



# Beekeeping 101:

## A brief introduction to beekeeping

George Baker  
[george@threeriveroaksfarm.com](mailto:george@threeriveroaksfarm.com)



# Agenda



1

What is Beekeeping

2

Getting Started

3

Benefits of Keeping Bees

4

Pests and Diseases

5

A Beekeeper's Year



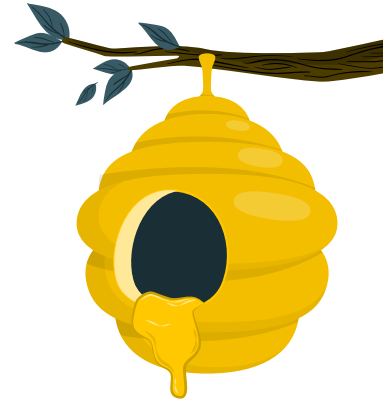


# The Good, the Bad & the Ugly





# Here's a Bee Fact



# How long do honeybees live?

	Spring & Summer	Winter
Drone	3 – 5 Weeks	N/A
Worker	4 – 6 Weeks	4 – 5 Months
Queen	2 -3 Years +-	

Source: *Hive and the Honey Bee*, P. 80





# What is Beekeeping?





# Beekeeping is:

- Fun and has lots of advantages.
- Taking care of your bees like you would a family pet or a herd of cows.
- Knowing how to keep your bees alive and healthy.



*Image Source: George Baker*








# Bees



Require an ongoing commitment. Contrary to popular belief you can't just set up a colony and forget it.



*Image Source: George Baker*



**You should strive  
to be a beekeeper,  
not a bee haver!**





# Here's a Bee Fact





**~20,000**

Species of Bees throughout the world.

**3600**

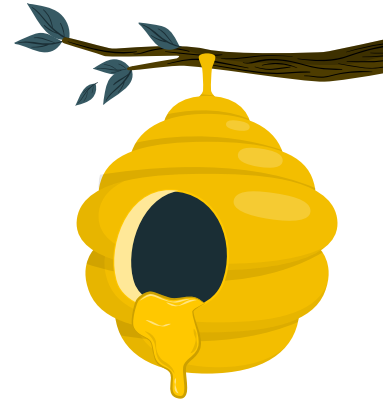
Species of Bees in North America and Mexico

**8**

Species of Honey bees

Sources: <https://www.xerces.org/endangered-species/wild-bees>  
[https://en.wikipedia.org/wiki/Honey\\_bee](https://en.wikipedia.org/wiki/Honey_bee)





# Getting Started





# What will you need?



1. A Mentor
2. Two Bee Hives
3. Bees
4. Protective Gear
5. Other Items



*Image Source: George Baker*



# What is a Mentor?



*Image Source: George Baker generated at Gemini.google.com*

## A Mentor:

1. is someone who can mean the difference between your bees living and dying.
2. will save you a lot of money and time.
3. helps makes beekeeping fun.
4. has the necessary local knowledge.
5. will only charge you a smile and a thank you.



# YouTube is not a mentor

Starting out you'll want to learn as much as you can as fast as you can. YouTube can be a great resource for that, but you need to be careful.

1. Remember, beekeeping is hyper-local.
2. What works in one area might not work in yours.
3. For at least your first year or longer, follow your mentor's lead rather than YouTube.



# What is a bee hive?



*Image Source: George Baker*

Starter hive kit – \$209  
Full Hive - \$130





# Building a Bee Hive

Inner Cover & Telescopic Cover



*Image Source: George Baker*





# Bees

1. Package - \$155
  2. Nucleus - \$199
  3. Full Hive - \$\$\$\$
  4. Swarm - Free
- (Not beginner friendly)*



Image Source: George Baker





# Protective Gear



*Image Source: George Baker*

1. Minimum of a jacket and veil - \$135 and up
2. Full Suit - Optional
3. Pants
4. Gloves – Leather vs Others
5. Veil





# Other Items

1. Hive Tool
2. Smoker
3. Feed & Feeder
4. Pest Treatment
5. And More



# Startup Cost??



**\$1000  
to  
\$1500**

Image Source:

<https://pixabay.com/illustrations/seedling-coins-jar-glass-pant-grow-8810123/>





# Here's a Bee Fact





# 1/12 Teaspoon

Amount of honey a bee makes in their lifetime.

