Guilford County Cooperative Extension Community Garden Outreach, News, and Information

Garden Wise

April 2016

One of the most delightful things about a garden is the anticipation it provides.

W. E. Johns

Gentlemen (and ladies), start your gardens!

Linda Brandon, EMGV

In these uncertain times, it's almost reassuring to know we can *count* on Guilford County springtime weather to throw us at least one or two curve balls each year. This year, as is the norm, we blissed out during a prolonged, uncommonly-warm spell back in March (seriously, were all of you able to control the urge to get *something* growing outdoors, even knowing danger still lurked around the corner?) . . . . . and then winter, not to be relegated to history quite yet, came back with a vengeance. Of *course* people are freaking out over their tender plants and the blooms on their fruit trees. Of *course* there will be damage from the cold. Fortunately, we're not all fruit growers relying on a bumper crop of peaches or oranges a few months hence.

If our spring weather does nothing else (aside from tying us in anxious knots as we watch the thermometer) it should teach us two lessons.:

- First, no matter what we tell ourselves, *we are not in control*. We're totally at the mercy of the elements. Yes, floating row covers, cloches, and all manner of season extenders can help us tremendously in our battle against spring frosts, but it's all more or less the luck of the draw. A degree or two one way or the other can mean all the difference in the world to a delicate blossom, and for those with real money at stake — I'm referring here to our brave, perpetually optimistic farmers — those tiny increments of temperature can mean the difference between a good year and a lean one.

- Second, if we're at all wise, we'll incorporate our understanding of the fickle nature of North Carolina spring weather into a slightly more cautious, well-considered approach to our spring gardens. A few years ago, when the *twelve flats* of seeds I had started and set out into the garden were wiped out to the very last plant by really harsh temperatures early in May, I was so crushed/hurt/angry/frustrated (pick *any* unpleasant emotion) that I vowed to never again put my delicate plants in the ground until well into May. After all, waiting another week or two to enjoy that first tomato of the season is tolerable; watching several hundred lovingly-nurtured seedlings die overnight is not. (Of course, that was *then*. This year, it was all I could do to keep myself out of the garden until the time was truly right, because the brutality of my earlier lesson had become hazy with time.)

If you're reading this, it's "officially" safe to start planting, since April 15 is the usual date of last frost. It's going to feel **good** to unleash that pent-up gardening energy!

Fresh Fruit & Vegetable Handling Guidelines

Hanna Pettus, Consumer Horticulture Agent

Food Quality & Food Safety

Food distributed to clients must be safe and of good quality. Good quality food tastes, smells, and looks good and is often nutritious. The goal of good food handling is to provide both safe and good quality foods.

Keep it Clean

Germs or bacteria can get into food during handling. Keep hands, work surfaces, utensils and refrigeration clean. Wash hands with soap and hot water for at least 20 seconds to remove germs or bacteria before handling fresh produce. Never handle raw meat before fresh produce without sanitizing the work station and one's hands. If this is not done, what is called "cross contamination" can occur. Cross contamination is what can cause food related illness.

Refrigerator Tips

- Keep the refrigerator temperature between 34° and 40°. It would be wise to keep a thermometer in the refrigerator and check it on a regular basis.
- Open the door as little as possible. Every time the door opens, warm air enters which can raise the inside temperature of the refrigerator. Constant door opening can increase electricity costs.
- Keep any raw meat, poultry 0r fish on the lowest shelf in the refrigerator – this will eliminate dripping on to produce or other products stored in the refrigerator.
- Cut or sliced fruits or vegetables should always be refrigerated.

Handling Fresh Produce

1. After receiving produce, sort fresh fruit and vegetables by quality and level of ripeness.
    - Fully ripe and over ripe produce should be used first
    - Discard moldy produce and anything badly bruised Produce with some spots, soft areas or bruises can be used for cooked items
2. Do not wash produce. Washing introduces extra moisture that can cause spoilage.
3. Follow the "First in, First Out" (FIFO) rule. This means the oldest produce is used first. Labeling produce with dates will help with inventory control.

Distribution of Produce

Wash produce prior to use, under running water, and scrub with a brush or their hands. Do not soak produce in water since this can cause spoilage. Dry the washed produce with clean paper towels or air dry.

Holding Produce at Room Temperature

- Some Fruits and vegetables can be stored at room temp until ripe. These include apples, apricots, avocado, bananas, cantaloupes, cassava, honeydew melons, kiwi, mango, nectarines, peaches, pears, plum, tomatoes, watermelon, winter squash, pumpkin, white potatoes, sweet potatoes and onions. Most of these can be stored at 55°-65° for extended periods – up to 10 days.
- Produce that can be stored at 45° to 50° includes basil, snap beans, cucumber, eggplant, okra, peppers, summer squash, grapefruit, lemons, limes, oranges, pineapples and tomatillos. It is best if they are not stored in a closed room without ventilation where a gas (ethylene) will develop and ripen the produce at a faster pace.

