NC STATE EXTENSION

Master Gardener | Johnston County

The Gardener's Dirt Newsletter

August 2019

Feature Article:

Ecological Landscape

By: Barb Barakat, Johnston County Extension Master Gardener Volunteer

Photo courtesy of Debbie Roos

Ecological landscaping, habitat gardens, pollinator pathways, native plant corridors. All of these are great solutions to the ever-growing observation that sub-developments are infringing upon our open lands. Let us use native plants to refurbish and honor the traditional North Carolina landscape and provide a habitat to native species -- where it's so simple to just grow some native plants, or is it?

It's not rocket science, but it is plant science. Although it's native, it doesn't mean it's easy to grow or that it will grow anywhere. Natives, like all plants,

are selective - they have preferred soil types, sun/shade requirements, average height, and spread requirements, then there are the details, like their texture, bloom time, leaf shape and color. That means before we begin, we need to know more about the specific plants we choose and create a plan before planting. Some questions that are good to ask are: What will I plant? Where should I plant them to get the desired result? I don't know about you but in July and August, I'm in the garden early and not out again until late - meanwhile, I'm envisioning all my upcoming fall plantings - they'll be spectacular!

I grow lots of pollinators - and true to their name, they attract bees, wasps, and butterflies exponentially - it's awesome! It is easy to grow a beneficial pollinator garden, but growing one that is also beautiful takes both knowledge and effort. Pollinator beds are best located on the fringe, off the beaten path. Pollinator plants add benefit and diversity to crop beds - they bring in the pollinators, so don't plant them near your entry.

I haven't mastered pollinator plants yet. I'm always back to the internet to sort thru thousands of N.C. native plants to find the combination that gives me height in the center and a beautiful flow down to the soil (with a few misbehaving flowering heads that create some chaos). I've seen the pollinator gardens of Debbie Roos (pictured above) and wonder what she knows that I don't.

In my wildest dreams I've been wishing for an expert to advise me, and finally, that's what is happening in Smithfield on Saturday, September 14, 2019! An event called "Birds, Bees, & Butterflies" a symposium on "Growing a Pollinator Garden." To register for this event, go to ***https://www.jocomgbbb.com***. I'm excited about this opportunity to cut through the volume of information and just be advised by local gardening experts. The best perk is spending the day with like-minded people - so uplifting... we hope you'll join us.

Feature Plant:

Oakleaf Hydrangea

by: Katherine Maynard, Johnston County Extension Master Gardener Volunteer

Image citation: ***https://www.abcdario.it/prodotto/hydarngea-quercifolia***

The Oakleaf hydrangea (Hydrangea quercifolia), is a spectacular native shrub that produces foot-long white flowers that contrast attractively against the deep green of the Oakleaf's large leaves. By fall, the flowers have faded to pink and serve to blend well with leaves as they change to gorgeous russet shades. This substantial beauty [can grow to 8-10 feet] is a wonderful addition to fall's annual color show. Like other hydrangeas, it is shade tolerant.

The North Carolina Extension Gardener Plant toolbox provides the following descriptions of the flowers and the leaves

> The Oakleaf hydrangea is noted for producing pyramidal 4-12-inch erect panicles of creamy white flowers in summer on exfoliating branches. The fragrant flowers fade to pink, then tan.
>
> The Oakleaf hydrangea is clad with dark green, large, opposite, simple, bold, leathery 3-7 inch lobed, oak-like leaves. The leaves are fuzzy when young and grow to 3-8 inches long. Fall colors are wine, orange, mahogany.

Native to the American Southeast, oakleaf hydrangeas adapt to life in a climate where humidity provides moisture, however in some areas they may need extra water to compensate for the dryness. Oakleaf hydrangeas are more heat-tolerant and demand less water than many of their relatives. They can tolerate some morning sun, but their native woodland habitat predisposes them to grow well in shade.

They reward placement at the edge of a woods or along a wooded drive with huge shrubs that grow up to 8 feet tall. This makes the edge of an area of deep or dappled shade, with its lower temperature and shelter from sunlight during warm, dry summers an ideal location for these hydrangeas. The light levels of full or dappled shade are enough to sustain them. Its flowers are attractive to butterflies and other insects. Songbirds eat the seeds. The Oakleaf hydrangea is moderately resistant to damage from deer.

