

Introduction to Texas Beekeeping

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Welcome to the adventure that is Texas beekeeping!

We've written this guide to assist you, a new Texas beekeeper, (NewBee) in being successful. Experience shows us that unless a NewBee gets off to a great start in the hobby/profession, he or she may give up beekeeping after only three years. THBEA and TBA want you to succeed, and that's why we have put this handy pamphlet together. Keep it in your beekeeping tool box and refer to it often to **know what to do and when to do it** in your apiary.

Texas is a large state with many diverse geographic areas. Bees don't read the maps or calendar, so you have to know and recognize the beekeeping seasons to stay ahead of them. Each panel in this brochure gives signs to look for to tell you what **beekeeping season** you are in no matter where you live in Texas. The beekeepers' year really starts with good fall season preparations and so do our panels. Keep in mind that recommended nectar/honey or pollen quantities are adequate for most of Texas; your mentor can assist you for your local area.

There is a lot to learn. Remember this one thing: "**Beekeeping is applied bee biology.**" The more you know about bees and why they do what they do, the better, and more successful, beekeeper you will be. We recommend you 1) find a mentor, 2) join a local bee association, and 3) attend beekeeping seminars and read beekeeping books and magazines. Then, apply in your own apiary what you've learned.

We wish you a great learning experience and success in your beekeeping endeavors!

Help us make this beekeeping tool even better. E-mail your tips and feedback to comments@THBEA.com. Send your questions to info@THBEA.com.

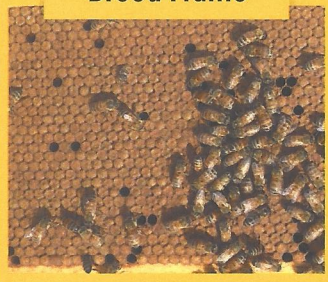
Honeybees are stinging insects. Working in and around honeybees can lead to stings, serious allergic reactions or other injuries. We highly recommend that you take a beginning beekeeping course or read a beginning book before obtaining bees or implementing the suggestions in this pamphlet.



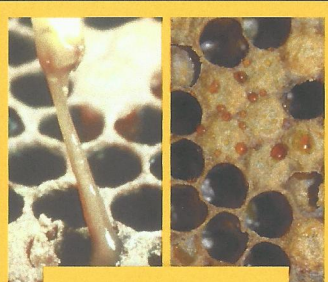
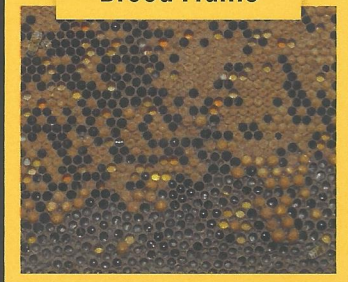
A NewBee's Guide to TEXAS BEEKEEPING

Recognize the Signs

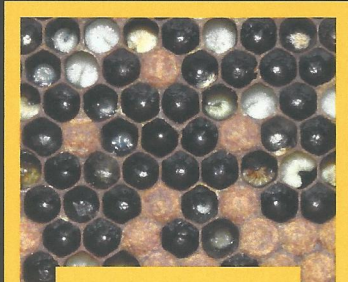
**Healthy
Brood Frame**



**Failing Queen
Brood Frame**



**American
Foul Brood**



**European
Foul Brood**

Successful Texas Beekeepers Should...

- Remember safety first:
 - Utilize protective gear to confidently enjoy working the bees
 - Utilize ventilated beekeeping suits or jackets to help you withstand hot Texas summers
 - Always use a smoker
 - Always have a friend or mobile phone nearby when working bees
 - Keep hydrated; bring water to the bee yard both for you and to put out the smoker
 - Always have a safe place nearby to get away from bees
- Maintain strong, productive hives:
 - Replace queens with poor brood pattern
 - Use local queens that show good resistance to varroa
 - Learn to raise queens and use them in splits
- Do not tolerate bees that are, for you, overly defensive; check your beekeeping technique, requeen, split the hive, come back tomorrow, or dispose of the hive
- Inspect hives regularly; consider weekly during spring, bi-weekly in summer and fall, and monthly in winter
- Maintain an inspection record keeping system
- Measure, monitor, and control varroa, bees' #1 enemy
- Locate hives in the direct sun for better pest control
- Recognize beekeeping as agriculture; consider seasons and weather
- Plant, and encourage those around your apiary to plant, bee-friendly flowering plants for all seasons appropriate for your area
- Find a mentor in a local bee association for answers
- Join the Texas Beekeepers Association (TBA)
- Know and follow Texas laws for beekeeping and honey selling

