UNIVERSITY OF GEORGIA EXTENSION

Shades of Green

Athens-Clarke County Agriculture and Natural Resources

October 2023

Included in this issue...

Articles

Events/Resources

A note from Athens-Clarke County Agriculture & Natural Resources

Hello readers! Fall is here at the Athens-Clarke County Extension Office. We are excited to share some fun events happening at the office and around Athens this month! Be sure to check out local Farmers Markets and other events happening throughout the month hosted by UGA Extension, State Botanical Garden of Georgia, Georgia Museum of Natural History, and Sandy Creek Nature Center, among many others.

We hope you enjoy this month's issue of "Shades of Green".

Take care,
Athens-Clarke County Agriculture and Natural Resources

Bats Are Beneficial

Forsyth County Extension, University of Georgia

Bats occupy an important niche in ecosystems around the world, providing mosquito control, eating crop-damaging moths and beetles, pollinating important agricultural crops, and dispersing seeds to aid in reforestation. Unfortunately, this unique flying mammal faces survival challenges from habitat loss, disease, and negative perceptions. Three of the four mammals identified as threatened or endangered in Georgia are bats.

Georgia is home to 16 species of bats. At least nine of these species have an expected distribution range in the upper piedmont

region, including the three endangered ones, the gray bat (Myotis grisescens), the Indiana bat (Myotis sodalist), and the northern long-eared bat (Myotis septentrionalis).

All Georgia bats are insectivores; they eat thousands of moths, beetles, mosquitoes, and other flying insects each night. This free service from bats provides over $53 billion in organic, non-toxic pest control to farmers worldwide.

In a study conducted in southern Illinois in 2013 and 2014, researchers spread net enclosures over 20-by-20-meter blocks within corn fields each evening to exclude bats. Corn grown where the bats could not enter suffered 56 percent more damage from corn earworms than did corn grown where bats were free to swoop in and feed each night. Based on 2014 corn prices, researchers estimated that bats provided a world-wide agricultural benefit of $1 billion on corn alone.

Bats also eat pests of other crops, including cotton, soybeans, and pecans. After losing 30 percent of their pecan crop to the larvae of hickory shuckworm moths each year, the owners of Pebble Hill Grove pecan orchard in south Georgia started installing bat houses in 1996. By 1999, they had 11 bat houses and 2-3 thousand bats hunting through their orchard each evening – and no more problems with damage from shuckworms.

Bats Are Beneficial

Forsyth County Extension, University of Georgia

In desert and tropical environments, bats feed on pollen, nectar, and fruits. They pollinate some of our favorite foods, including bananas, cloves, and agave, as well as other socially and economically important plants. By distributing the seeds they ingest, fruit-eating bats "can account for as much as 95 percent of the seed dispersal responsible for early growth in recently cleared rainforests," according to the U.S. Fish and Wildlife Service.

After all of their insect, pollen, and fruit consumption, bats produce a valuable product: guano. The agricultural use of droppings from birds and bats as fertilizer dates back at least to the 13th century, and guano became the first commercial fertilizer in the 1840s, when it was mined from Peruvian islands and shipped to Europe and the U.S.

The fungal disease Pseudogymnoascus destructans, abbreviated as Pd, that causes White Nose Syndrome has reduced bat populations in some Georgia caves by over 90 percent since it was first detected in Georgia in 2013. Habitat loss is another major threat to bats. Some bats now roost in structures, including homes, bridges, and culverts.

Although no one wants bats roosting in their home, they are beneficial to have around the yard for reducing numbers of mosquitoes and other flying pest insects. To encourage bats to move out of your house, install a bat house in a desirable location nearby. Then determine where bats enter the home. Sometime between August and March, when all the bats have left the roost to hunt, seal up the entry point so that the bats cannot get back inside. Avoid excluding bats between April and the end of July because the pups can't yet fly, and they will be sealed inside the home..

