



Shades of Green

Athens-Clarke County Agriculture and Natural Resources Newsletter

July 2023

Included in this issue...

Articles

Programming and Resources

A Note from Athens-Clarke
County Agriculture and Natural
Resources

Pg. 2

Green Thumb Lecture: Iced Tea
Garden Tour at ACC Office

Pg. 11

The UGA Research and Exten-
sion Experiences for Undergrads
(REEU Program)

Pg. 3

Soil Texture Workshop

Pg. 12

UGA Trial Garden People's
Choice & Industry Awards

Pg. 5

Stay in the Loop! July 2023

Pg. 13

Creating Pollinator Nesting Boxes
to Help Native Bees

Pg. 7

Events

Local Farmers Markets 2023

Pg. 14

Helpful Resources

Pg. 16

A note from Athens-Clarke County Agriculture & Natural Resources

Hello readers! July flowers are brightly blooming 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



The UGA Research and Extension Experiences for Undergrads (REEU Program) Winners!

The Research and Extension Experiences for Undergrads (REEU) Program at UGA provides undergrad students with the opportunity to train with UGA researchers in hands-on laboratory and field-based research experiences in crop genetics and genomics. As a part of the program, students participated in a Service Learning and Outreach field trip to the Marigold Farmer's Market on Saturday, June 10th. Students were assigned in groups of two to a local farmer and tasked with assisting with booth setup and engaging with customers. Students were required to interview farmers and write a 1-page summary detailing their experience with the REEU program and the field trip. A total of 5 articles were submitted and a winner chosen: Cultivating future scientists at the Marigold Farmers Market

by Kim Casares and Camren Cordell. Enjoy the winning article on the next page...



University of Georgia REEU summer interns, Camren Cordell (left) and Kim Casares (middle) with Steve Chrestman (right) of Daisyfish Farm excited about their booth setup at the Marigold Farmers Market.

Below: REEU Fellows at the Marigold Market



Cultivating future scientists at the Marigold Farmers Market

Authors: Kim Casares majoring in Biology at NM State & Camren Cordell majoring in Biochemistry and Cellular Biology at Fort Lewis College

Traditional job perks include annual bonuses, insurance benefits, and vacation time. But, have you ever heard of experiencing pure bliss when getting to work and enjoying your morning coffee with a perfectly ripe strawberry straight from the vine?

This is Steve Chrestman's daily routine as co-owner of Daisyfish Farm, located in Bluestone Creek in Danielsville, GA. Daisyfish Farm is a new and upcoming local farm with the mission of maintaining soil and plant health to nourish their surrounding community with fresh organic produce.

At the local Marigold Farmers Market, students from the University of Georgia's



Daisyfish Farm started in 2021 is in Bluestone Creek in Danielsville, GA. Owned and operated by Steve Chrestman, Emily Nagle, and Christy Williams.

Research and Extension Experience for Undergraduates (REEU) summer program, hosted by the Crop Genetics and Genomics department, had the opportunity to

experience the intersection of the projects they contribute to and how they touch the community.

As Daisyfish Farm started their journey two years ago, they used the assistance of the UGA Extension Services to assess which plants were suitable for their soil type and growing region. Steve spoke with confidence when addressing the information he collected from the database. He mentioned that the ability to consult this resource streamlined the startup of the farm leading to a successful first year.

Unlike industrial crop farming, Steve uses biological pesticides, specialized for bacterial and fungal based illnesses as well as pests. He also uses soil supplements and finished compost to treat soil before planting seeds. Many of these practices follow organic farm regulations and “treatment packages” suggested by UGA Extension Services.

This was a point of interest for undergraduate students Kim Casares from New Mexico and Camren Cordell from Colorado. Both are visiting Georgia for the first time to participate in the UGA REEU program. Steve passionately explained his love for the practice of farm to table feeling “deep satisfaction in feeding people”. With a similar passion, Kim and Camren had the ability to share their backgrounds and love of crop sciences.

In the future Kim and Camren hope to have the job perk of contributing to global crop health one strawberry at a time...

Learn more about Daisyfish Farm here:

[About | Daisyfish Farm](#)

People's Choice &
Industry

Winners

UGA Trial Gardens
Open House



The Trial Gardens at UGA is part of a network of Trial Gardens around the world. Each year, the Trial Gardens receive hundreds of new introductions from the horticulture industry. Each plant is evaluated based on its performance in the heat and humidity of the Southeastern region.