Winter Squashes: Variety is the Spice of Life

by Nikki Christakos, EMGV

Winter squashes are a phenomenal vegetable when it comes to variety. There are three main species of edible winter squashes: Cucurbita pepo (acorn, delicata, and spaghetti types), C. moschata (butternut types), and C. maxima (Hubbard, kabocha, and buttercup types) (Brendenkamp, 2013). The variety does not stop there, some winter squashes are a deep orange color while others are a bright yellow and some stay a multi-colored green. Winter squashes also range in size from being able to fit in your hand to as large as 20 pounds! The wide variety allows someone to create a colorful, flavorful garden that will make anyone want to explore.

Winter squashes originated in the Western Hemisphere and were used for thousands of years by natives in North, Central, and South America. Conquistadors quickly transported squash to other countries in the 16th century after learning about it through exploration. Squash is one of the trio of early Native American companion plants along with corn and beans that, when planted together, are known as the three sisters. The three sisters are a long-held Native American planting practice that still holds practical significance in today's gardens. Along with corn and beans, marigolds, mints, radishes, sunflowers, borage, and other aromatic herbs are good companions to plant near squash. Many of these plants deter pesky squash bugs while others provide support for winter squashes that have long vines.

Winter squash were first differentiated from summer squashes by early settlers because of the hardiness of their rinds. Summer squashes, with softer skin, need to be eaten relatively quickly compared to winter squashes, whose hard rind enables them to store better in colder conditions. However, both are warm season vegetables that grow in the same season. Winter squash should be planted from the middle of April, after the last frost through the beginning of August in central North Carolina. Winter squash does not tolerate heavy frosts. It takes 70 – 95 days to harvest which should be considered when planting to avoid hitting late or early frosts during the growing period. Winter squashes should be planted a minimum of 36 inches apart and do well when they are planted in hills or mounds. This allows the vines to run down and around the mound. Trellises can also be considered when growing winter squash. Winter squash should be watered deeply without drowning or pooling to encourage good root growth.

Winter Squashes (continued)

Winter squash are ready to harvest when their rind is hard enough that you can't stick a fingernail through it and it will appear dull compared to its growing skin that has a sheen to it. Harvest with some of the stem still on the plant and store in a cool room around 55 degrees Fahrenheit with good air circulation for prolonged storage. If you cure winter squash right after you pick it then it will store for much longer. Curing involves leaving the squash in the sun or in a warm, ventilated room with a temperature of around 80 degrees Fahrenheit for about a week.

Winter squash is a lovely addition to any garden and plate for its unique variety and health benefits. Winter squashes are a good source of fiber, vitamin C, and alpha-carotene and beta-carotene. They are rich in antioxidants and anti-inflammatory compounds as well as polysaccharides that help regulate blood sugar making it an excellent option for diabetics. Overall, winter squash is an excellent vegetable nutritionally and it has enough variety to prevent anyone from getting tired of it.

Sources:

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http://msue.anr.msu.edu/news/enjoy_the_taste_and_health_benefits_of_winter_squash

https://www.hpfb.org/uploads/companionplanting.pdf

https://swain.ces.ncsu.edu/2013/10/winter-squash-and-other-cucurbits-2/

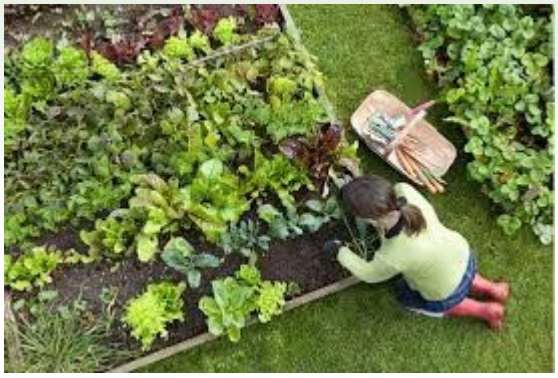
http://aggie-horticulture.tamu.edu/archives/parsons/publications/vegetabletravelers/squash.html

https://www.ces.ncsu.edu/files/library/65/pumkin%20and%20Win.%20squach.pdf

Don't forget the 14th Annual Passalong Plant Sale!

- **Friday May 6 from 9:00 am - 3:00 pm (Best Selection)**
- **Saturday May 7 from 9:00 am - 1:00 pm**

Held in the barn complex of the Ag Center, this year the Extension Master Gardener Volunteers are featuring **Organic Veggie Plants!**



Share the Harvest

Planting for the coming season? Of course, you are! While you are at it, how about planting some extra rows for the hungry?!

