

Shades of Green

Agriculture and Natural Resources

E-Newsletter

October 2024

A Note from Athens-Clarke County Agriculture & Natural Resources

Hello readers!

Thank you for tuning in to our October 2024 edition of Shades of Green! This month, we have a special feature on bats in preparation for two Extension Programs taking place in October. Also stay tuned to learn how to use fall cover crops as a strategy to improve soil characteristics in the home garden.

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

Athens-Clarke County Agriculture and Natural Resources

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Athens-Clarke County

Celebrating Bats Year-Round

Heather Kolich

ANR Agent UGA Extension Forsyth County

At the end of October, bats get a week of recognition. The timing coincides with Halloween, but we should really celebrate bats all year long. Why? Because bats are very cool, very unique, and very important to ecosystems around the world. With more than 1,300 species of bats, there's a lot of diversity, but the one thing that makes bats unique is that they are the only mammal that can actually fly. Their wings are structured like a human hand – with very long fingers – and a thumb that can be used for climbing. A thin, flexible membrane covers the bones and connects to the bat's body to form wings. The order name for bats, Chiroptera, means hand-wing. Researchers have developed flapping-wing drones based on the structure and movement of bats' wings. Bats come in a range of sizes. The Golden-crowned Flying Fox is considered the

largest bat species. These fruit-eating bats of the Philippines weigh up to 3 pounds and have a wingspan of over 5 feet.

By contrast, the smallest known bat is the Bumblebee bat, with a wingspan of around 6-inches and weighing about 2 grams – less than a penny. Bumblebee bats eat insects, including flies, beetles, and spiders, within their very limited range along the Thailand-Myanmar border of Southeast Asia.



Big Brown Bats are among the most common bats in Forsyth County. They can use the thumb-like appendage on their wings to climb trees.

Photo by Leah Riley, U.S. Fish and Wildlife Service.

Celebrating Bats Year-Round

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Bats that feed on fruit and flowers play a vital role in spreading seeds to grow new trees and plants that produce foods, such as figs, cashews, and mangoes. These seed dispersals are also critical in reestablishing cleared rainforests. Bats that visit flowers provide pollination services for favorite foods such as coconuts, dates, bananas, and avocados.

By eating mosquitoes, moths, and beetles, insectivorous bats remove thousands of insects that are pests of humans and agriculture. Collectively, insect-eating bats provide over \$53 billion of organic, non-toxic pest control to farmers around the world, protecting crops such as corn, chocolate, pecans, strawberries, coffee, and cotton from damage caused by plant-eating insects.

All 16 species of bats that live in Georgia are insectivores, feeding largely on insects that fly at night. Bats use echolocation to find flying insects in the dark. While hunting, bats emit chirps that are pitched too high for

human hearing to detect. The sound waves from these chirps bounce off near-by objects. The returning sound helps bats avoid flying into walls and trees, and it also helps them locate their flying food.



Brazilian Free-tailed bats are among the 16 species of bats that live in Georgia. All Georgia bats feed on flying insects. Photo by Ann Froschauer, U.S. Fish and Wildlife Service.

Celebrating Bats Year-Round

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ANR Agent UGA Extension Forsyth County

Catching and eating an insect in the air usually isn't as simple as flying up to it with an open mouth. Instead, the capture requires quick and acrobatic flying skills. After locating a moth or beetle, the bat flies toward it. When she comes into range of the insect, the bat curls her tail forward under her body, scooping up the bug and spooning it into her mouth. Sometimes the maneuver causes bats to somersault through the air. Bats can also use their wings to direct a bug into their tail membrane. Considering that a single bat can eat hundreds to thousands of insects each night, catching the evening meal requires a lot of stamina, too. Watch this video from the National Park Service, a red bat catching a moth: <https://www.nps.gov/media/video/view.htm%3Fid%3DD94DF11C-1DD8-B71B-0B6D7DA329EB250D>.