On Saturday, June 10th, 2023, the UGA Trial Gardens hosted an open house for industry leaders and the general public. A vote was held to determine the top plants as nominations for the 2023 People's Choice Award. Take a look at the top three winners on the next page...



Aerial photo of Trial Gardens, UGA



Entrance to Trial Gardens, UGA

People's Choice &
Industry

Winners

UGA Trial Gardens
Open House



Thank you to all who came out to vote for your favorite plants for 2023! After tallying up the results, these plants are the top 10 favorites from June 7 Industry Open House and the June 10 Public Open House. We are excited to share the results!

Top Three Winners

Rudbeckia MiniBeckia™ 'Flame' by Garden-Choice

The bees are the true judges of which plants are the winners. This superstar has been on trial for a few seasons, and seems to keep getting better every year with perfect symmetry and powerful color!

Crocosmia NOVA® 'Gold Dragon' by TerraNova

Dramatic. Thrilling. Elegant. How does the bashful crocosmia win, compared to an overflowing basket of petunias or a bursting bed of sunflowers? If you have a moist sunny location, crocosmia will give you and your neighbors an endless supply of flowers.

Echinacea SUNDIAL™ 'Pink' by TerraNova

2023 has been the best year yet for Echinacea. With 25 new varieties in our garden beds and perfectly mild spring weather, the bed is a rainbow of color and form. SUNDIAL™ stands out in size and shape, and is the prettiest shade of pink.





Creating Pollinator Nesting Boxes to Help Native Bees

Elizabeth McCarty, UGA Warnell School of Forestry and Natural Resources

Becky Griffin, UGA Center for Urban Agriculture

Native pollinators are animals from North America that pollinate crops and many other plants. Pollination is necessary for seed production in many plants. Pollinators include mason bees, carpenter bees, bumble bees, sweat bees, wasps, hover flies, butterflies, hummingbirds, and many more. Most of the focus on pollinators revolves around honey bees, which are native to Europe, Africa, and the Middle East, but not North America, but native bees are very important pollinators. Many native bees are solitary—an individual bee lives alone, rather than nesting in colonies or hives as honey bees do. Also, if left undisturbed, native bees will not sting.

Planting pollinator-friendly flowers in your yard is a great first step for improving the quality of pollinator habitats. Adding nesting sites and nesting materials is another important measure

in creating sustainable habitats, especially for native bees. Many native bees lay their eggs in aboveground cavities. They make nests in abandoned beetle tunnels in dead logs, hollow stems, and similar locations. Unfortunately, dead wood and debris that would be useful for nesting is often quickly removed from yards. While flowers may be present, the bees are left with few locations and materials for laying their eggs.

Urbanization is a direct cause of pollinator declines (Hennig and Ghazoul 2012). Neighborhoods have developed in areas that were once forests and other natural habitats. Natural landscapes have both the floral and nesting resources needed for native bees, but in most landscaped yards, the grass is mowed short, flowering “weeds” are killed with herbicides, many landscape bushes do not bloom, and debris is quickly removed to maintain a neat and manicured appearance.

Creating Pollinator Nesting Boxes to Help Native Bees

Elizabeth McCarty, UGA Warnell School of Forestry and Natural Resources

Becky Griffin, UGA Center for Urban Agriculture

If you want to help pollinators while maintaining a neat yard, there is good news. Many of the resources that pollinators need, including nesting locations, can be attractive additions to your landscape. In Europe, nesting boxes can host over 15% of native bee species (Fortel et al. 2016). When bees have access to a diversity of nesting materials, their numbers are positively affected, so providing nesting resources in your landscape is very beneficial to bees (Potts et al. 2003).



Mason Bee Paper Tubes

Photo: Jason Fuder, UGA

Bees can use different nesting substrates. Aboveground nesting bees use materials like hollow twigs, dead wood, and paper-based bee tubes. These materials can all be incorporated into nesting boxes, or “bee hotels.”

Nesting box design can be as simple as several paper-based bee tubes secured into a bundle or one piece of untreated lumber with holes drilled into the surface. Designs can also be creative, using a multilayered structure with numerous types of nesting materials. Creating a variety of cavity sizes will attract different types of pollinators based on their body sizes.