Share the Harvest will begin its fourth year with distributions beginning on June 6, 2016 from the Interactive Resource Center. **Share the Harvest** is a not-for-profit that collects and distributes produce during the growing season to agencies in Guilford County that either prepare a meal for the hungry or have a food pantry. There are collection sites throughout the county where you can take your extra produce all season. Community gardens, commercial growers and home gardens have been generous and the donations are especially appreciated by those for whom a fresh tomato or just-picked green beans taste a whole lot better than canned.

Share the Harvest has established drop off sites across the county where gardeners can drop off their fresh produce. Information about these sites can be seen at our website: http://sharetheharvestguilfordcounty.org/ Want to volunteer? Go to the Volunteer Center website andsee the jobs listed: http://www.volunteergso.org/

(This may seem to be an early announcement, but this is one event that is usually sold out well in advance of the date it occurs. It's not at all too early to mark your calendars now so you don't miss out on this year's very special Gala!)

The 15th Annual Gardening Gala and Seminar

Let Your Imagination Grow

Thursday, September 22, 2016.

8:30 a.m.– 4:00 p.m.

$45

Please mark your calendars and make plans to attend next year for the 15th Annual Gardening Gala and Seminar! Keynote speakers include Peter J. Hatch, celebrated author of four books on the gardens of Thomas Jefferson's Monticello, in Charlottesville Virginia, where he served as Director of Gardens and Grounds for 35 years; Lisa Mason Ziegler, author and owner of The Gardener's Workshop Farm in Newport News, Virginia; and Master of Landscape Architecture, Paul Faulkner "Chip" Callaway, President and CEO of Chip Callaway and Associates, Greensboro, North Carolina. Each speaker will present a separate breakout session after lunch.

Growing Cherry Tomatoes

by Claire Morse, EMGV

Kids' Corner

Cherry tomatoes offer you and your family pleasure-filled gardening experiences Why not share some fun with your child (ren) this summer. They'll learn about where food comes from, and watch the process of fruiting on plants they take care of. Cherry tomatoes are easy to grow, wonderful to pick and eat, and can be the basis for lots of learning. How much closer can "Eating local" be than your own garden, even perhaps your deck, patio, or porch if you plant in containers! An involved child, depending on age, can learn responsibility, grow a tasty snack or contribution to the family salad, and perhaps develop a life-long interest.

If you have not had your garden soil tested recently, send off a sample. The Guilford County Cooperative Extension Service, located at 3309 Burlington Road, has mailer boxes. Send a sample in, and the results will be available for you to view online within a couple of weeks. Tomatoes like a pH of between 5.8 and 6.8 and rich soil, so well rotted compost is a good soil addition, especially if you haven't amended your garden soil lately

Small tomatoes, generally cherry tomatoes and grape tomatoes, come in several colors and can be grown in a sunny garden spot or in a pot that you place where it gets at least 6 to 8 hours of sun daily. Local garden stores, as well as the big box stores, are likely sources for small plants, easier to start with than seeds, especially if this is your child's first garden experience and you are starting now.

These plants can grow pretty tall, 5 to 6 feet, before they stop bearing in the late fall, so allow enough space in the garden or choose a fairly large container and be prepared to stake or otherwise support the plant as it grows. Planting the small plant deeper than it was in its nursery pot will allow it to grow additional roots (tomatoes are unusual in this respect, so generally vegetables should be planted only as deep as they were in their previous container), adding to its strength.

Tomatoes do best when they are regularly watered, whether by rain or by you and your young assistant. Here's one of many chances to help your youngster understand responsibility and consequences. A thirsty wilted tomato plant speaks pretty clearly to forgetting to water. Plants in containers tend to dry out more readily than those in the ground, so daily watering may be required. Mulch around the base of the plant will reduce weeds and help keep the soil moist.

Feeding a cherry tomato can be another place for some good age-appropriate learning, whether just connecting a hungry plant to a hungry child or a much deeper exploration of fertilizer components, product labeling, appropriate use, runoff consequences, and more as your gardener shows interest. Cherry tomatoes do not require much feeding, but some fertilizer, applied according to package directions, is appropriate.

As the plant grows flowers and begins to produce its tasty fruit, there's a lot to watch for and talk about. Here's a perfect opportunity to help kids understand where so much of our food comes from, what pollination is, why bees are important, and many other things helping kids see the ways we depend on the sun, on farmers, and on the soil and on other creatures.

Who can resist a ripe cherry or grape tomato, sun warmed, sweet and the perfect size to pop into a small mouth. Of course, if resisting is possible, slicing one to look at the seeds is yet another chance to learn about food production. Or to make up a story about what animal might eat a tomato and spread seeds. Or to practice counting, if that's what your youngster is learning. Maybe multiplication is more the focus for an older child. Or estimating how many seeds there are in one tomato and counting them. Let imagination, your child's interest, and your own knowledge and perspective be your guide to conversations and activities.