U.S. Department of Agriculture plant hardiness zone 5 through 9,

For more information on hydrangea-quercifolia, click the link below:

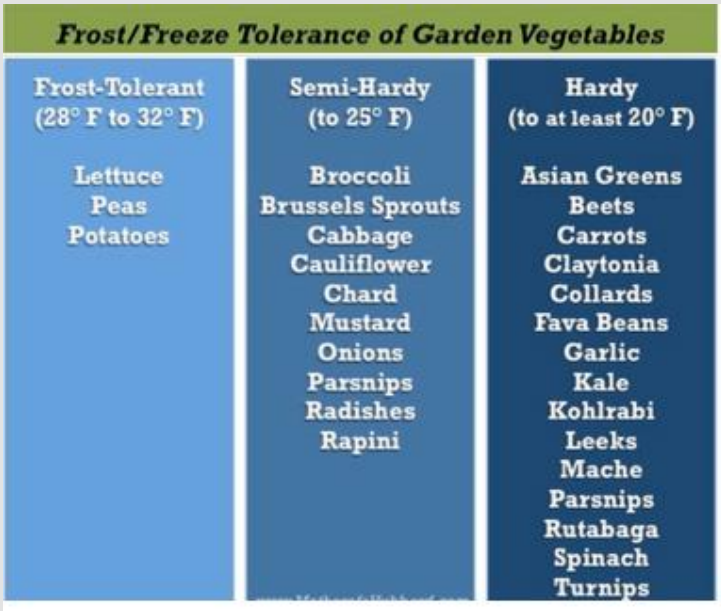
https://plants.ces.ncsu.edu/plants/hydrangea-quercifolia/

Some choice cultivars of Hydrangea quercifolia Johnston County Nurserymen grow that can be found at your local garden centers are: 'Alice,' 'Munchkin,' 'Pee Wee,' 'Ruby Slippers', 'Sikes Dwarf', 'Snow Queen' and 'Turkey Heaven'

Veggie Tale:

Growing a Fall Vegetable Garden

from the work of Ervin Evans, Extension Associate



Shawn Banks photo

Planting a fall garden will extend the gardening season so you can continue to harvest fresh produce after earlier crops have finished. Many cool-season vegetables, such as carrots, broccoli, and cauliflower, produce their best flavor and quality when they mature during cool weather. Vegetables that have a 60 to 80-day maturity cycle should be planted around August 1. Quick maturing vegetables, such as turnips and leafy greens, can be delayed until September. November 7 is our average killing frost date.

It's time to take out warm-season vegetables that are beginning to look ragged. Prepare the soil for fall planting by aerating or tilling, add compost & fertilizer. Direct sowed seeds should be planted deeper in the fall (1.5 - 2 times as deep) due to lower moisture level & higher soil temp.

Leafy greens seed will not germinate if the soil temperature exceeds 85°F, and you should lightly mulch over the seed row. Young transplants also benefit from light shading. Newly planted seed and transplants need frequent light watering. Once established deep, less

frequent watering is best (~1"/week). Most greens benefit from a side dressing of nitrogen.

Healthy plants are less susceptible to insects and diseases. Check the plants frequently for insect and disease damage. You can extend the season by covering growing beds or rows with a floating row cover supported by stakes (pictured above). Most of the semi-hardy and hardy vegetables will require little or no frost protection. Semi-hardy vegetables should be harvested before a heavy freeze. Root crops such as carrots and radishes should be harvested or mulched heavily before a hard freeze. The harvest of mulched root crops can often be extended well into the winter. During mild winters, harvest may continue till spring.

For more information on growing a fall vegetable garden, click on these links below:

https://content.ces.ncsu.edu/growing-a-fall-vegetable-garden
https://content.ces.ncsu.edu/home-vegetable-gardening-a-quick-reference-guide

---

Ask an Expert:

Understanding Pollination in Cucurbit & Solanaceae Crops

reprinted with permission M.S.U. Pollinator Project

Common plants in the cucurbit family include cucumbers, squash, zucchini, pumpkins, watermelons, and muskmelons. Most cucurbits depend on bee pollination because each plant produces separate male and female flowers. Bees are essential to cross-pollinate or carry pollen from the male flower to the female flower. The easiest way to distinguish between the two flower sexes is to look for an ovary below the yellow petals. Female flowers have a swollen ovary or fruit and male flowers do not.