# 64

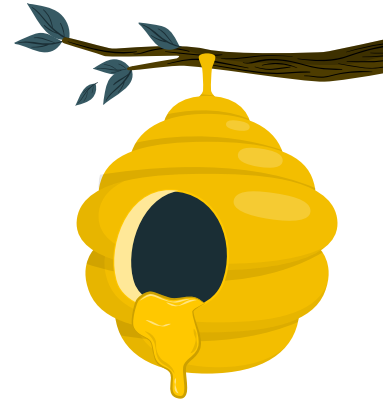
Number of teaspoons in a pound of honey

# Only one

The honeybee is the only insect that makes food for humans.

Sources: <https://www.honeyassociation.com/about-honey/honey-trivia>  
<https://blogs.ifas.ufl.edu/manateeco/2023/07/11/honey-bees-of-the-world/>





# Benefits of Keeping Bees






# Pollination



Image Source: <https://pixabay.com/photos/bee-honey-bee-insect-fauna-bloom-7413333/>

- 
1. Commercial pollination – (almonds & more)
  2. Will help your garden.
  3. Honeybees can't pollinate everything. (*Eggplant and tomatoes for example*)
  4. Without pollination, many foods that we have today would not be available.





# Honey & Beeswax

1. Sell it
2. Give it away
3. Can help you cover your costs
4. Won't make you rich



Image Source: Cyndi Baker





**Break**





# Raise Bees & Queens



1. Expand your apiary
2. Sell them
3. Replace failing queens
4. Replace dead outs



*Image Source: George Baker*





# Improve your mental well-being

1. It's relaxing
2. Teaches patience
3. Helps cure procrastination



*Image Source: George Baker generated at Gemini.google.com*







# Here's a Bee Fact






# Honey Bees in US

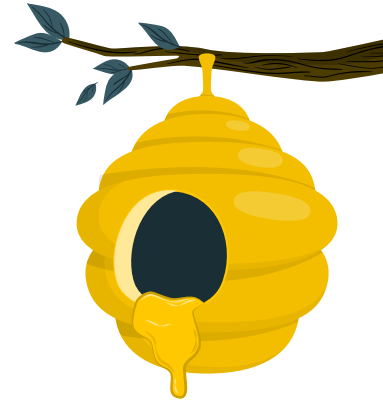
1. 2.5 million colonies in US.
  2. Estimated 125,000 to 150,000 beekeepers.
  3. Commercial Beekeepers lost 62% of their bees over the winter of 2024.
- 
- 

Sources: <https://honey.com/newsroom/presskit/honey-industry-facts>,  
<https://www.statista.com/statistics/755263/bee-colonies-us/#:~:text=This%20statistic%20shows%20the%20number,decrease%20from%20the%20previous%20year>





5



# Pests and Diseases



# Varroa Mite



Image Source: By Gilles San Martin from Namur, Belgium - Female Varroa destructor on the head of a bee nymph Uploaded by Jacopo Werther, CC BY-SA 2.0, <https://commons.wikimedia.org/w/index.php?curid=24610951><sup>1</sup>

1. First detected in Florida in 1987.
2. It's usually not the mites that kill; it's the viruses they vector.
3. Currently the Honeybee's worse enemy in the US.
4. Best way to control is to have a care plan, including monitoring and treatment.





# Small Hive Beetle (SHB)

1. First detected in South Carolina in 1996.
2. Is a scavenger. Generally, does not kill a hive but is a symptom of bigger problems .
3. A strong healthy hive can control.
4. Not as prevalent as Varroa.