Some bats hunt rodents and birds. There's even a species of bat that goes fishing. The Greater Bulldog Bat uses its long toes and claws to snatch fish from lakes in the tropics

of South America.

Unfortunately, bat populations are declining worldwide. A disease called White Nose Syndrome is a major cause of decline for bat species that live in caves. Habitat loss has impacted bats that roost in trees. Wind power turbines also kill bats and birds.

We can do some things to protect bats, starting with learning how important bats are to local ecosystems and sharing that information with others. We can make some changes in landscaping to provide habitat for bats. We can plant bat-friendly gardens that include native flowering plants, shrubs, trees, and grasses that attract night-feeding moths and beetles. Visit the Georgia Department of Natural Resources "Bats of Georgia" website (<https://georgiawildlife.com/GeorgiaBats>) for more information on bat conservation.



If you are interested in learning more about bat behavior and would like to see a bat habitat in action, please visit the ACC Extension Bat House Display! This is located behind our Demonstration Garden at 275 Cleveland RD, Bogart GA 30622



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BAT CHAT & BUILD

Come learn about Georgia's native bats and build your own bat house (optional)

- ✦ Why are bats important?
- ✦ What threats are they facing?
- ✦ How can we support them?

✦ **When:** October 22nd, 6-8pm

✦ **Where:** Athens-Clarke County Extension Office
275 Cleveland Rd
Bogart, GA 30622

✦ **Program admission free but RSVP required**
Optional bat house build: \$40 per box
Fee goes toward program & professional development

✦ **RSVP & pay by October 16th**
Call 706-542-7078 to RSVP



Questions?

Contact

Athens-Clarke Extension:
706-613-3640

OR

Oconee County Extension:
706-542-7078

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution.

If you are an individual with a disability who may require assistance or accommodation in order to participate in or receive the benefit of a service, program or activity of UGA, or if you desire more information, please contact us.

Using Cover Crops in the Home Garden

Bob Westerfield, Extension Horticulture Specialist

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.



Using Cover Crops in the Home Garden

Bob Westerfield, Extension Horticulture Specialist

An important consideration is the use of a legume inoculant. Specific *Rhizobia* bacteria invade the roots of legumes, forming nodules where nitrogen fixation takes place. 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.

Summer cover crops can also be beneficial when you need to rest an area of the garden yet protect the soil from erosion and invasive weeds. Typical summer cover crops include buckwheat, millet, cowpeas, sorghum-sudangrass or soybeans. Depending on your selections, they should be planted at a rate of 1 to 5 pounds of seed per 1,000 square feet. They can be planted as a single cover crop or mixed in any combination; reduce the planting rate appropriately when mixing seeds.

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.



Crimson Clover

Using Cover Crops in the Home Garden

Bob Westerfield, Extension Horticulture Specialist

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 erosion and compaction before they start.



Local October Events

Bat Chat & Build

Tuesday, October 22nd, 2024

6—8 p.m.

ACC Extension Office

275 Cleveland RD, Bogart GA 30622

Come learn about Georgia's native bats and build your own bat house (optional).

Why are bats important? What threats are they facing? How can we support them?

Program admission is free but RSVP required to 706-542-7078. Optional bat house build is \$40 per box. RSVP and pay by October 16th.

Lunch and Learn: Vermiculture

Wednesday, October 9th 12—1 pm

Virtual— email Brooklyne.wassel@uga.edu to receive the zoom link.

Join Pike County Extension to dive into homesteading skills with monthly, virtual Lunch and Learns on the second Wednesday of each month. "Vermiculture" will be lead by UGA Extension Agent Josh Fuder.