In many cucumber cultivars, the first set of flowers is all male, which do not bear fruit. Both male and female flowers will then be produced in the second wave of blooms. If female flowers are present but no fruit develops, then the problem may be a lack of pollinators. In the short-term, you can fill the role of the bee with hand-pollination. Take a clean paintbrush and insert it into the male flower to gather pollen. Then, transfer pollen to the stigmas of an

open female flower. Hand-pollination works best in the morning. For a long-term solution, create pollinator habitat near or in the garden to attract bees.

In contrast to cucurbits, Solanaceae crops such as tomatoes, peppers and eggplants produce "perfect" flowers that contain male and female reproductive structures. Tomatoes, peppers, and eggplants can be pollinated simply by wind shaking the pollen from the anthers onto the stigma. However, bumble bees can improve fruit set and size because they vibrate the flowers and shake pollen loose from the anthers.

Smart Gardening ***https://www.canr.msu.edu/news/smart-gardening-pollination-in-vegetable-gardens-and-backyard-fruit***
Esther E. McGinnis, Nathaniel Walton, Erwin Elsner, Janet Knodel

---

Quick Tip:

Quick Gardening Tip

by Marshall Warren, Horticulture Extension Agent-*aka your gardening insider investment advisor strategist*

Gardening Investment Strategy: LET NO WEED GO TO SEED!

If you are serious about reducing the number of weeds in your garden and landscape, it's helpful to visualize your soil as a "weed seed bank". With this kind of bank you don't want to make deposits and receive interest because you will be paying a hefty penalty if you do. You will receive long term dividends when you actively minimize weed seed deposits and maximize weed seed withdrawals. The weed seed bank can be described as the reserve of viable weed seeds on the soil surface and distributed throughout the soil profile which consists of new weed seeds and older seeds that have persisted in the soil from previous years.

Some weed seed bank management practices:

- Kill weeds before they set seed - before flowering to be safe. Dr. Joe Neal's research suggests you should remove emerged weeds every 2 to 3 weeks to prevent rapid population growth and spread.
- Prevent weeds from germinating by using mulch and cover crops
- Control creeping perennial weeds before they can form new rhizomes, tubers or other propagules
- Utilize good sanitation to prevent new weed seed introductions
- To maximize withdrawals from the weed seed bank, (avoid deep tillage which encourages germination of newly exposed dormant weed seeds), encourage shallow

tillage and allow weed seeds to germinate first, then kill them before you plant your crop. See link on how to create a stale seedbed. https://extension.umd.edu/learn/stale-seedbed-technique-relatively-underused-alternative-weed-management-tactic-vegetable

Maintaining excellent weed control for several consecutive seasons can eliminate a large majority of the weed seed bank. But you must remain diligent. A weed seed bank reduction study in Nebraska over a 5 year period reduced weeds to 5 percent of their original density when weeds were not allowed to produce seeds. However, in the sixth year weeds were not controlled and the seed bank increased to 90% of the original level. So, the best investment advice from your gardening insider investment advisor strategist is to **Never allow a weed to set seed** .

Additional investment insider trading research:

Weed Seed Bank Management

Weed the Soil, Not the Crop

Weed Management

Are You Weeding Frequently Enough to Prevent Weeds From Spreading?

What Master Gardeners Do:

MG teams with 4-H to Teach about Pollinators & Recycling

By: Valerie Little, Ester Garner, & Judith Uhrick, Johnston County Extension Master Gardener Volunteers

Teaching & learning the importance of insect pollinators and

which flowers attract them.

Campers put their knowledge to use by building solitary bee hotels from donated bamboo and native reeds.

In anticipation of meeting the needs of pollinators in the soon-to-be built 4-H Pollinator Garden, campers painted river rocks to provide an artistic touch to the insect habitat and to welcome visitors.