By now perhaps your mouth is watering in anticipation of your first tomato, your mind is racing planning activities you and your child can share, and you are looking for your gardening gloves and trowel. Good growing and good eating tomatoes to you and your helpers!

Spiralized Vegetables

Zucchini Pasta with Basil Hemp Pesto

From the Kitchen

Ingredients

- 2 cups of fresh basil
- 2 cups of fresh spinach (or extra basil)
- ½ cup of zucchini, finely chopped
- ½ cup of sunflower seeds or pine nuts
- ¼ cup of hemp seeds
- ½ small clove of garlic, grated
- ½ teaspoon of nutritional yeast (or more to taste)
- Himalayan pink crystal salt or sea salt, to taste
- 2 large pinches of cayenne pepper
- 4 medium zucchini (You can substitute carrots, parsnips, beetroot, or squash for zucchini in this recipe)

Optional addition: extra virgin olive oil, to taste

Directions

1. Combine basil, spinach and zucchini in the food processor fitted with an S-blade. Process until finely ground.
2. Add sunflower seeds, hemp seeds and garlic, and process again.
3. Finally, add nutritional yeast, salt and cayenne pepper. Mix into a creamy pesto.
4. Peel your 4 medium zucchini and turn them into noodles using a spiralizer or julienne peeler.
5. Combine your zucchini pasta and basil hemp pesto right before serving. *If you combine these two in advance, the pasta will become watery.

(Julie Van den Kerchove on Onegreenplanet.org)

Shaved Asparagus and Sausage Sweet Potato Noodle Pasta

From the Kitchen

Ingredients

- 1.5-2 tablespoons of olive oil
- 2 sweet Italian sausage links, decased, crumbled
- 1 large (350g+) sweet potato
- salt and pepper, to taste
- 1 large garlic clove, minced
- 1/4 tsp red pepper flakes
- 1/2 cup low-sodium beef broth
- 2 tbsp. freshly chopped parsley
- 6 asparagus stalks
- ·optional: grated parmigiano reggiano cheese, to garnish

Directions

1. Place a large skillet over medium heat and add in the olive oil.
2. Then, add in the sausage. Cook the sausage until browned, 5-7 minutes. Continue to crumble the sausage as it cooks.
3. While the sausage is cooking, snap the bottoms off the asparagus and then shave with a vegetable peeler, starting from the bottom of the asparagus tips all the way down to the end of the stalk. When done shaving, chop off the tips and set aside. Set aside all shavings and tips.
4. Peel sweet potato with a julienne peeler or a spiralizer.
5. When the sausage is done, add in the sweet potato noodles, garlic, red pepper flakes and season with salt and pepper.
6. Toss to combine and then add in the broth and parsley. Let cook, stirring occasionally, for 6-8 minutes or until sweet potato noodles are cooked through and soften. After 5 minutes into the noodles cooking, add in the shaved asparagus and asparagus tips. Toss to combine and let the noodles finish cooking.
7. When pasta is done, plate into bowls and garnish with optional grated cheese.

Recipe by Ali Maffucci at Inspiralized.com

Growing the Green Way Class Series

Fall 2016

Class Locations:

- Cooperative Extension Office, 3309 Burlington Road, G'boro, NC 27405
- Bur-Mil Park (Wildlife Education Center), 5834 Bur-Mil Club Road, G'boro 27410
- Greensboro Arboretum (Ed Center), 401 Ashland Drive, G'boro 27403
- Kathleen Clay Edwards Library, 1420 Price Park Road, G'boro, NC 27410

** Programs are designed to be approximately one hour long, but may run slightly over depending on questions and discussion - which are encouraged!*

CLASSES ARE FREE

Pre-Registration Is Requested

For more information or to register, call 641-2400 and sign up for your choice of sessions and locations. Registrations can also be emailed to Crystal Mercer at cbmerce3@ncsu.edu

FALL VEGETABLE GARDENING: EXTENDING THE HARVEST

End of summer is the time to plan and plant for your garden's third productive season! Vegetable gardening for the year does not have to end with the tomatoes and cucumbers. Let's talk timing, to maximize your garden's yield with fall and even winter crops. We'll also discuss season extenders and other tips and techniques to keep your garden growing well past the first frost.

Sunday, Aug. 7th	4:00 pm	Greensboro Arboretum
Monday, Aug. 15th	6:30 pm	Kathleen Clay Edwards Library
Thursday, Aug. 18th	6:30 pm	Bur-Mil Wildlife Education Center
Tuesday, Aug. 23rd	6:30 pm	Cooperative Extension
Sunday, Aug. 28th	4:00 pm	Greensboro Arboretum

BEAUTIFUL AND SUSTAINABLE LAWNS – A GREENER YARD

Fall is the best time for rejuvenating lawns - and also to learn how knowing and using good growing practices all year saves you time and money and reduces environmental impact. Establishing a healthy stand of grass with good planning and sensible management can minimize issues with weeds, diseases and insects. You can have a healthy lawn and still reduce the impact and expense of lawn chemicals.