Photo credit: J Scott Altenbach

Photo credit: Ann Froshauer /USFWS

Native Plants That May Attract Bats In Georgia

Native Host Plants that Attract Moths

Wild Onion, Allium cernuum
Columbine, Aquilegia canadensis
Pale Indian Plantain, Arnoglossum atriplicifolium
Wild Indigo, Baptisia spp.
Bellflower, Campanula spp.
American Hornbeam, Carpinus caroliniana
Common Buttonbush, Cephalanthus occidentalis
Rattlesnake Master, Eryngium yuccifolia
Joe-Pye Weed, Eupatorium spp.
Spotted Jo-Pye Weed, Eutrochium maculatum
Wild Geranium, Geranium maculatum
Smooth Ox Eye, Heliopsis helianthoides
Winterberry, Ilex verticillata
Blazing Star, Liatris spp.
Cardinal Flower, Lobelia cardinalis
Sundial Lupine, Lupinus perennis
Feathery False Lily, Maianthemum racemosum
False Aloe, Manfreda virginica
Four-o' Clocks, Mirabilis spp.
Wild Bergamot, Monarda fistulosa
Pink Muhly Grass, Muhlenbergia capillaris
Wild Quinine, Parthenium integrifolium
Bearded Tongue, Penstemon spp.
Scentless Mock Orange, Philadelphus inodorus
Garden Phlox, Phlox paniculata
Flatwoods Plum, Prunus umbellata
Mountain Mint, Pycnanthemum spp.
Gray Headed Coneflower, Ratibida pinnata
Black-Eyed Susan, Rudbeckia hirta
Silver Plumegrass, Saccharum alopecuroides
Bloodroot, Sanguinaria Canadensis
Pitcher Plants, Sarracenia spp.
Blue Rudge atchfly, Silene ovata
Cup Plant, Silphium spp.
Goldenrods, Solidago spp.
Asters, Symphyotrichum spp.
Golden Banners, Thermopsis spp.
Hairystem Spiderwort, Tradescantia hirsuticaulis
Farkleberry, Vaccinium arboreum
Blue Vervain, Verbena hastata
Hoary Verbena,Verbena stricta
Ironweed, Vernonia spp.
Culver's Root, Veronicastrum virginicum

White Flowers to Attract Night Insects

Bowman's Root, Gillenia trifoliata
White Wild Indigo, Baptisia alba
Goats-beard, Aruncus diocus
Shooting Star, Dodecatheon meadia
White Milkweed, Asclepias variegata
White Bergamot, Monarda clinopodia
Indian Hemp, Apocynum cannabium
Culver's Root, Veronicastrum virginicum
Foxglove Beardtongue, Penstemon digitalis
White Snakeroot, Eupatorium rugosum
Robins Plantain, Erigeron pulchellus
Wild Quinine, Parthenium integrifolium
Virgin's-bower, Clematis virginiana
Virginia Sweetspire, Itea virginica
Mock-orange, Philadelphus spp.
New Jersey Tea, Ceonothus americanus
Elderberry, Sambucus canadensis
Winterberry, Ilex verticillata
Flowering Dogwood, Cornus florida

http://botgarden.uga.edu/conservation-science/georgia-native-plant-initiative/

http://georgiawildlife.com/GeorgiaBats

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
WILDLIFE RESOURCES DIVISION

State Botanical Garden of Georgia
UNIVERSITY OF GEORGIA

Using Cover Crops in the Home Garden

Robert Westerfield, University of Georgia Department of Horticulture, Extension horticulturist

Carmen Westerfield, U.S. Department of Agriculture, District Conservationist

Cover crops can be an important component to any home garden. They are used for various reasons, including building the soil, controlling soil erosion, and limiting the initiation and spread of certain diseases and insects in the soil. Cover crops are primarily used to "rest" or leave a garden area open during non-production times. Therefore, they are most often planted in the fall. However, summer cover crops can be equally effective and can provide the same benefits as a fall cover crop.

