoun County Public Library.

Reviewed by Betty Hedges, Master Gardene

Save the Date!

5th Annual Gardening Symposium

March 29/30
Ida Lee Rec. Center
Leesburg, VA

Hosted by
Loudoun County
Master Gardeners