Tuesday, Sept. 6th	6:30 pm	Cooperative Extension
Thursday, Sept. 8th	6:30 pm	Bur-Mil Wildlife Education Center
Monday, Sept. 12th	6:30 pm	Kathleen Clay Edwards Library
Sunday, Sept. 18th	4:00 pm	Greensboro Arboretum

WINTER INTEREST GARDENS – FALL IS FOR PLANTING

Of course spring and summer gardens are beautiful, and the fall's foliage colors are unsurpassed. But which plants have special characteristics that add interest to your landscape in the winter? Join us to discuss choosing and growing some of the many wonderful plants that thrive in our Piedmont yards, and can also make your winter garden more captivating and unique.

Tuesday, Sept. 20th	6:30 pm	Cooperative Extension
Sunday, Sept. 25th	4:00 pm	Greensboro Arboretum
Wednesday, Sept. 28th	6:30 pm	Kathleen Clay Edwards Library
Thursday, Sept. 29th	6:30 pm	Bur-Mil Wildlife Education Center





See back page for more class listings

PLANNING AND PLANTING FOR POLLINATORS

Gardeners need pollinators, and pollinators need gardeners too. Even small home gardens can provide important habitat for them, especially in urban and suburban neighborhoods: year-round food sources, and places for the next generation to reach maturity. Let's talk about creating a pollinator garden that is also a beautiful and fascinating setting for the gardener to enjoy.

Tuesday, Oct. 4th	6:30 pm	Cooperative Extension
Monday, Oct. 10th	6:30 pm	Kathleen Clay Edwards Library
Thursday, Oct. 13th	6:30 pm	Bur-Mil Wildlife Education Center
Sunday, Oct. 16th	4:00 pm	Greensboro Arboretum

COMPOSTING AND VERMICOMPOSTING

What to do with all those leaves?! Composting is a great way to recycle, and it also produces a fantastic organic amendment that improves the texture and fertility of your soil and helps everything grow better. We will discuss easy ways to start composting in your own backyard, and what should and shouldn't be composted. We'll also go over the to-do list for having a successful "worm bin" at home.

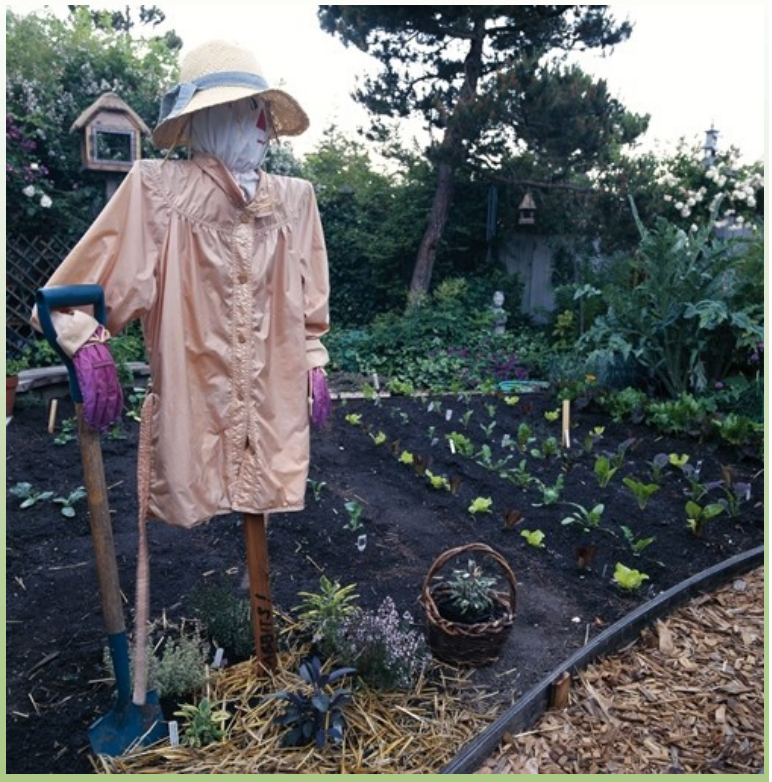
Tuesday, Oct. 18th	6:30 pm	Cooperative Extension
Monday, Oct. 24th	6:30 pm	Kathleen Clay Edwards Library
Thursday, Oct. 27th	6:30 pm	Bur-Mil Wildlife Education Center
Sunday, Oct. 30th	4:00 pm	Greensboro Arboretum
Friday, Nov. 4th	12:00 pm	Kathleen Clay Edwards Library

Remember this!

Here's our QR code:

Any time you want to know the latest events Cooperative Extension and the EMGVs will be hosting, just use your smart phone to click on the QR code above. You'll be directed to our Guilford County office's web page, and from there, just click the **EVENTS** tab to learn the latest news.