The sides of the nesting box that do not contain holes can even be painted to add an attractive splash of color to your yard. Making nesting boxes can be a fun activity for the whole family.

Building a Bee Hotel

1. Cut untreated wood to the desired size.
2. Add a roof to the structure. A roof will help to protect the nesting sites from rain.
3. Attach the roof to the structure with a few nails.
4. Select the appropriate drill bit size, from 5/16 to 3/8 of an inch. Holes can be drilled in various sizes.
5. Check the depth of the holes, which should be about the length of most drill bits.
6. Begin drilling the holes. The number of holes depends on the size of the nesting box, but a dozen should suffice for a small nesting box.
7. Gently sand the nesting holes. Splinters can remain after drilling, but removing splinters will make the nesting box more appealing for bees.
8. As desired, paint the sides that do not have holes.
9. The nesting box is ready to be placed in your yard.



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Installing a Bee Hotel

Place bee nesting boxes in the yard during early spring so that they will be available for the first bees of the season to lay eggs. February should be appropriate for most places. Be sure that the boxes are installed at least 3 feet above the ground in a location protected from wind and rain. It is best to install the nesting boxes facing south. Secure the top and bottom of the boxes to a surface like a tree or fence. If the bottom of the box is not secured, it will blow around in the wind.



Place multiple nesting boxes throughout your yard to give bees plenty of nesting locations. The bees that use nesting boxes have one generation each year, so do not remove the nesting boxes during the winter. Leave them out and bees will exit the holes in the spring.

Nesting boxes require some maintenance. Pollinators have pesky pathogens and parasites that harm them. Once a box has been in use for a couple of years, the wood will begin to degrade and the pathogens and parasites that find the box can become a problem. Depending on your design, plan to replace nesting boxes or the wood bolts in the boxes every two years.

Once your nesting boxes are installed, it is time to relax and enjoy your pollinator visitors. Keep your eyes open for leafcutter bees and mason bees that will use the holes that you drilled in the wood. Carpenter bees may show up as well, but they will drill their own holes into the wood nesting boxes.

Leaf Cutter Bees

Females emerge in the spring and summer and begin making their nests. A single egg is laid in each cell, or hole, in the nest. The female stocks the hole with pieces of leaves and pollen to feed developing larvae. The larva is nearly finished developing in the fall and will overwinter as a mature larva. The next spring, leafcutter bees emerge as adults and begin looking for new nesting sites.



Leafcutter bees are about 0.25 to 0.5 inches long and have black bodies with light or dark hairs. They carry pollen on hairs on the underside of their abdomen. Leafcutter bees have large mouthparts to cut the leaves, but they generally do not bite or sting unless disturbed.

Creating Pollinator Nesting Boxes to Help Native Bees

Elizabeth McCarty, UGA Warnell School of Forestry and Natural Resources

Mason Bees

Mason bees received their name because they often use mud during nest construction. In the spring, male mason bees emerge first and wait for females to emerge so that they can mate. Shortly after mating, the males die. Females search for an appropriate nesting site and begin preparing the nest. A cavity or hole will have



Mason Bee nest cells

multiple cells, each of which has a single egg. The cells, between four and 10, are stocked with pollen and nectar to feed each larva once it hatches. The

female divides the cells in the cavity with plugs of mud. Unfertilized male eggs are laid toward the front of the cavity, and fertilized female eggs are laid toward the back of the cavity. A female may produce approximately five nests, and larvae develop during the year. About a month after hatching, the larva has eaten its food and begins to spin a cocoon to continue development. Adults emerge the next spring.

Mason bees are about 0.25 to 0.5 inches long. Some have dark bodies covered with pale hairs, while others are a metallic greenish-blue with less hair.

Large Carpenter Bees

Homeowners often consider large carpenter bees to be pests because they bore holes in the wood in siding, decks, and fences. Carpenter bees emerge later in the spring, and a female will begin to dig her tunnel once she has mated. Cells are stocked with pollen and nectar to feed developing larvae and wood chips are used to separate cells. Each cavity has about six to eight cells. Larvae finish development during the late summer. Adults emerge and then hibernate, usually in abandoned nesting sites, until the next year. Large carpenter bees will not use holes that are drilled into a nesting box, but they may use the nesting box to bore their own holes. Large carpenter bees have a black body with either light or dark hairs. The back legs have special hairs for carrying pollen. They are relatively large bees, 0.75 inches long or larger. Large carpenter bees are often mistaken for bumble bees because they are similar in size and appearance. They can be easily identified, however. Bumble bees have a hairy abdomen, while large carpenter bees have a glossy abdomen.



