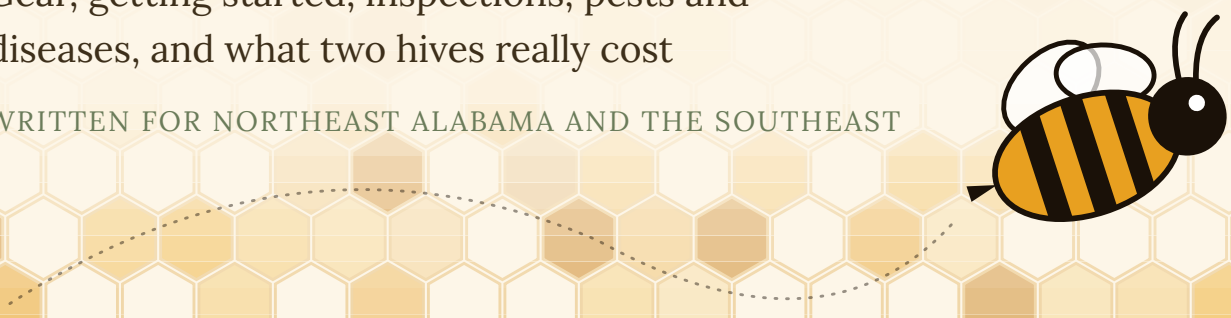
A beginner's guide

Your First Year with Bees

Gear, getting started, inspections, pests and diseases, and what two hives really cost

WRITTEN FOR NORTHEAST ALABAMA AND THE SOUTHEAST

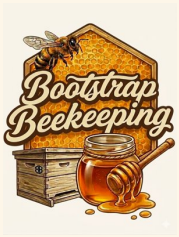


Thinking about keeping bees? Good. This guide walks you through your first year: the gear, picking a spot, getting your bees home, inspecting, keeping them healthy, what two hives really cost and how much of your time they take, including the parts nobody puts on the brochure.

It's written for someone who has never opened a hive. Any bee word you don't know is underlined the first time it shows up; tap it (or look in the Glossary at the back) for a plain-English meaning.

The calendar and local details are set for **Northeast Alabama and the Southeast** (around USDA Zone 8a); beekeepers elsewhere should shift the timing to their own seasons. Temperatures are in °F.

Prices are estimates as of November 2026 and will change. This guide is general information for hobby beekeepers. It's not a substitute for a mentor, your local Extension office or your state apiary inspector, and product labels always come first.



From **Bootstrap Beekeeping**, one beekeeper to another
bootstrapbeekeeping.com



Keep your hive notes in **Apiary HQ**, our hive-records app. It's free during its invite-only beta, and you're welcome to request an invite.
apiaryhq.com

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01

Before you start

Beekeeping is one of the most rewarding things you can do with a backyard. It's also real animal care. Bees don't need you every day, but they do need you at the right times, and a few missed weeks in spring or late summer can cost you a colony.

Here's the short version of this guide:

- **Money:** plan on roughly **$1,300 to $1,700** to set up two hives in year one, and about $150 to $400 a year for both after that.
- **Time:** about 30 to 50 hours a year, most of it from March through September.
- **Honey:** expect little or none the first year. Year one is about building strong colonies.
- **Risk:** losing a colony is common, even for careful beekeepers. Starting with two hives gives you a backup and a comparison.
- **The #1 job:** keeping varroa mites under control.

None of that is meant to scare you off. Thousands of people in Alabama do this as a hobby. The ones who stick with it are the ones who knew what they were signing up for.

> **A friendly note before you dive in:** this guide is here to give you a good feel for what beekeeping involves, so you can decide whether it's for you and know what to expect. It's a starting point, not the whole course. A beginner class, a good book or two, a local club and a patient mentor will teach you things no single guide can, and we'd gently encourage all four. Use this one as your map, and let them show you the ground.

02

How a colony works

A honey bee colony is one big family that works together like a single animal: a queen, a few hundred drones in spring and summer, and anywhere from several thousand to about 60,000 workers depending on the season. There are three kinds of bees:

- **The queen:** one per colony. She lays all the eggs, up to about 1,500 a day at her peak. She's longer than the others and often hard to spot.
- **Workers:** all female, and almost every bee you see. They clean, feed babies, build wax comb, guard the door, and fly out for nectar, pollen and water. A summer worker lives about six weeks; workers raised in fall can live up to six months, which is how the colony

makes it through winter. Workers do nearly all the stinging. Drones have no stinger, and a queen has one but rarely uses it except on rival queens.
- **Drones:** the males. Bigger, with huge eyes. They have no stinger and don't gather food; their one job is mating with queens from other colonies. The colony kicks them out in the fall.