Keeping Community Gardeners Engaged



April. Everyone is excited about the new planting season, cheerfully digging, tilling and planting, enjoying the seedlings popping up in your community garden and anticipating a bountiful harvest.

Late July. Those same gardeners are complaining about the heat, complaining about the weeds, feeling overwhelmed by the tasks they face, and not showing up to work as often as they need to keep your garden in shape.

Gardeners enjoy the garden, but sometimes there is some burnout. To keep them engaged throughout the season the garden leader needs to keep them informed. Every week send out an email letting them know what is happening in your garden. Or, establish a message board at the garden. Consider setting up a Facebook page for easy communication among members. Assemble an email list or a phone tree to make communication easier.

In those updates tell them about jobs that need to be done, pests that threaten the garden, what is being planted and harvested, who is going away on vacation and needs their plot tended and harvested. Remind them about the rules that were set at the beginning of the season if some folks are slacking off.

At your garden, plan for learning. Many of your gardeners may be new and they appreciate the information that can be provided about growing plants of all sorts. Seek out an EMGV to teach about timing, fertilizing, watering, pest identification and harvesting. Have a workshop of activities folks can do at the garden: birdhouse construction, painting plant stakes, building tomato cages. Encourage families with young children to participate. Invite them to come especially on days when you are planting seeds that are big, “Big Seeds for Little Fingers.” Encourage families to take some seeds home to plant.

Promote friendships by having social events. Highlight special harvesting: digging potatoes around the Fourth of July is a popular day at our community garden. It’s like a big treasure hunt. Other social events that you can consider: cookouts, potluck breakfasts before a workday, watermelon seed spitting contests , a tomato sandwich supper in mid-July when everyone has too many tomatoes, a movie night in the garden (set up a sheet for a screen, ask families to bring blankets or lawn chairs and watch a movie under the stars.)

During the summer you can prepare to keep gardeners engaged in the off-season in a few ways: freeze basil in Ziploc bags, harvest and dry sunflower seeds to use in bird feeders. Pass these out in November and watch faces light up with summer remembrances. In December make ornaments out of dried okra pods. Plan for a gardening workshop in February to get folks excited about the coming season.

Linda Anderson, Starmount Presbyterian Church Community Garden Leader.

Read about more at the Bonnie Plants website.

How to Control Aphids in Vegetable Crops

— Written By **Charlotte Glen**

. . . Though individually tiny, aphids frequently occur in huge numbers and can cause serious problems for vegetable crops. Aphids are easy to manage with either organic or synthetic insecticides, if they are detected before numbers get out of hand.

All about Aphids

Aphids are tiny (1/8”), oval to pear-shaped, soft bodied insects, sometimes referred to as plant lice. They occur in a variety of colors, including green, yellow, orange, brown, and black. Like all insects, aphids have six legs. One thing that sets them apart from other insects is a pair of cornicles on their rear end which look like two exhaust pipes. Another unique feature of aphids is that they rarely lay eggs, and instead give birth to live young, which are clones of their mother. This ability results in rapid, explosive increases in aphid numbers in a very short time.

All aphids are sap feeders, meaning they feed on plant sap with their needle like mouthparts rather than eating leaf tissue. There are many species of aphids, most of which feed on specific plants. For example, crape myrtle aphids will only feed on crape myrtle and are not a threat to any other plants in the landscape or garden. The two most common aphids that cause problems in vegetable gardens at this time of the year are the cabbage aphid and the turnip aphid. These two aphids are extremely similar in appearance. Both are green in color and feed on plants in the crucifer family, such as cabbage, collards, kale, turnips, mustard, broccoli, cauliflower, brussel sprouts and radish.

Detecting Aphid Activity

Cabbage and turnip aphids are most prevalent in cool dry weather. Because they feed on plant sap from the underside of leaves, they are often not noticed until their numbers become severe. Aphid feeding can cause plants to produce crinkled, cupped or deformed leaves. Feeding by large populations will stunt plants and can kill small plants. Aphids also excrete honeydew, a sticky, sweet, clear substance that can coat plant leaves and attract ants and wasps. Gardeners should inspect the backside of plant leaves, particularly tender new leaves, for aphids each week.

If you find aphids in your garden, keep a look out for “aphid mummies”. These are the bodies of aphids that have been parasitized by a species of very small wasp that do not sting people. These are a good sign that mother nature is helping defend your garden! “Aphid mummies”, are bronze or tan in color and appear ‘puffed up’ when compared to living aphids.

Controlling Aphids

Because aphids can reproduce extremely rapidly, they should be controlled as soon as they are found. Cabbage and turnip aphid are not killed by cold weather in our area and survive through the winter, most commonly on collards. If you only find a few aphids, squish them or break off infested leaves and remove them from the garden. Both organic and synthetic insecticide sprays are available to control aphids in the vegetable garden. When using either, make sure to cover plants completely, especially the backside of leaves, since aphids often shelter in pockets and crevices underneath leaves and in buds. Repeated applications are usually necessary to control this pest.