Image Source: Kroll, G. eagle. (2024, May 31). CC BY 4.0 Small hive beetle (*aethina tumida*). iNaturalist. <https://www.inaturalist.org/observations/219443552>



# Wax Moth



Image Source: By Sarefo - Own work, CC BY-SA 3.0,

<https://commons.wikimedia.org/w/index.php?curid=2891248><sup>3</sup>

1. First mentioned for US in 1700's literature.
2. Like the SHB, it is also a scavenger. Generally, does not kill a hive but is a symptom of bigger problems.
3. A strong healthy hive can control.
4. Will destroy your wax if not controlled.



# Yellow-Legged Hornet (YLH)

1. First in US 2023 – Savannah, GA
2. A bee predator
3. Has been detected in SC
4. Need to stay vigilant
5. They starve out your colonies



Source: Allan Smith-Pardo, Invasive Hornets, USDA APHIS PPQ, [Bugwood.org](http://Bugwood.org)<sup>7</sup>



# Other Pests



Bears

Raccoons

Mice

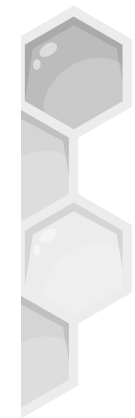
Yellowjackets





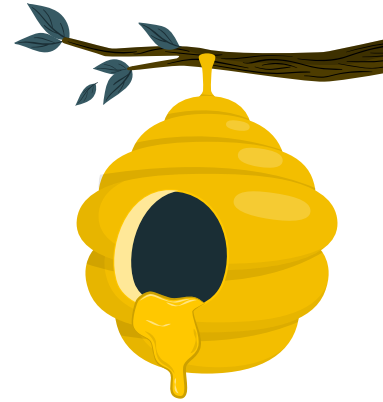
# Diseases

- Deformed Wing Virus
  - Israeli Acute Paralysis Virus
  - Sacbrood Virus
  - American Foulbrood (AFB)
  - European Foulbrood (EFB)
- 






# Here's a Bee Fact

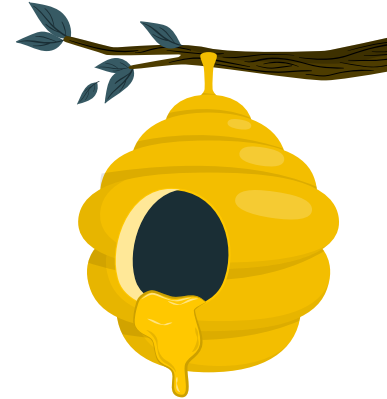




# Honeybees are very local

1. They can travel up to three miles for pollen and nectar.
  2. Your bees may be in a dearth while your friend's bees across town have plenty to eat.
  3. What works in one area doesn't always work in another.
- 





# A Beekeeper's Year

Adapted from: <https://scstatebeekeepers.com/beekeepers-calendar/>





# Late Summer

August – Mid September



1. Check mites and treat if necessary.
2. Feed colonies that need it.
3. Balance hives.
4. Requeen if necessary.
5. Inspect hives.

*Image Source: George Baker*





# Fall

Late September – Mid November

1. Feed If needed.
2. Add empty supers if needed.
3. Continue inspections.
4. Combine weak colonies.
5. Check mites and treat if necessary.



*Image Source: George Baker*





# Early Winter

Late November – December



*Image Source: George Baker generated at Gemini.google.com*

1. Repair, purchase and build equipment.
2. Feed colonies that need it.
3. Read and learn about bees.
4. Treat for mites.
5. Order bees.





# Late Winter

January – Early February



*Image Source: George Baker generated at Gemini.google.com*

1. Assemble Equipment.
2. Keep close watch on resources - most likely to starve from early February till end of March.
3. Clean up dead outs.
4. Start planning for season.
5. Keep an eye out for early blooming.