The bees live on sheets of wax comb made of six-sided cells. The same cells are used as nurseries and as pantries. Baby bees, called brood, grow in the middle of the nest. Pollen (protein) is stored around the brood, and honey (energy) is stored at the top and edges.

The year, from the bees' side

In late winter the queen starts laying again and the colony grows fast through spring. In spring a strong colony may try to swarm: the old queen leaves with about half the bees to start a new home, and the rest raise a new queen. Summer brings the biggest population. In fall the colony shrinks and stores up honey. In winter the bees cluster together for warmth and live off what they saved. They don't hibernate.

Your job as the beekeeper is to make sure the colony has room to grow, enough food, a healthy queen, and a low mite load, at each point in that cycle.



Can you spot the queen? Look for the long bee with a reddish-brown body in the middle of the cluster, just above the gloved hand. Photo: Bootstrap Beekeeping

03

Basic equipment

Most beekeepers in the U.S. use a Langstroth hive: a stack of wooden boxes with removable frames hanging inside like files in a drawer. From the ground up, one hive looks like this:

- **Hive stand:** keeps the hive off the damp ground and at a workable height. Cinder blocks and a couple of treated boards work fine.
- **Bottom board:** the floor, with an opening at the front (the entrance). An entrance reducer is a wooden strip that makes the door smaller when the colony is small or under attack.
- **Deep boxes** (also called brood boxes): the main living space where the queen lays. Most beginners in our area run two deeps per hive.
- **Frames:** ten per box. Each holds a sheet of foundation that the bees build their comb on.
- **Honey supers:** shorter boxes added on top when the bees are bringing in more nectar than they need. This is where your harvest comes from.
- **Queen excluder** (optional): a grid the workers can fit through but the queen can't, used to keep eggs out of the honey supers.

- **Inner cover and outer cover:** the ceiling and the weatherproof roof.
- **Feeder:** holds sugar syrup for new or hungry colonies. A hive-top feeder or an in-hive frame feeder is less likely to start robbing than one at the entrance.

Tools you'll carry to the hive

- **Smoker:** a small can with a bellows that puffs cool smoke to keep bees calm. Get one with a heat guard.
- **Hive tool:** a flat steel bar for prying apart boxes and frames the bees have glued together with sticky propolis.
- **Bee brush:** for gently moving bees off a frame.
- **Mite test kit:** a jar for counting mites (see the varroa chapter).
- **Notebook or app:** for writing down what you saw. A notebook works fine. If you'd like an app, Apiary HQ (our hive-records app) is free during its invite-only beta, and you're welcome to request an invite at apiaryhq.com.

Buy new equipment rather than used. Alabama Extension warns that old boxes and comb can carry diseases like American foulbrood and pesticide residue. Painting the outside of your boxes (never the inside) makes them last for years.

04

Protective gear

Good protective gear isn't about being scared of bees. It lets you work slowly and calmly, which is what keeps them calm.

- **Veil:** the one piece you never skip. Stings to the face and eyes are the ones that matter. Most beginners buy a *jacket with an attached veil*; a full suit is hotter but covers your legs too.
- **Ventilated is worth it.** Alabama summers are brutal. Mesh ("vented") jackets and suits are much cooler than plain cotton.
- **Gloves:** leather or goatskin gloves with long cuffs. Many beekeepers go to thinner gloves or bare hands once they're comfortable; start with gloves.
- **Pants and boots:** long, light-colored pants and closed boots. Tuck your pant legs into your socks or boots; bees love to crawl up.
- **Colors:** light colors only. Bees treat dark, fuzzy things as a threat (think bears and skunks).

> **Treatments need their own gear.** Mite treatments like oxalic and formic acid call for chemical-resistant gloves and eye protection, and oxalic acid vapor needs a respirator. Always read the product label for what it requires.

Keep a sting-kit in your truck: tweezers or a card to scrape stingers, and an antihistamine. If anyone in your household has a known serious allergy, talk to a doctor before you get bees.

05

Getting your bees

There are two common ways to start:

- **A nuc** (short for nucleus colony) is a small working colony: a laying queen and five frames already full of comb, brood and food. Nucs get going faster and usually cost about $200 each.
- **A package** is about 3 pounds of loose bees in a screened box, with a queen in a separate little cage. They're cheaper (about $150) but have to build every bit of comb from scratch, so they need more feeding and grow slower.

> **Alabama rule worth knowing:** the state's "No Comb Law" bans bringing bees on comb into Alabama, so **nucs have to come from Alabama sellers**. Packages and queens can come from out of state if they have a health certificate.

For a first-timer, **two nucs from a local Alabama producer** are usually the easier start. Alabama Extension notes that nucs made the previous summer or fall ("overwintered" nucs) are better than ones put together in early spring, and suggests asking the seller about their mite treatment history. Good sellers book up, so order early: Extension suggests November or December. Packages usually arrive mid-March through April here, and nucs mid-March through early May.