Aphids (continued)

Organic insecticides that are effective for aphid control in vegetable gardens are insecticidal soap, pyrethrin, and neem oil. For these products, vegetables can be harvested from treated crops the same day of application. Aphids also have many natural enemies, including ladybugs, parasitic wasps, and hoverfly larvae. In landscape plants, natural enemies can often be relied upon to clean up aphid infestations. In vegetable gardens though, aphid outbreaks usually cause lasting damage before natural enemies are able to reduce their levels.

Synthetic insecticides for aphid control on vegetables include those containing the active ingredients permethrin or bifenthrin. Both of these products are available under several name brands, so check product labels to find these in local garden centers. Permethrin has a one day post harvest interval, meaning you have to wait at least one day after treating to harvest. For bifenthrin, the post harvest interval is seven days.
Aphids can be washed off of harvested leaves with running water or by submerging harvested crops in soapy water and then rinsing with clean water. Vegetables that aphids have fed upon are safe to eat and if you don't get every single aphid off don't worry — they will just add a little protein to your meal!

Harnessing Our Gardening Partners: Bringing Pollinators to the Garden

It couldn't BEE any easier! From the Xerces Society, a fabulous resource for all things pollinator-related:

Flowers provide the nectar and pollen resources that pollinators feed on. Growing the right flowers, shrubs, and trees with overlapping bloom times will support pollinators from spring through fall.

A home for growing pollinators is essential. You can leave patches of bare ground and brush piles or install nesting blocks, and plant caterpillar host plants.

Pesticides are harmful to pollinators, especially insecticides. Herbicides reduce food sources by removing flowers from the landscape.

Let your friends and neighbors know you're providing habitat with a pollinator habitat sign.You can also sign the Pollinator Protection Pledge!

For region specific information, visit the Pollinator Conservation Resource Center!

Now that you have the short version on boosting your pollinator population, here's more detailed information from Guilford County EMGV Janet Sommers:

So What's All the BUZZ About?

If you've been gardening for years, thinking about starting your first garden, or just enjoy the beauty of others' gardens, you have most likely come across the latest trend — **pollinator gardens**. Public parks are carving out sections to devote to pollinators, as are garden centers. Newspaper and magazine articles are featuring information on pollinators and ideas on how to encourage them into your garden. Of course, there are dozens of books on the subject, and don't forget the seed catalogs!

You may even be aware of President Obama's "National Strategy to Protect Pollinators and Their Habitat." This initiative lists three priorities: reduce honeybee loss, protect Monarch butterflies, and create millions of acres of pollinator habitat.

Before getting started with your pollinator garden, the experts recommend a basic understanding of the role pollinators play in a healthy environment. Knowledge of their behavior and needs will serve you well as you manage an existing garden, begin developing ideas for a new garden, or take a second look at that closely mowed weed-free lawn. To attract pollinators, you just might want to make a few changes or adjustments in your current landscape!

Stop to think about your morning breakfast. Without pollinators you would have no coffee, no orange juice and no strawberries! One in three bites of food is the result of the work of pollinators. And it's not just humans who benefit from their activity; these tiny creatures are central to the lives of wildlife from voles to grizzly bears. Pollinators are central to a healthy environment for all of us; they simply are a must!

So, who are these most important creatures and what makes them uniquely qualified to hold the title of "pollinator"?

They are insects mostly: bees, wasps, moths, flies, beetles, and butterflies, as well as what might seem unlikely such as bats and hummingbirds. The list even extends to mammals like rodents searching in your flower bed for nuts and seeds, dogs going where they shouldn't, and even humans who go from flower to flower touching them; everyone can be pollinators.

The behavior common to pollinators is their movement from flower to flower in search of food in the form of nectar and, in some cases, pollen. Not all pollinators are interested in or need pollen. Butterflies, for example, are only interested in the high-energy source – flower nectar. As insects travel from flower to flower, their bodies transfer or shed pollen they picked up from the previous flower. This is pollination. For most bees, pollen collection is deliberate. They collect it for their own nutritional needs but most importantly for their offspring. This pollen, combined with nectar, is made into "bee bread" and then is made available to their developing larvae.

Butterflies are one of the most desired insects in our gardens, but their pollinating ability is minimal. Butterflies do not need pollen, nor do their offspring. Butterflies float from flower to flower in search of nectar, which provides them with energy for flight, mating and egg laying. In addition, their bodies are relatively smooth so pollen does not stick like it does on a bee's body.