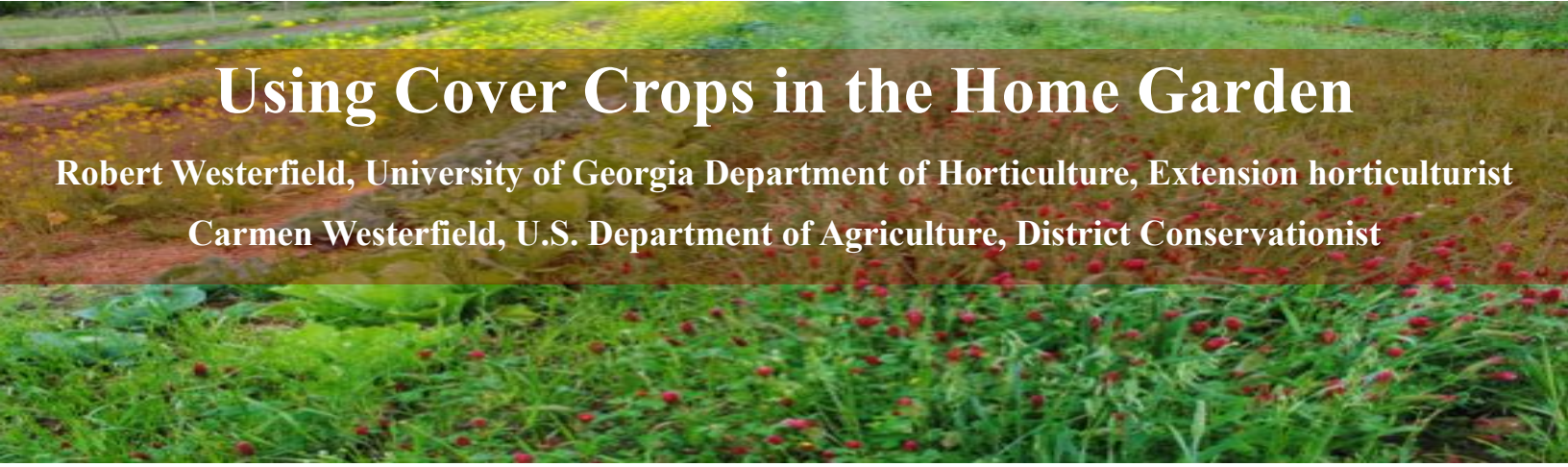
Benefits of Cover Crops

It is important to mention the benefits of cover crops and why you should consider using them in your garden. Leaving an unplanted area of your garden as bare soil can easily lead to the germination of unwanted weeds and to damaging soil erosion. Cover crops are intended to cover this bare soil and provide a cheap source of nutrition for your garden plants, when cover crops are turned under and decomposed into the soil. They also increase the organic matter of the soil, as they break down into humus. Cover crops look more attractive than bare soil and, depending on the type of cover crops you plant, can attract beneficial and pollinating insects. They can also be used between rows in your garden to help hold the soil and block weeds from germinating. Rotating between different vegetable families, as well as planting cover crops, can assist in starving out damaging soil pathogens by providing a non-host plant.. Overall, the planting of cover crops is an essential organic method of protecting your garden, building better soil and increasing production.

Selection of Seed

The time of year will determine whether you plant a cool- or warm-season cover crop. Cool-season cover crops should be established after the summer garden fades, usually from early September into the first part of October. If you are not planning on planting a winter vegetable garden, you should consider seeding your entire garden in a cover crop.

Try using a combination of a cereal grain with some type of legume. Typically, wheat, oat or rye is planted with a legume, such as clover or winter peas. The grass-type cereal grain is quick to establish and helps hold and protect the soil while the slower germinating legume crop takes hold. Legume crops have the added bonus of fixing atmospheric nitrogen, which can be used by the crops that follow when the legumes are tilled into the soil. This can help reduce your fertilizer expenses. A typical mix might be 3 to 4 pounds of a cereal grain with 0.25 pounds of a legume per 1,000 square feet. For a garden as large as an acre, you can go with 50 pounds of cereal grain and 5 pounds of clover per acre. An important consideration is the use of a legume inoculant. Specific Rhizobia bacteria invade the roots of legumes forming nodules where legumes, forming nodules where nitrogen fixation takes place.