Resources and References



Texas Honey Bee Education Association (THBEA)
THBEA.com
info@THBEA.com | comments@THBEA.com



Texas Beekeepers Association (TBA)
texasbeekeepers.org



Texas Apiary Inspection Service (TAIS)
txbeeinspection.tamu.edu



Texas Master Beekeeper Program (TMBP)
masterbeekeeper.tamu.edu



Tools for Varroa Management
honeybeehealthcoalition.org

Suggested Reading

The Backyard Beekeeper
Kim Flottum

Honey Bee Biology and Beekeeping
Dewey Caron and Lawrence John Conner

The Beekeeper's Handbook
Diana Sammataro and Alphonse Avitabile

The American Bee Journal
monthly magazine
from Dadant and Sons

Bee Culture
monthly magazine
from A. I. Root and Company

The TBA Journal
bi-monthly magazine from TBA

Fall Preparations

OCTOBER | NOVEMBER



Signs of the Season

- Evening temperatures below 50°F
- Limited flower bloom

Activity in the Hive

- Brood rearing declines/stops
- Drones removed from the hive
- Long-lived winter bees produced
- Final honey flow

Beekeeper's Checklist

- ☐ Perform last varroa measurement before winter
- ☐ Decide to harvest honey or leave it for winter feed
- ☐ Ensure honey stores are at least 50 pounds per hive
- ☐ Feed sugar water if inadequate honey stores
- ☐ Look for some pollen – one or two frames
- ☐ Remove any boxes or frames of empty foundation
- ☐ Remove totally empty drawn-comb frames
- ☐ Discard empty comb frames older than 3 to 5 years
- ☐ Store empty comb with "para-moth" or in a freezer
- ☐ Condense hive to two or three boxes
- ☐ Arrange boxes and frames with pollen and nectar frames on bottom and honey on top
- ☐ Remove queen excluders
- ☐ Install entrance reducers (smallest opening)
- ☐ Attend TBA annual meeting and educational seminars

Potential Problems

- Robbing behavior – install entrance reducers
- Weak hive – combine with a strong hive

Decisions/Considerations

- Are there enough bees (at least 20 frames) to cluster?
- Where will I store removed empty comb?
- Which hive had the best queen so I can use her in queen rearing?



Varroa Mites on Bee Pupa

Over Winter

DECEMBER | JANUARY



Signs of the Season

- Daytime temperatures below 50°F
- No nectar or pollen sources
- Significant rainfall in many areas

Activity in the Hive

- No brood or only hand-sized patches
- Hive population declines to 10 frames of bees
- Cluster activity starts when temps are below 55°F
- Little flight activity when temps are below 50°F
- Queen awaits the first pollen and nectar flows to start laying

Beekeeper's Checklist

- ☐ Perform quick inspection when temps are above 60°F
- ☐ Check honey stores – at least 30 pounds per hive remaining
- ☐ Feed winter pollen patties or fondant sugar candy in hive if inadequate honey stores
- ☐ Check pollen stores – consider open-feeding pollen substitute
- ☐ Check empty comb stores and apply additional "para-moth"
- ☐ Clean and repair stored equipment for spring use
- ☐ Order bees and queens if necessary
- ☐ Read and learn from beekeeping publications

Potential Problems

- High varroa counts – treat before honey flow starts
- Queenless hives – requeen or combine with a strong hive
- Tracheal mites and Nosema present but not visible

Decisions/Considerations

- How many hives do I want to have when summer begins?
- Do I have enough equipment ready to split my hives in spring?
- What treatment(s) will I use for varroa control this year?
- Do I have my queen-rearing equipment ready?
- Where will I buy bees and/or queens if I need them?
- Will I become a Master Beekeeper this year?