Athens-Clarke County Extension Green Thumb Lectures

2023 Free Monthly Gardening Class Series



July: Ice Tea Extension Garden Tour

Please join us for a tour with the curators of the ACC Extension Garden. During the tour, garden curators John Aitkens and Kristi Segó will share about topics including

- Planting for birds and pollinators
- Basic garden requirements and upkeep
- Using creativity in the garden

It will be warm. Make sure to bring a hat. Cold beverages will be served. Gardeners of all experience levels are welcome.

WHEN:

Wednesday, July 12th
6:00 -7:30 pm

WHERE:

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

TO REGISTER:

Please register by July 11th by visiting www.accgov.com/gardening



For questions:

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

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UNIVERSITY OF
GEORGIA
EXTENSION



Soil Texture Workshop



UGA ATHENS-CLARKE EXTENSION

Calling gardeners, farmers, and all interested to learn about soil texture and how it affects infiltration, water holding, and soil fertility!

WHEN

Thursday July 6th, 6:00-7:30PM

WHERE

Extension Office
275 Cleveland RD

COST

FREE!

REGISTER

Welcoming all experience levels and all interested in soil to

- Learn what soil texture is and why it matters to plants
- Get your hands dirty and try hand texturing!

Local June Events

Soil Texture Workshop

Instructor—Tess Thompson

July 6 6:00 PM—7:30 PM

Athens-Clarke County Extension Office
275 Cleveland Road

Athens Farmer's Market

July 19 5:00 PM –8:00 PM
(every Wednesday)

Live Music Begins at 6:00
Creature Comforts Brewery
271 Hancock Avenue

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.



Sandy Creek Nature Center

205 Old Commerce Rd.

July Friends First Friday

Christmas in July

July 7 AM—10:30 AM

State Botanical Garden of Georgia

2450 S. Milledge Ave

\$12 general admission, \$10 for members

Diamond Hill Farm Stand

July 6,13,20

4:00 PM—6:00 PM

Authentic Brewing Company
108 Park Avenue, Athens GA

West Broad Farmers Market

Tuesdays Beginning July 4th

5:00 PM—8:00 PM

Athenic Brewing Company

108 Park Avenue

Saturdays

11:-00 AM—2:00 PM

300 S. Rocksprings Rd.

Garden Tours:

State Botanical Garden of Georgia

Themes include Garden Tour Sampler, Edible Gardening, Gardens in Bloom, or A Walk on the Wild Side. To schedule, contact Andrea Fischer [@afischer@uga.edu](mailto:afischer@uga.edu) or 706-542-6195

Green Thumb Lecture Series

Ice Tea Extension Garden Series

Wednesday, July 12

6:00 PM—7:30 PM

Athens-Clarke County Extension Office
275 Cleveland Road

Local Farmers Markets



The **Athens Farmers Market** is taking place on Saturdays from 8am-12pm at Bishop Park. Make sure to visit [their website](#) for updates and details.

Find them on Facebook: [@AthensFarmers-Market](#)

Follow them on Instagram:
[@athensfarmersmarket](#)



West Broad Farmers Market

Returns to in-person markets beginning Sat. April 1—December 16

Visit [their website](#) for more information.

Find them on Facebook:
[@WestBroadMarketGarden](#)

MARIGOLD



MARKET

The **Winterville Farmers Market** is taking place on Saturdays from 10am-2pm starting May 1 at Pittard Park. Visit [their website](#) for more information.

Find out more on Facebook:
[@marigoldmarketwinterville](#)


Instagram: [@marigoldmarketwinterville](#)



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!



gardenwithclarke
UGA Extension Athens-Clarke County





Helpful resources online:

[Find My Local Extension Office](#)

[Bugwood— Pest Images](#)

[Landscape Alerts Online](#)

[Georgia Turf](#)

[Pest Management Handbook](#)

[Pesticide Applicator Info](#)

[Free Online Webinars](#)

[SE Ornamental Horticulture Production & IPM Blog](#)

[UGA Center for Urban Agriculture](#)

[Georgia Certified Plant Professional](#)

[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.

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