Using Cover Crops in the Home Garden

Robert Westerfield, University of Georgia Department of Horticulture, Extension horticulturist

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These bacteria are specific for different legumes and can be purchased to inoculate legume seed prior to planting. Inoculant comes in the form of a powder and is actually live bacterial. There are specific inoculants for various types of clovers and other legumes, so be sure to purchase the correct one.

Nitrogen fertilizer should not be applied to legume cover crops as this interferes with nitrogen fixation; however, applications of phosphorus and potassium according to soil test recommendations can enhance nitrogen fixation. Be sure you do not use ryegrass for a winter cover crop. Ryegrass is different than the cereal grain rye, and it is much too competitive and difficult to eradicate.

Planting and Establishment

Cover crops establish quickly when planted on a well-prepared seedbed. Prepare the bed by removing old vegetable plants and tilling the area to a depth of 4 or 5 inches. Seed can be broadcast over the intended planting area .at the proper rate discussed earlier. It is best to test the soil prior to planting to determine the pH and fertility needs of your cover crop. Lime and fertilizer can be applied at time of planting and should be tilled into the soil just prior to spreading seed.

After the seed has been planted, lightly rake or drag the seed into the soil to establish good soil contact. Tiny seeds, such as clover, should not be buried deeply; make sure they are just barely below the soil surface. If you happen to have access to a roller or cultipacker, it is an excellent idea to go over the seedbed with such a tool to help firm the bed and increase germination. Water the newly planted area every other day for the first week or two to assist in germination. Once the cover crop is up and growing, you can cut back watering to once a week. A fully established cover crop will typically survive on rainfall alone.

Use in Prevention of Soil Erosion

One of the greatest benefits of cover crops is erosion control because cover crops reduce the amount of time soil

is left bare. Living plants and plant residue intercept falling raindrops and absorb the erosive energy of the rain

before the water reaches the soil. The cover also slows the flow of water across the surface and increases the rate at which the water soaks into the soil.

Cover crops address the management concepts of soil

health by:

- Disturbing the soil less (less is more).
- Increasing the diversity of soil biology and assuring a successful growing area by using a combination of plants**.**
- Keeping a living root system of plants growing throughout the year.
- Controlling compaction and erosion before they start.

Status and Revision History

Published on Sep 30, 2014

Published with Full Review on Jul 13, 2022

Planting Pansies Like A Pro

Stephanie Schupska, News Editor – College of Agricultural and Environmental Sciences

With their colorful faces and cold-weather tolerance, pansies are an easy landscape addition if they are installed correctly. A University of Georgia plant expert who specializes in helping Georgia's landscapers says planting like the pros is the best way to have beautiful flowers and avoid heartaches and backaches. "If you're going to spend your money on flowers, you might as well do it right," said Gary Wade, a UGA Cooperative Extension horticulturist. During his 26 years helping make Georgia more beautiful through plants, he's come up with a few pansy-planting pointers.

Top Tips

Don't plant more than you can maintain. "Annual flowers are high maintenance and require a lot of care to keep them looking their best," Wade said. Plant at the right time of year. Georgia has three pansy zones. In cooler north Georgia, install them between Sept.15 and Oct. 1. In middle Georgia, plant between Oct. 1 and Oct. 15. In warm south Georgia, wait until Oct. 15 to Nov. 1 to plant. "If you plant too early, the warm weather can make pansiesstretch and become leggy," Wade said.

Landscapers usually purchase flowers grown in 4-in. containers. These plants cost more than those grown in smaller six-packs. But because they have larger root systems, they will establish more quickly, produce more flowers earlier and be ready to weather the winter.

Lots of Color, Variety of Faces

Pansies come in a wide variety of colors. Wade suggests planting white, gold and yellow pansies with purple. Bright yellow and orange blooms go well with darker maroon and blue. The combinations are almost limitless. "There are some plants out now that are pretty much UGA red," Wade said. Pansy blooms can be solid colors, or they can have shades of pastel colors. Traditional pansies have dark centers surrounded by a lighter color (known as faced pansies). For smaller flowers, plant violas.