We want all pollinators in our garden, but if you want a healthy thriving pollinator garden you must have bees! Bees are the predominant pollinator. What pops into the minds of most when bees are mentioned is the European honeybee, which plays a vital role in pollination of many farm crops. However, native bees are just as significant. Some native bees are actually more efficient pollinators than the honeybee and will forage earlier and later during the day, does not mind wet or cloudy days, and can tolerate colder temperatures than the honeybee. The variety of native bees is staggering and they are indispensable to a healthy environment. Research into the vast array of native bees and their pollinating abilities has been significant over the past decade due to the concern over the decline in honeybee populations.

When you walk into the grocery store what do you see?
When a bee flies over a wildflower meadow what does she see?
In both cases – FOOD! So look at your garden from a pollinator's perspective.

Follow these steps to create your pollinator garden:
Consider size: A pollinator garden does not have to be large; several well-chosen flowers in containers will work fine. A few containers certainly do not provide as much as a field of wildflowers, but those containers provide food whereas a weed-free mowed lawn does not.

The size of gardens varies and so does the size of the insect. When choosing plants and deciding on plant placement, keep in mind the difference in the size of these insects. Factors to consider are the distance they must travel from their nests and from flower to flower to obtain food. Also, the length of their tongues dictates their choice of flowers. Flowers should be planted in clumps or clusters so movement from bloom to bloom does not require too much energy.

Bees exhibit a behavior called "floral consistency," which means on a given foraging trip they will visit the same type of flower or plant. Pollination would not be very effective if a bee were to go from lavender to cucumber, to clover and then to a bean plant. Consider the growth habit of a particular plant group in clusters or groups to assure successful pollination.

Location: Large or small, you must have at least several hours of direct sun. Most insects and their offspring need the warmth of the sun. Water is also essential, so if there is a natural source close to your garden they will find it. If not, a birdbath could work. Children aren't the only ones who love mud; some bees use mud to build their nests and butterflies enjoy sucking in the minerals available in mud.

Shelter: Honeybees and bumblebees are social bees that return to their hives for shelter against bad weather or at night. Other pollinators seek shelter in trees or shrubs.

Nesting: Bees are grouped into three broad categories: social, ground nesting and cavity nesting. Ground nesting and cavity nesting bees are considered solitary. The queen builds and maintains her nest alone. However, you will often find several individual nests very close together. They tolerate the presence of other bees. Roughly 70% of native bees nest underground. It's common for people to mistake a ground-nesting bee's nest for an ant nest. If you watch closely maybe you'll catch sight of the queen coming and going. Cavity nesting bees like the mason bee make their nests by utilizing hollow reeds or grasses. Leave spent flower stems such as purple coneflower or dahlia for the cavity nesters. "Bee hotels" are also becoming popular.

Bloom time: To make food available over an extended time and to accommodate insects that emerge from their nests at different times, choose flowers that bloom throughout the growing season from early spring to late fall. Variety in flower size, shape and color is another important criterion for a successful pollinator garden. It seems bees are very attracted to blue, purple and white, while hummingbirds go for reds. Butterflies like everything, but they appreciate a nice landing/resting platform.

Pesticide: The decline of the honeybee, as well as mounting concern over the loss of many species of insects, has scientists searching for a cause. More and more evidence indicates that pesticides are contributing to the decline in pollinator and beneficial insect populations. Before using insecticides, try hand-picking the bad ones and encouraging beneficial insects into your garden. Remember too that birds depend heavily on caterpillars to feed their young. If the use of pesticides seems necessary, follow these rules: Do not spray directly on flowers, apply insecticide late in the afternoon or early evening, when insects are less likely to be foraging. Don't apply on wet days, or windy days and spot spray instead of broad spraying. Organic pesticides can be just as damaging to the pollinators as synthetic, so be very conservative.

Creating a pollinator garden is really quite simple if you follow a few basic principles. When you're done, what you have created is a habitat, a place where pollinators will find food, shelter and nesting sites, and your garden will be much more productive and healthy.
Perhaps you may want to join the National Pollinator Garden Network – a collaboration of national and local groups seeking to create a million new pollinator gardens by the end of 2016!

Then you will know what all the BUZZ is about!

Resources:

http://www.Xerces.org – Power of Pollinators
Conserving Bumble Bees
Farming for Bees – Guidelines for providing Native Bee Habitat
Bumble Bees of the Eastern United States
Bee Basics – An Introduction to Our Native Bees
http://www.protectpollinators.org
http://www.wildflower.org
https://pender.ces.ncsu.edu/wp-content/uploads/2014/03/BeesFriendlyFlowers.pdf?fwd=no
Attracting Native Pollinators – Xerces Society Guide
Bring Nature Home – Doug Tallamay
The Living Landscape – Rick Darke & Doug Tallamy

> All is miracle. The stupendous order of nature, the revolution of a hundred millions of worlds around a million of suns, the activity of light, the life of animals, all are grand and perpetual miracles.
>
> *Voltaire*

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