There's nothing quite like learning from someone who is out-in-the-field actually doing it day-to-day.
Special Thanks to:
Emily and Paul Etheridge, P&E Farm
Jason Barbour, Bearded Cob Farm, Four Oaks,& our Extension Master Gardener Volunteer team; Valerie Little, George Easley, Ester Garner, Silvia Caracciolo, Judith Uhrick, Lori Meeker, Cynthia Watson & Colleen Nicholson

Discarded china & glass recycled into mosaic garden waterers for insect pollinators.

Preparing healthy foods from the garden is fun. Digging veggies up, washing, scraping, and grating, then creating. Campers made heartily consumed veggie "insects", sweet potato chips with kale, veggie quiches, and fig carrot desserts that are delicious and nutritious. Thriftily we composted our veggie scrapes turning them into next year's soil. Seed to harvest to compost - cycle & recycle.

Welcome. . .our future agriculturalists!
It's so much more than earning badges and completing service projects. These young campers are pure heart and energy. It's camp, where knowledge is passed from one generation to the next through lectures, videos, games, projects and crafts! It's a team where people think, learn, and grow. Thanks to Johnston County Extension Master Gardener Volunteers and 4-H. These young citizens are honing their skills right here in Johnston County, N.C.

What Master Gardeners Do:

Johnston County hosts Native Pollinators Symposium

Birds Bees Butterflies & Growing Pollinator Gardens
Saturday, September 14, 2019 8:30-4:00 $45
Johnston County Agricultural Center,
2736 N.C. Highway 210, Smithfield, N.C. 27577-9556

Johnston County is coming up in the world and with it a host of beautiful and hardy flowering plants that will bring in the pollinators. My Dad always said, "that the way to get things done is to get under and push." In our case, the goal is to increase the productivity of plants that support native pollinators. Did you know that 85 percent of all plant life that provides us with food, medicine, and fiber comes from plants that need to be pollinated? Yikes, that is huge! And to be part of the force that keeps that system in place, now there is something worth doing.

A year ago, a group of ambitious Extension Master Gardener Volunteers of Johnston County secured a starter grant to spearhead a symposium to engage and educate on this important topic. It is aptly named "Birds, Bees & Butterflies and Growing Pollinator Gardens." You may wonder what can I do in my landscape to provide pollinators with a native habitat they need? How can I beautify my own yard with easy-to-care-for natives? These are just a couple of the questions that will be answered at the symposium.

The public is welcomed and encouraged to attend this event. We need everyone's garden to make this a success. This educational event is designed to aid all of us (homeowners, schools, churches, businesses, nurserymen, landscapers, businesses, container gardeners) in the many aspects of plant selection and gardening techniques aimed at protecting and increasing native pollinators. There will even be a special emphasis on drought and pest resistant natives.

It is a star-studded line-up of speakers. This is the first-time speakers of this level of expertise and enthusiasm have come to Johnston County to speak on this timely issue.

Charlotte Glen, *Statewide Coordinator for the NC Extension Master Gardener Program* will act as the Leader of Ceremonies & speak on Growing Native. Ms. Glen is a native North Carolinian whose interest in gardening started in her childhood. She has studied and gardened in the US, Scotland, and New Zealand. She is in the final stages of her Doctoral Degree in Agricultural and Extension Education at NCSU She has served as an Agricultural Extension Agent in several counties across NC Charlotte is a high energy, dynamic speaker who easily sprinkles laughter into learning.

Chris Moorman, Ph.D. *NCSU Dept. of Forestry & Environmental Resources Professor & Faculty Scholar with special interests in Urban Wildlife Ecology & Management, Native Plant Conservation, and expertise in Avian Ecology.* Dr. Moorman will speak on Birds. Educated in nearby South Carolina, Dr. Moorman's research and numerous publications focus on local ecology and the preservation of native plants and wildlife.

Debbie Roos, Chatham County Agriculture Agent is best known for her Pollinator Gardens, which feature over 215 species of perennials, trees, shrubs, vines, and grasses - 85 percent of them are NC natives. In 2018, Ms. Roos was recognized as Agent of the Year for N.C. Sustainable & Organic Agriculture Research. An avid and experienced beekeeper, Debbie will speak on bees.