Planting Pansies Like A Pro

Stephanie Schupska, News Editor – College of Agricultural and Environmental Sciences

Planting Perfection

After choosing the perfect colors in larger pots and buying at the right time of year, planting is the next step toward pansy perfection, Wade said.

1. Choose a spot that gets full sun and drains well to prevent disease problems.

2. Prepare the bed. Commercial landscapers plant pansies on beds raised 6 to 12 in. above the surrounding soil. This assures good drainage and improves visibility. When re-planting old beds, remove old mulch to avoid plant diseases. Top new beds with 4 in. of organic matter (such as compost), and work it into the bed about a foot deep.

3. Broadcast fertilizer, such as 10-10-10, at a rate of 2 cups per 100 square feet over the bed. Rake it into the top 4 in.of soil.

4. Plan your bed. Lay out the plants in their pots on the bed, spacing them 8 to 10 in. apart. Rearrange the pots until you get the bed looking just right.

5. Plant the pansy bed from the inside out so you won't crush any plants. Carefully remove each plant from itscontainer, dig a hole and plant it.

6. Mulch plants with 2 to 3 in. of pine straw, pine bark min-nuggets or shredded hardwood mulch. Carefully place themulch around the plants, and brush excess mulch off the leaves, Wade said.

7. Water the plants with a hand-held hose or watering can. Once the bed is thoroughly wet, apply liquid fertilizer,such as 20-20-20 or 15-30-15, which is absorbed by both foliage and roots.

8. Keep the bed moist, but not too wet. Water between 6 a.m. and 9 a.m. "Don't water in late evening because the water won't evaporate and will encourage diseases," Wade said. Apply liquid fertilizer once a month throughout the winter.

9. Groom pansy beds once a week by removing spent blossoms and seedpods. Seedpods zap the plant's energy. Old blossoms may harbor diseases.

For more information, view this UGA Cooperative Extension publication at

pubs.caes.uga.edu/caespubs/pubcd/

Athens-Clarke County Extension

Green Thumb Lectures

2023 Free Monthly Gardening Class Series

October: Bats of Georgia

Please join us for an informative presentation by Georgia DNR Bat Conservationist, Katrina Morris on topics including

- Bats of Georgia
- The importance of protecting bats
- Inviting bats to your backward

Wildlife enthusiasts of all experience levels are welcome.

WHEN:
Thursday, October 19th
6:00 -7:30 pm

WHERE:
The Athens-Clarke County Extension Office, 275 Cleveland Rd, Bogart, GA 30529

TO REGISTER:
Please register by October 17th by visiting **www.accgov.com/gardening**

For questions:
Contact Laura Ney, Extension Agent at lney@uga.edu

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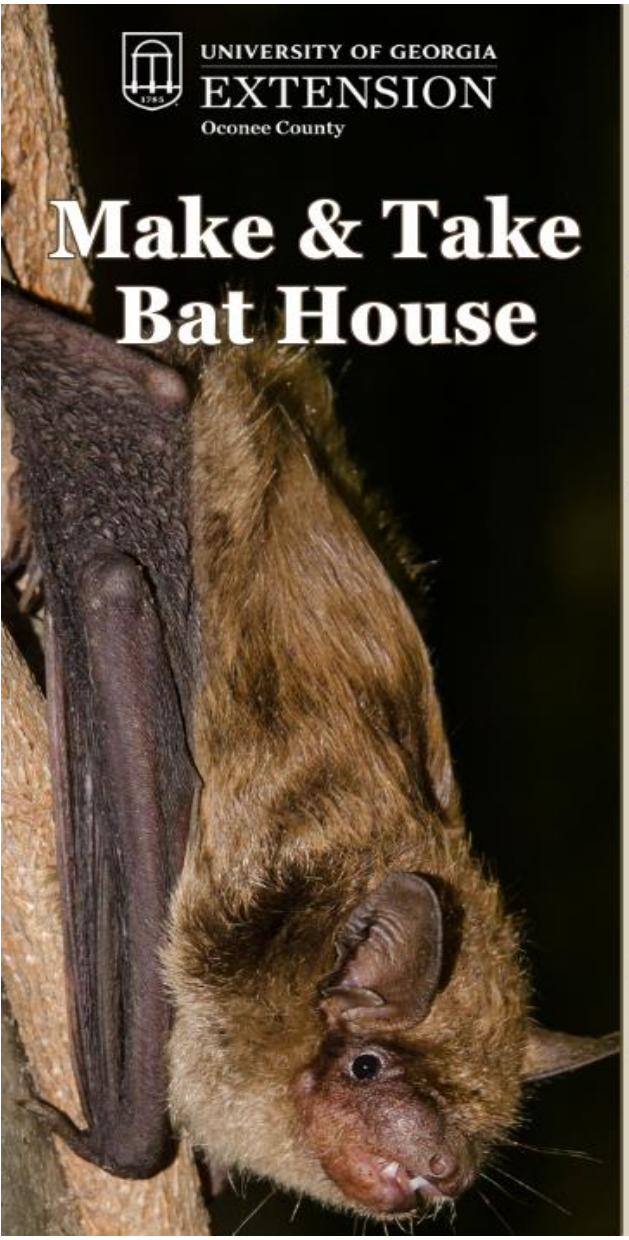