Which kind of honey bee?

Every bee you can buy here is the same species, *Apis mellifera*, the western honey bee. Names like "Italian" or "Carniolan" are races (subspecies) or bred stocks. Most U.S. bees are really mixes descended from these races, so think of the names as a general personality, not a guarantee.

- **Italian:** the most used bee in the U.S., and the easiest to find. Light colored, generally gentle, big colonies and good honey producers. On the downside, they keep raising lots of brood late into the year, so they eat more of their stores, and they're known for robbing weaker hives.
- **Carniolan:** the second most popular. Dark, very gentle, and they build up fast in spring. The catch: they're quick to swarm if you don't give them room.
- **Russian:** gray bees brought in by USDA researchers for their varroa resistance; NC State Extension notes they tend to carry less than half the mites of standard stocks. They tend to keep queen cells around most of the time and manage their numbers differently, which can confuse a beginner.

- **Buckfast:** a hybrid bred in England by Brother Adam from bees across Europe and North Africa. Good housekeepers. If you let them raise their own queens for a generation or two, the offspring can turn defensive.
- **Caucasian:** very gentle with a long tongue for deep flowers, but slow to build up in spring and they gum everything up with propolis. Harder to find than they used to be.
- **Bred mite-resistant lines:** *VSH* ("varroa sensitive hygiene") bees find and remove mite-infested pupae. USDA's *Pol-line* uses this trait: in a USDA study, 62.5% of Pol-line colonies survived winter without a fall mite treatment, compared with 3% of standard colonies. *Saskatraz*, from a Saskatchewan breeding program, is selected the same general way, by breeding colonies that survive mites. These are a nice advantage, but you still count mites and treat when needed.

Most beginners start with Italians, mainly because they're the most common and easy to buy, and their easygoing nature suits a new beekeeper. Honestly, a healthy colony from a good local producer matters more than the label.

06

Choosing your apiary location

Where you put your hives (your apiary, or bee yard) matters more than most beginners expect. Look for:

- **Sun:** full sun or morning sun with some afternoon shade. Sunny hives have fewer small hive beetle problems and get the bees out working earlier.
- **Water:** a creek, pond or a shallow pan with stones or floats within a few hundred feet, year-round. Give them water before they find your neighbor's pool.
- **Easy access:** you'll be hauling heavy boxes and sugar. Drive or roll a wheelbarrow right up to the hives.
- **Good drainage and wind protection:** not in a low, damp spot. A tree line or fence on the north side helps in winter.
- **Away from people and animals:** point the entrances away from walkways, driveways, play areas and livestock pens. A fence or hedge in front makes the bees fly up and over people.
- **Forage:** bees forage well beyond your yard, so you don't need flowers next to the hives, but woods, pasture and fields with clover and blooming trees are a plus.
- **Room to work:** a few feet between hives and space beside or behind each one to stand and set boxes down.

Before you set up, talk with your neighbors, make sure nobody close by has a serious bee allergy, and check city rules or HOA restrictions. Alabama Extension notes some homeowners associations ban backyard hives. A jar of honey later goes a long way.

Set the stands up level side to side, tipped very slightly forward so rain runs out the entrance, before your bees arrive.

07

What it costs

Here's a realistic first-year budget for **two** 10-frame Langstroth hives. Some costs repeat for every hive you set up; other gear you buy once and use on every hive. Where a price depends on how lean you go, it's shown as a range from budget to typical. Sales tax isn't included.

Costs for each hive

Item	Per hive	For two hives
Dadant 10-frame Expanding Apiary Kit, assembled and painted: bottom board, two deep boxes, two medium honey supers, frames with foundation, inner and outer cover, entrance reducer[a]	$350	$700
Bees: one package (budget) or one nuc (typical)[b]	$145–$200	$290–$400
Hive stand[e]	$10–$40	$20–$80
Feeder[e]	$15–$35	$30–$70
Sugar and winter feed[e]	$25–$50	$50–$100
Mite treatments, first year[c]	$28–$40	$56–$80
Hive costs	**$573–$715**	**$1,146–$1,430**

Gear you buy once

You need one of each of these whether you keep one hive or ten.