# Early Spring

Late February - March



1. Monitor for and handle swarms.
2. Check for and treat for mites.
3. Monitor blooms.
4. Watch resources.
5. Inspect hives.
6. Requeen, if necessary.



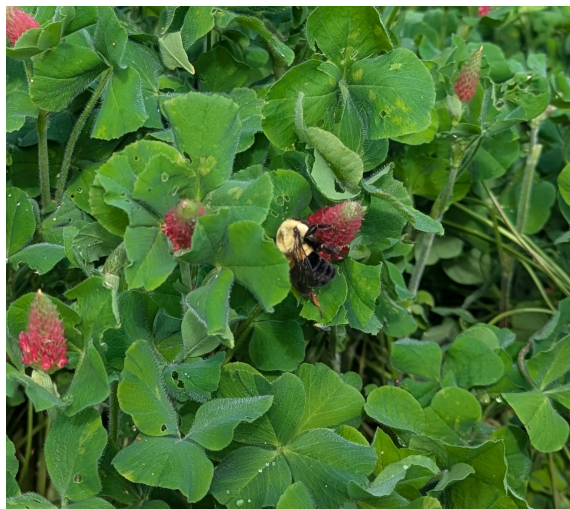
*Image Source: George Baker generated at Gemini.google.com*





# Late Spring

April – Mid June



*Image Source: George Baker*

1. Continue monitoring for swarms.
2. Add supers as needed.
3. Inspect hives.
4. Bees are making honey.





# Early Summer

Mid June - July

1. Pull supers and extract honey. Leave some for them to eat later.
2. Inspect hives.
3. Requeen if necessary.



*Image Source: Cyndi Baker*





# Next Steps

1. Join a Beekeeping Association.
2. Sign up for a Basic Bee Keeping Course.
3. Find a mentor.
4. Read as much as you can.
5. With mentor's help, order bees and equipment.



*Image Source: George Baker generated at ChatGPT.com*





# How to have a successful first year as a beekeeper



1. Keep your bees alive.
2. Don't fret if you loose bees, everybody does.
3. Have fun.





# RESOURCES

Where to find more information

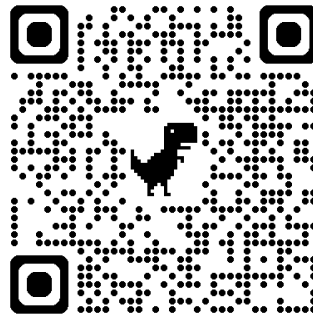
- [SC State Beekeeper Association](#)
  - [SC State Beekeeper Association Local Association Lookup Page](#)
  - [Bee Culture Magazine](#)
  - [The American Bee Journal Magazine](#)
  - [Georgia State Beekeepers Association](#)
  - [North Carolina State Beekeepers Association](#)
  - [Clemson University – Yellow Legged Hornet](#)
  - [Clemson Apiculture](#)
- 
- 
- 





# QUESTIONS?

Download this presentation



<https://www.threeriveroaksfarm.com/beekeeping/Beekeeping101.pdf>

George Baker  
george@threeriveroaksfarm.com



# References

1. By Gilles San Martin from Namur, Belgium - Female Varroa destructor on the head of a bee nymph Uploaded by Jacopo Werther, CC BY-SA 2.0, <https://commons.wikimedia.org/w/index.php?curid=24610951>
2. Kroll, G. eagle. (2024, May 31). *Small hive beetle (aethina tumida)*. iNaturalist. <https://www.inaturalist.org/observations/219443552>
3. By Sarefo - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=2891248>
4. Gemini – <https://gemini.google.com/>
5. ChatGpt - <https://chatgpt.com/>
6. Pixabay - <https://pixabay.com/>
7. Allan Smith-Pardo, Invasive Hornets, USDA APHIS PPQ, Bugwood.org <https://www.insectimages.org/browse/image/5571274>