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EXTENSION
Oconee County

Make & Take Bat House

Come Build With Us!

- **Pre-registration is required**
- **Cost:** $35 per bat house
- **Date:** Saturday, October 28, 2023
- 10 bat house builds available, so register early!

QR Code →
Link to printable registration form

Registration & payment due by 10/23
Check-in: 9:30-10AM
Learn & Build: 10-11AM

Location :
Oconee County Extension
1420 Experiment Station Rd
Watkinsville, GA 30677

Coloring activities will be available for young children


VULTURE FESTIVAL
RECONNECT THE CIRCLE
Athens-Clarke County Solid Waste
2023
SATURDAY, OCT. 14TH, 2023, 8 A.M. TO 12 P.M.
ACC Landfill Outdoor Classroom
5700 Lexington Rd.
Winterville, GA
FREE FUN FOR THE ENTIRE FAMILY!
FUN EDUCATIONAL ACTIVITIES | FACILITY TOURS | SCAVENGER HIKE
BIRDS OF PREY LIVE PERFORMANCE | BIRD WALK
Oconee Rivers
Audubon Society
accgov.com/vulture
Athens-Clarke County
Solid Waste
Department

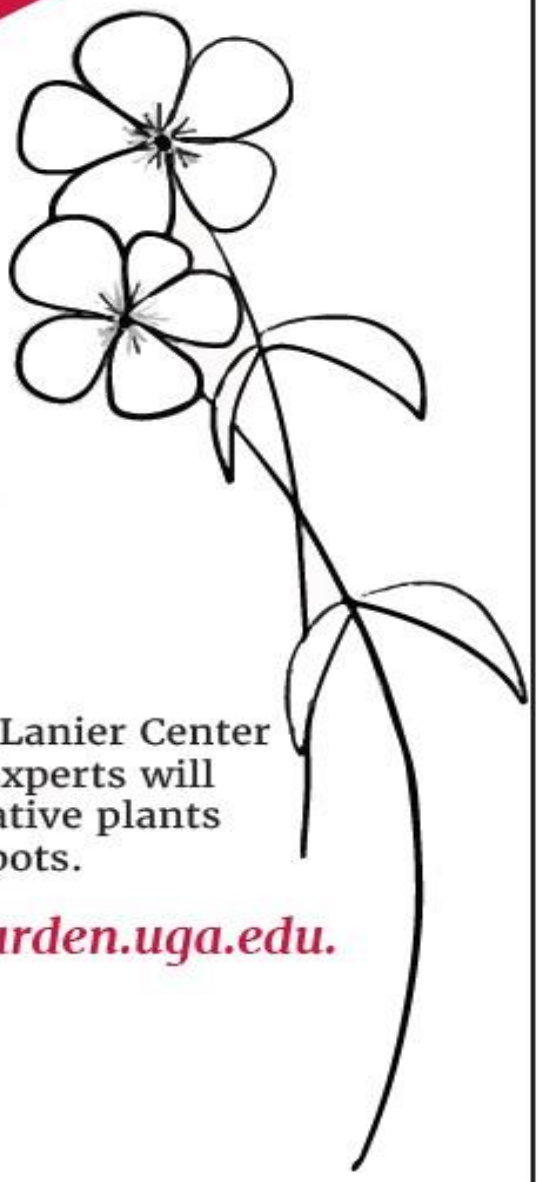
12TH ANNUAL

NATIVE PLANT SALE




OCT. 5-7 AND 12-14

Thursday & Friday: 4–6 p.m.
Saturday: 9 a.m.–noon



Join garden professionals at the Mimsie Lanier Center for six days of on-site plant shopping. Experts will answer questions about incorporating native plants into every space, from large gardens to pots.

See details and a plant list at botgarden.uga.edu.

State Botanical Garden of Georgia
UNIVERSITY OF GEORGIA

Local October Events

Green Thumb Lecture Series

Wednesday, October 18th

6:00 PM—7:30 PM

Bats of Georgia

Athens-Clarke County Extension Office

275 Cleveland Road

UGA Extension offices around the state are working hard at developing quality online presentations on various topics.

Visit the UGA Extension event calendar to see events happening local to our county as well as virtual opportunities.

ACC Solid Waste Department Vulture Festival

October 14

ACC Outdoor Classroom

5700 Lexington Road

North Georgia Folk Festival

October 7, 11:00 am—dark

Sandy Creek Park

400 Bob Holman Road

West Broad Market Fall Festival

Trick or Treat, costumes, seasonal crafts, live music and a haunted house!

Saturday, October 28th, 2023

11:00 AM—2 PM

300 S. Rocksprings St.

Athens, GA