Wax Moth Adult



Wax Moth Larva

Spring Buildup & Honey Flow

FEBRUARY | MARCH | APRIL | MAY | JUNE

Signs of the Season

- Evening temperatures above 50°F
- First pollen sources and early nectar flowers appear
- Bees seem to be everywhere as they search for food
- Bees line up at your external pollen feeder
- Bees coming/going faster than can be counted at hive entrance

Activity in the Hive

- Brood rearing starts and quickly ramps up
- Total bee population increases from 10,000 (1 box) to 50,000 (5 or more boxes)
- Drones appear as the colony population increases
- Bees draw comb on new empty foundation empty foundation
- Swarm queen cells may appear along frame bottom bars
- Swarm may issue from a hive taking 30–70% of the bees with the old queen

Beekeeper's Checklist

- ☐ Remove hives that died during the winter – determine cause of death
- ☐ Be ready to add boxes to hives utilizing the stored comb frames
- ☐ Inspect hives regularly and take quick action to fix problems
- ☐ Fill external pollen feeder until bees no longer collect it
- ☐ Combine queenless hives with strong hives
- ☐ Remove entrance reducers
- ☐ Consider splitting hives for increase and to reduce swarming
- ☐ Test all hives monthly for varroa and treat as necessary
- ☐ Prepare for a honey harvest with proper equipment and legal labels
- ☐ Attend TBA Summer Clinic to improve beekeeping skills

Potential Problems

- Queen loss over winter – combine with strong hive or requeen
- Monitor queen quality and laying pattern – quickly replace failing queens
- Secondary pests (wax moths and hive beetles) – have controls ready
- Varroa increases with brood production – have controls ready

Decisions/Considerations

- When will I split my hives, and what will I do with the increase?
- Where will I get queens? (purchase, rear, walk-away)
- What will I do with the honey production?
- Will I collect and utilize other products from the hive?



Summer Dearth

JULY | AUGUST | SEPTEMBER

Signs of the Season

- Daytime temperatures above 95°F
- Sparse flower bloom
- Low rainfall

Activity in the Hive

- Brood-rearing declines
- Bee population declines
- Varroa population peaks
- Nurse bees that will rear the winter bees are produced
- Nectar and honey stores decline

Beekeeper's Checklist

- ☐ Monitor honey stores; minimum 10 frames per hive
- ☐ Aggressively feed sugar water if inadequate honey stores
- ☐ Inspect hives regularly and take quick action to fix problems
- ☐ Monitor pollen stores; minimum 2 frames per hive
- ☐ Ensure bees have a nearby, constant water source
- ☐ Feed pollen patties if inadequate pollen stores
- ☐ Split hives; final opportunity
- ☐ Test all hives for varroa monthly and treat as necessary
- ☐ Replace failing queens; final opportunity for mating

Potential Problems

- Harvested too much honey – need to feed sugar water
- Weak hive – combine with a strong hive
- Failing queen – source new queen or combine with a strong hive

Decisions/Considerations

- How will I keep varroa levels low now?
- Is the hive strong enough to keep wax moths and hive beetles in check?
- Did I make the right/enough splits to help control swarming?
- What do I need to learn to be a better beekeeper next year?



Hive Beetle Larva



Hive Beetle Adult

Photo Attributions

Cover photo
Sue Farr

Queen bee and workers
Robin Young

Healthy Brood Frame
Mary Reed

Failing Queen Brood Frame
Mary Reed

American Foul Brood
Left: Vita Bee Health
Right: Bee Informed
Partnership, Rob Snyder

European Foul Brood
Bee Informed
Partnership, Rob Snyder

Wax Moth Adult
Vita Bee Health

Wax Moth Larva
Pest and Diseases Image
Library, Bugwood.org

Hive Beetle Larva
Pest and Diseases Image
Library, Bugwood.org

Hive Beetle Adult
University of Florida,
Lyle J. Buss