Gardening to Attract Butterflies and Hummingbirds: Parts 1 and 2

Part 1: October 10th, 2024 6—7 PM

Part 2: October 24th, 2024 6—7 PM

Virtual: <https://extension.uga.edu/calendar/event/23227/gardening-to-attract-butterflies-and-hummingbirds-part-2.html>

Attracting butterflies and hummingbirds to your garden can be fun and rewarding! Forage considerations such as promoting native species in various shapes and colors are key to building a successful butterfly and hummingbird garden for these nectar-seekers. Learn from Lisa Klein as she walks you through some basic pollinator biology and how to design-and group plants to help these colorful

Oconee County Bat Festival

Monday, October 14th

3— 7 PM

Heritage Park

2543 Macon Hwy, Watkinsville, GA

Discover GA's bats, see museum specimens, participate in bat costume contest, talks by bat experts, kid activities, display by local artist. Admission is free: contact Oconee County Extension, 706-542-7078

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.

Fright on the Firefly– Trick or Treat Trail

Saturday, October 26th, 2024

4—6 PM Dudley Park

Fun ride (4:30pm), Kids Story Stroll (5pm), Pumpkin Egg Hung (5:45), Free Sweets, Health and Wellness Tabling Vendors, Games, and more! Rain date: 10/27, 4—6 pm

ACC Trails & Open Space

The Bostwick Cotton Gin Festival

Saturday October 26th, 2024

9:00—3:00 p.m.

Bostwick, Georgia

The City of Bostwick will host the Cotton Gin Festival on Saturday, October 26, 2024, from 9:00am until 3:00pm with the tractor parade at 11:00am. Bostwick's Cotton Gin is one of the few operational gins in Georgia and Saturday, during the Festival, is the ONLY time of year it's open for public tours. The day is filled with cotton-ginning, a parade of 100 or more tractors and antique cars, arts and craft ven-



**UNIVERSITY OF
GEORGIA**
State Botanical Garden
of Georgia



Join us for our 13th annual Native Plant Sale!

OCT. 10-12

Thursday and Friday
2-6 p.m.

Saturday
9 a.m.-2 p.m.

Join garden professionals at the Mimsie Lanier Center for 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.



October 14th 3-7PM

Heritage Park

**2543 Macon Hwy
Watkinsville, GA 30677**



-  Discover Georgia's bats
-  Talks by bat experts
-  Museum specimens
-  Kid activities
-  Bat costume contest
-  Display by local artist

ADMISSION IS FREE!

Questions? Contact Oconee County ANR Agent, Carsen Dean
706-542-7078 crd72388@uga.edu

Athens Seed Lawn & Garden



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An Equal Opportunity, Affirmative Action, Veteran, Disability Institution.

If you are an individual with a disability who may require assistance or accommodation in order to participate in or receive the benefit of a service, program or activity of UGA, or if you desire more information, please contact us.

Local Farmers Markets



The **Athens Farmers Market** is running year-round on Saturdays from 8am-12pm at Bishop Park, and Wednesdays from 5pm-8 pm at Creature Comforts. Make sure to visit [their website](#) for updates and details.

Find them on Facebook:

[@AthensFarmersMarket](#)



West Broad Farmers Market

Will hold markets beginning Saturday, **April 20—December 15th, 2024** from 11 am-2 pm in the West Broad Neighborhood, and on the 2nd and 4th Tuesday of the month at Authentic Brewing Company in Normaltown.

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

Find them on Facebook:

[@WestBroadMarketGarden](#)

MARIGOLD



MARKET

The **Marigold Market** is returning on Saturdays 9 am—1 pm at Pittard Park starting April 6th. The Monday Marigold Market (& Café) offers fresh produce and seasonal soup specials year-round, 9 am—3 pm weekly at the Historic Pittard Bank Building. 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!



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UGA Extension Athens-Clarke County





Helpful resources online:

[Find My Local Extension Office](#)

[Georgia Turf](#)

[Free Online Webinars](#)

[Pest Management Handbook](#)

[Pesticide Applicator Info](#)

[Georgia Certified Plant Professional](#)

[Bugwood— Pest Images](#)

[UGA Center for Urban Agriculture](#)

[Extension Publications](#)

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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:



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