Diamond Hill FarmStand

Every Thursday, 4-6 pm

Vegetables and fresh flowers are available on hand and pre-ordered. Every Thursday, 4–6 p.m. at Athentic Brewing Company.

www.diamondhillfarmathens.com

Jack-O-Lantern Jog and Goblin Fun Run

Sunday, October 29th, 2:00 pm

Sandy Creek Nature Center

205 Old Commerce Rd.

State Botanical Garden of Georgia Native Plant Sale

October 5-7th & 12-14th

Thursday & Friday—4:00 –6:00 pm

Saturday— 9:00 am—12:00pm

2450 S. Millege Avenue

Scary, Oozy Slime Day

October 13, 6:00—8:00 pm

Sandy Creek Nature Center

205 Old Commerce Road

Critter Tales

October 14, 2:30-3:00 PM

(Second Saturday of every month)

Listen to a story about nature and watch it be brought to life

Sandy Creek Nature Center

205 Old Commerce Rd.

Local Farmers Markets

The **Athens Farmers Market** takes place on **Saturdays** from 8am-12pm at Bishop Park and **Wednesdays** from 5pm- 8pm at Creature Comforts Brewery. Be sure to visit **their website** for updates and details.

Saturday Market: Year-Round

Wednesday Market: March—November

Find them on Facebook: **@AthensFarmers-Market**

Follow them on Instagram: @athensfarmersmarket

The West Broad Farmers Market takes place on **Saturdays** from 11am– 2 pm at 300 S. Rocksprings Street and on **Tuesdays** from 5pm– 8pm at Athentic Brewing Company.

Both markets run from April 1—December 16

Visit **their website** for more information.

The **Winterville Farmers Market** takes place on **Saturdays** from 10am-2pm at Pittard Park. Visit **their website** for more information.

The market runs from April 15th– December 16th.

Find out more on Facebook: **@marigoldmarketwinterville**

Instagram: **@marigoldmarketwinterville**

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Join Athens-Clarke County 4-H!

Students in 5th - 12th grades in Athens-Clarke County can sign up for 4-H now. The mission of Georgia 4-H is to assist youth in acquiring knowledge, developing life skills, and forming attitudes that will enable them to become self-directing, productive and contributing members of society. 4-H meetings will look different this year and are online. There is no charge to be a member or participate in a competition.