Colleen Bockhahn, works with Wake County Parks & Recreation. Ms. Bockhahn manages Environmental Education at Lake Crabtree (Morrisville) and works in a leadership role with NC Audubon. Ms. Bockhahn spends her Saturdays conducting birding expeditions, environmental meet-ups, and other public outreach excursions in Wake County open spaces (places she calls Wake Wonders). Colleen will present on butterflies.

Anne Spafford, NCSU Associate Professor, Author, and landscape designer. Ms. Spafford is focused in her quest to raise awareness about pollinators, her expertise is in intertwining gardening and architecture. Ms. Spafford has been instrumental in designing the Living Lab in the Sky (a pollinator habitat atop the NCSU Student Center roof). Anne will present on Garden Design.

In addition to speakers who will increase your knowledge and open your sense of purpose and creativity - the symposium features fun events: free lunch, exhibits, silent auction, raffles, door prizes, vendors and a book signing.

YOU are invited! Your presence is needed to make this symposium a success. Now there is an opportunity in Smithfield to learn about it. **"Plan to participate. Plant to participate!"**

Saturday, September 14, 2019 at the Johnston County Agriculture Center in Smithfield.

Follow this link to register ***https://www.jocomgbbb.com/***.

Our many hands will make this endeavor to preserve our natives light work. Join us in the quest for native North Carolina. Thanks.

August Gardening Tasks:

GENERAL REMINDERS

- Collect soil samples for testing so you'll know how much fertilizer and lime to add this fall. Test your lawn, flowerbeds and vegetable garden using the free kits from Cooperative Extension. Testing should be done once every 3 years.
- Watering deeply but frequently encourages a deep and extensive root system for better drought tolerance.
- Control fungal diseases by watering early in the morning, allowing the sun to dry water droplets from the foliage.
- Mulch trees and shrubs with a 2-3 inch layer of mulch to keep roots cool, conserve moisture, and control competing weeds and grasses. Avoid mulching more than 4 inches deep, and leave 3-4 inches between mulch and the trunk of the tree or shrub.
- Avoid pruning shrubs and trees during late summer. Pruning stimulates new growth which will not have sufficient time to harden off before cold weather.

- Avoid nitrogen fertilizers during late summer. New growth at this time of year is vulnerable to frost damage in the fall. If your soil test shows you need to add phosphorus or potassium to your soil, add them now. These nutrients will help your plants better withstand the winter.

- Cut back leggy summer flowers, then fertilize them. They'll re-grow within a few weeks and look great until frost.

- Plan for Fall Bulbs. Autumn-blooming crocus and colchicum add color to your fall garden. Since these bulbs are not always available locally, order them now from a mail-order source. They need to be planted in September.

- Prepare garden spaces for fall garden veggies. Greens, cabbage, carrots, parsnips, beets, radishes and lettuces can be started by mid August.

- New tomato plants and fall cucumbers need to planted quickly.

LAWN CARE

- Check out the **Lawn Maintenance Calendar** for your grass and learn how best to care for it.

- August is the best time to prepare for planting cool season grasses. The optimal planting time is the second half of September.

- Prepare to treat for winter weed control using pre-emergents.

Click on each type of grass for link to maintenance schedule:

Bermuda ***Centipede*** ***Zoysiagrass*** ***St. Augustine Grass*** ***Tall Fescue***

TREES, SHRUBS & ORNAMENTALS

- When you visit your roses, clip off leaves that show early evidence of blackspot - a common fungal disease that causes black spots on leaves. Put the spotted leaves in the garbage (not in the compost pile.)
- When gathering cut flowers to bring indoors, cut stems early in theday. Bring them indoors and recut the ends while they are submerged in a sink of well water.
- Don't use Japanese beetle traps. The pheromones in the traps often attract beetles that would not otherwise visit the area. To control a particularly pesky group of beetles, go hunting for them in early morning and shake them into a bowl of soapy water to get rid of them.
- Keep potted plants watered! Plants in pots outside may need daily watering in the heat of summer.
- Pinch out the tips of garden mums to encourage lower, compact plants with many flowers.
- Start stem cuttings of geraniums and leaf cuttings of succulents to be potted for use as house plants this winter.
- Propagate shrubs by rooting cuttings. Semi-hardwood cuttings of Azalea, Camellia, and Holly can be taken this month. The wood should be hardened enough that the

stem breaks when bent. ***http://www.ces.ncsu.edu/depts/hort/hil/hil-8702.html***
- Prune spent crape myrtle blossoms to prolong the flowering period.

