

We hope you are enjoying the SC 4-H Honey Bee Project! Have you been filling out your record book? You should be filling out your 'Nectar Flow' section and making progress on your 'Maintaining your Project Hive' & 'Mastering the Art of Beekeeping.' The Bee Cause Book of the Month Challenges are things that you can put down in this section!

South Carolina 4-H Honey Bee Project



Celebrate National Pollinator Week!

June 20 - 26, 2022

National Pollinator Week is an annual event celebrated worldwide in support of pollinator health! Raise awareness for pollinators and what we can do at home to protect them! How will you celebrate?

www.pollinator.org

Show us how you are celebrating National Pollinator Week by tagging us online at our South Carolina 4-H Natural Resources Facebook Page or by emailing us a picture! You can even post to Padlet! Participants will be entered to win a random drawing for a pollinator prize packet!

Vol. 01. 3 Newsletter

Feed the Bees

Golden Rod

Goldenrods are one of the most important late season pollinator plants! They attract specialist bees such as mining bees, polyester bees, and long horned bee!

Cardinal Flower

Cardinal flowers are exceptional bumble bee plants! Coming in red or blue, they feature showy flowers and thrive in partial shade along with damp soil, making them excellent for rain gardens!

Magnolia

The Magnolia attracts many bees, including honey bees! They grow best in rich, slightly acidic soil and some are deciduous while others are evergreen.

Aster

Aster is another late fall food source for bees! They can help bumble bee queens build up energy reserves for the winter! They come in white, pink, blue or purple, and are well adapted to upland or wetland conditions including sunny meadows.

Do you have food to feed your bees?

Learn the native species around your hive to understand where your bees are feeding!

seek

by iNaturalist

Tech To-Go

The free phone app Seek by iNaturalist enables users to identify plants and more using photo recognition technology of photos they take!

Calendar of the Hive

Spring	Early Summer	Late Summer/ Early Fall	Winter
Queen lays eggs Overwintered workers start finding food	Eggs emerge and mature Workers are foraging at full force	Foraging slows Newly hatched queens leave to form new colonies Relocation of hive may occur via swarming	Hive in dormancy Overwintering workers surround the queen to keep her warm

Adopted from pollinator.org
Learn more here

No Trespassing!

Like people, bees can get sick! Investigate some of the threats to the hive

<h3>Mites</h3> <p>Small arachnids (eight-legged arthropods) related to spiders and scorpions.</p> <p>Spotlight Issue: Varroa mites They attach to bee larvae and suck hemolymph (invertebrate blood), causing weak and potentially deformed bees.</p> <p>Others: Tracheal mites Free from State Extension and University of Georgia</p>	<h3>Viruses</h3> <p>Non-living infectious microbes that require a host cell to reproduce.</p> <p>Spotlight Issue: Deformed Wing Virus Often spread by Varroa mites, the infected bees have distinctively damaged wings as well as small bodies and diminished energy.</p> <p>Others: Sacbrood Virus Paralysis Virus Black Queen Cell Virus Free from State Extension and University of Georgia</p>
<h3>Bacteria</h3> <p>One-celled organisms that can be helpful (gut microbes) or harmful (C. botulinum).</p> <p>Spotlight Issue: American Foulbrood Long-lasting toxic contamination that impacts larvae (the brood), causing them to die before they can emerge.</p> <p>Others: European Foulbrood Free from State Extension and the University of Georgia</p>	<h3>Insects</h3> <p>Six-legged animals with a hard exoskeleton and antennae.</p> <p>Spotlight Issue: Small Hive Beetle A relatively recent invasive species to American hives, the beetle larva moom honey, bee eggs, and pollen, ruining the honeycombs as they eat.</p> <p>Others: Greater Wax Moth Free from State Extension and the University of Georgia</p>

"Bee" in Action: Disease Detection

Invisible Invasion

by YouTuber Mark Rober

We can't see germs, but with powder that glows under black light, a classroom demonstrated just how far they can spread!

Black light germ video.

Spread Joy, Not Germs

Mimic a Sneeze

adapted from Arizona State University

Sneezes provide an efficient way for microbes to travel from one host to the next. The microscopic particles are rocketed further than you might expect.

Instructions

Fill a spray bottle with water
Add a few drops of Tempa paint and shake
Go outside to a safe, paved driveway or sidewalk
Mark the point where you stand, then spray
Measure how far the spray travels
Experiment with different angles and spray styles
How far could the spray go?

Bee Hive Barometer

It is important to get very familiar with your hive. Learning what is normal and what is out of the ordinary are both key to maintaining a strong colony.

Healthy Hive Checklist*

From Beekeeping Like a Girl; learn more here

Observe your bees often at different times of day
Consider keeping a photo journal

- White, curled larvae
- Abundance of royal jelly
- A covering of nurse bees over the brood
- Bees protecting the honey from intruding pests
- Ample supply of pollen (and thus strong workers)

*Note seasonal differences in production, etc.

Understanding Potential Problems:

Explore the online diagnostic tool Bee MD to learn the telltale signs of various ailments like Deformed Wing Virus and American Foulbrood

Bee MD

The Bee Cause Project: Book Club Challenge

Cloverbud Challenge #3

Check out the pages entitled How Bees Make Honey and Sweet Treats in your book.

How do bees make honey? Why do they make it? What is your favorite thing to eat with honey? Share your answers and include a drawing if you like on the Cloverbud Group Padlet.

Use the Camera app on an iPhone or iPad to scan this QR Code for a quick link to your Padlet.

Also, feel free to share positive and kind comments or other participants' answers and pictures.

Junior Challenge #3

Read through the sections about The Life of the Queen Bee. How does a newly hatched queen survive the life of the hive after the old queen has left with the swarm?

Have any of the Queen Spotting Challenges stumped you? If so, tell us what pages so we can see if we are stumped too! I'm still stumped on page 20. Share your answers and pictures on the Junior's Group Padlet.

Use the Camera app on an iPhone or iPad to scan this QR Code for a quick link to your Padlet.

Also, feel free to share positive and kind comments or other participants' answers and pictures.

The Bee Cause Project: Book Club Challenge

Senior Challenge #3

Chapter 3 is all about the "bee"navior of the colony. Question #36 deals with multiple queens in the hive. Have you had any experience with multiple queens in your hives? How did you solve the problem? Did the issue resolve itself as this book suggests? If you have pictures of your queen, we would love to see her! Show us those queens on Padlet.

Use the Camera app on an iPhone or iPad to scan this QR Code for a quick link to your Padlet. Also, feel free to share positive and kind comments or other participants' answers and pictures.

Problem accessing your Padlet Group? Email the Director of Educational Programs at The Bee Cause educator@thebeecause.org

- Junior Padlet
- Cloverbud Padlet
- Senior Padlet

South Carolina is joining the Great Georgia Pollinator Census

Starting in 2022, South Carolina residents are able to contribute as part of the Great Georgia Pollinator Census. They will be piloting our system as we work towards expanding the Census to the southeast. Let's welcome our neighbors to the east!

From Myrtle Beach to Savannah Beach. From Dalton to Charleston. Protecting pollinators one count at a time!

UNIVERSITY OF GEORGIA EXTENSION
CLEMSON UNIVERSITY

South Carolina is joining Georgia in the Great Georgia Pollinator Census! This event will take place on August 19th and 20th, 2022! There will be a FREE webinar on July 11th to learn how to participate in this fun citizen science event.

Pollinator Census Webinar

Remember to pay your 4-H membership fee by visiting <https://24honding.com>

[View this email in your browser](#)