To start your 4-H Adventure e-mail the ACC 4-H Agent, Elizabeth Conway, at ebarber@uga.edu today!

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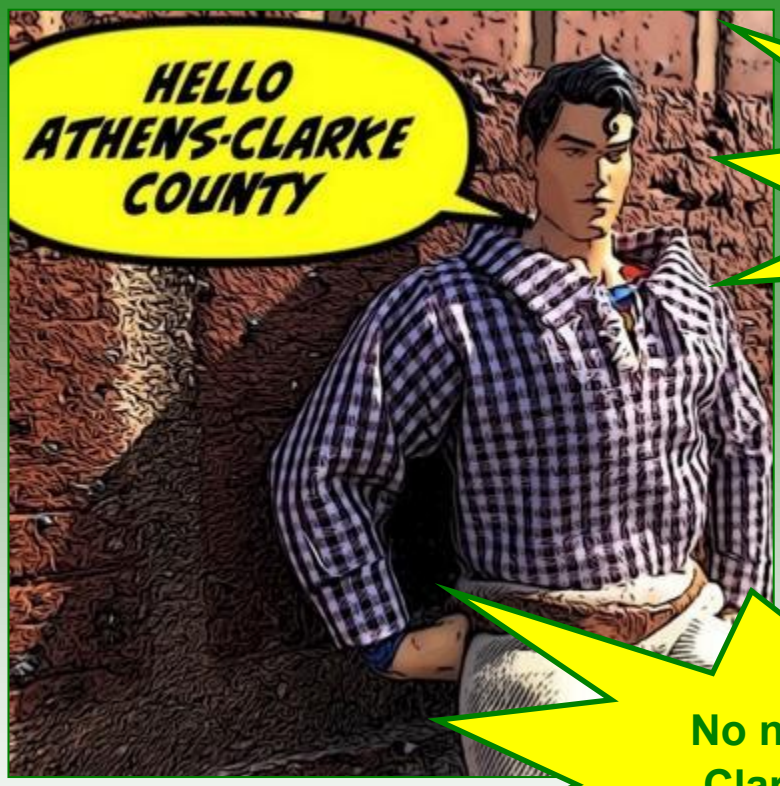
The University of Georgia is committed to the principals of equal opportunity and affirmative action.

Virtual 4-H Programs can be viewed on the ACC 4-H website:
https://tinyurl.com/acc4hvirtual





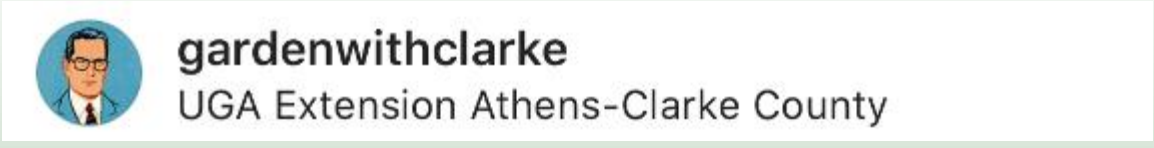


Concerned about the state of your garden?

Are weeds taking over your landscape?

No need to fear, Clarke is here!

Follow @gardenwithclarke on Instagram and learn how to battle pests, identify weeds, build your soil and so much more as you garden alongside Clarke, Athens-Clarke County's super gardener!



Helpful resources online:

Find My Local Extension Office

Bugwood— Pest Images

Landscape Alerts Online

Georgia Turf

Pest Management Handbook

Free Online Webinars

Pesticide Applicator Info

Georgia Certified Plant Professional

SE Ornamental Horticulture Production & IPM Blog

UGA Center for Urban Agriculture

Extension Publications

Athens-Clarke County Extension
Agriculture and Natural Resources

Mission Statement

The UGA Athens-Clarke County Extension's mission is to respond to the people's needs and interest in Agriculture, the Environment, Families, and 4-H/youth in Athens-Clarke County with unbiased, research-based education and information.

Visit us online:

UNIVERSITY OF GEORGIA EXTENSION

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