- Sooty Mold on the crape myrtles will make the leaves appear dark and sooty or almost uniformly charcoal gray. Sooty mold grows on honeydew (the sticky leftovers) from aphids. Control the aphids, and the mold will wash off.
- Powdery Mildew makes leaves appear gray and powdery. It's a common problem which disfigures the foliage, but doesn't kill the tree.
- Hand-pick bagworms off evergreens. Pesticides are not effective once the caterpillars are safe in their bags.
- Remove vigorous upright sprouts growing from tree roots ("suckers"), or from the upper surfaces of tree branches ("water sprouts"). Pruning the sprouts out directs the tree's energy into desirable growth.
- Weed when it's easy. Weeds are easier to pull when the soil is moist, so wait until after a soaking rain or irrigate the area first. The roots of desirable plants can be injured by pulling large weeds nearby so pull those weeds in late afternoon or on cloudy days, and water the area afterward to help injured plants recover.
- Start seeds for cool-weather annuals indoors in July/August for fall planting.Try foxglove, pansy, alyssum, snapdragons, ornamental cabbage (kale), and primroses. Pansy seeds germinate well when stored in the refrigerator (not freezer) for 10-14 days before planting.

FRUITS & VEGGIES

- Pinch out the tips of blackberry shoots when they reach about 4 feet tall. This helps form a tidier hedgerow for easy picking.
- Soon after tomatoes begin to set fruit, give them a boost of fertilizer to keep them vigorous and productive. Most of the new varieties are heavy producers if provided with good nutrition and adequate soil moisture.

LANDSCAPE IDEAS

- Deckscape: Play with colors, textures, and the placement of furniture on your deck or patio. Use container-grown plants, windsocks and sculptures to change or fine-tune your color scheme and overall feel.
- Think strategy. Now that deciduous trees and shrubs are in leaf, survey your landscape critically. Do you have too much? too little? are plants too low where screening is needed? So tall a view is blocked? Take photographs and make plans to add or move shrubs this fall. Don't plant it now, wait until fall.

WILDLIFE

- Put out a bird-bath. Keep it filled with freshwater. Change it once a week to minimize mosquitoes. Birds will pay you back by eating lots of insects!
- Think twice about squishing caterpillars; many turn into butterflies. Swallowtail caterpillars love parsley, so set out a few extra plants to share with them. A pan of moistened pebbles or sand will attract butterflies.

Cool Connections:

Helpful Links from N.C. Cooperative Extension Johnston County

Cool Connections - Gardening Resources for ALL!

Basic Steps for Home Landscaping

Carolina Lawns

NC Extension Gardener Handbook

Vegetable Gardening: A Beginners Guide

Upcoming Events:

To Register for the Event Follow Link: ***https://www.jocomgbbb.com/***

Visit our

N.C. Cooperative Extension of Johnston County Page

NC State University and N.C. A&T State University work in tandem, along with federal, state and local governments, to form a strategic partnership called N.C. Cooperative Extension.

For accommodations for persons with disabilities, contact Bryant Spivey at (919) 989-5380, no later than five business days before the event.

NC State and N.C. A&T State universities are collectively committed to positive action to secure equal opportunity and prohibit discrimination and harassment regardless of age, color, disability, family and marital status, gender identity, genetic information, national origin, political beliefs, race, religion, sex (including pregnancy), sexual orientation and veteran status. NC State, N.C. A&T, USDA and local governments cooperating.

Disclaimer agrichemicals:
Recommendations for the use of agricultural chemicals are included in this publication as a convenience to the reader. The use of brand names and any mention or listing of commercial products or services in this publication does not imply endorsement by North Carolina Cooperative Extension nor discrimination against similar products or services not mentioned. Individuals who use agricultural chemicals are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. Be sure to obtain current information about usage regulations and examine a current product label before applying any chemical. For assistance, contact your county Cooperative Extension agent.