Item	Cost
Jacket with veil[c,e]	$40–$130
Gloves[c]	$20–$30
Smoker[c]	$54
Hive tool and bee brush[e]	$15–$25
Mite test kit[c,e]	$10–$40
State hive registration (covers 1 to 9 colonies)[d]	$4
Shared gear	**$143–$283**

Year-one total

Setup	Year one
One hive (hive costs × 1, plus shared gear)	about $720–$1,000
Two hives (hive costs × 2, plus shared gear)	**about $1,300–$1,700**

Where the numbers came from (checked Nov 10–11, 2026): [a] Dadant: 10-Frame Deep Expanding Apiary Kit, assembled and painted (item C52301P), $349.95 with free shipping. [b] Mountain Sweet Honey (Toccoa, GA), 3-lb package $143 on sale ($175 regular); Foxhound Bee Company (Irondale, AL), 2027 nuc $199.99. Alabama nucs must come from Alabama sellers. [c] Mann Lake: smoker $53.99, goatskin gloves $19.99–$29.99, mite testing kit $39.99, Apivar 12-strip pack $42.95, Api-Bioxal oxalic acid from $12.99. Tractor Supply: Mann Lake vented jacket with veil $127.99. [d] Alabama Department of Agriculture & Industries, $4 a year for 1–9 colonies. [e] Rough estimate, not from a single listing.

Optional extras

- **Oxalic acid vaporizer and respirator:** about $280 (a Varrox vaporizer is $229.99 at Mann Lake, plus a respirator). Handy, not required. The cheaper "dribble" method works too.
- **Honey extractor:** skip it for now. You won't need one in year one, and many clubs lend or rent them.

After the first year

Plan on roughly **$150 to $400 a year** for both hives together: mite treatments, sugar, registration, and replacing worn frames or adding supers. If a colony dies, replacing it is another $150 to $210 for that hive.

For comparison, Alabama Extension's 2026 guide puts a bare-minimum first year at about $1,000 and estimates $836 to set up two colonies in two brood boxes each. Our total runs higher on purpose: it uses Dadant's assembled, painted kit with honey supers included, adds a first year of mite treatments, and allows for a full bee jacket instead of a veil alone. Unpainted kits you put together yourself, and a simpler veil, bring it closer to Extension's number.

> **About honey:** most new colonies make no extra honey in their first season. They need everything they collect to build comb and get through winter. In Alabama a colony needs at least **40 pounds** of honey stored to winter comfortably. Your first real harvest usually comes in year two, once the bees have drawn comb to work with.

08

How much time it takes

Alabama Extension estimates beekeeping takes **30 to 50 hours a year**. It's not spread evenly:

- **Spring (March through May):** inspect every 7 to 14 days. This is swarm season, and things change fast. For a full spring inspection, going through every frame, Extension suggests allowing about 45 minutes per colony, so two hives is a good hour and a half while you're learning. Your first few looks at a brand-new colony are much shorter (see "Inspecting your hives"), and you'll get quicker.
- **Summer:** every two to three weeks, plus a mite count each month.
- **Late summer and fall:** about once a month, plus mite treatment and fall feeding.
- **Winter:** mostly hands-off. Lift the back of the hive to judge its weight, add winter feed if it's light, and treat for mites when there's little brood. Most beekeepers avoid pulling frames when it's colder than about 50°F.

On top of inspections, count on time for learning, setting up and painting equipment, mixing and hauling sugar syrup, and the occasional surprise, like a swarm hanging in a tree on a Tuesday afternoon.

A good rule of thumb: open hives on calm, sunny days, around 60°F or warmer, late morning to mid-afternoon, when most of the field bees are out working.

09

Installing your bees

Have the hive set up on its stand, with the feeder and syrup ready, before you pick up your bees. Install on a calm afternoon if you can.

Installing a package

These steps follow Alabama Extension's directions.

1. Take the wooden cover off the package and lift out the syrup can the bees traveled with.
2. Lift out the small queen cage. Pull the cork from the candy end so the candy plug is exposed (leave the candy in; the workers eat through it over a few days and get used to her).
3. Fasten the queen cage flat across the top of a frame near the middle of the box, with the candy end where the workers can reach it.
4. Take four frames out of the box, set the open package upright in the gap, and put the inner and outer covers back on. The bees will walk out on their own.

5. Give them light syrup (1:1) in a hive-top or frame feeder, and put the entrance reducer on the smallest opening.
6. **Day 3:** open up, make sure the queen is out of her cage (release her gently if she isn't), remove the empty package and cage, and put the four frames back.

Keep feeding until they've drawn out most of the comb in the first box. Don't worry if bees fly around wildly at first; they're learning their new address.

Installing a nuc

1. Set the nuc box right next to (or on top of) the hive stand where it will live, and open its entrance.
2. Let the bees settle in for a few days. Extension suggests five.
3. Around day 6, move the nuc frames into the center of your deep box, **in the same order and facing the same way**, with new frames on both sides to fill the box.
4. Feed light syrup and use the entrance reducer, same as a package.

Look for eggs at your first inspection a week or so later. A nuc already has a laying queen, so this is just a check that she survived the move.

10

Inspecting your hives

Your first inspection

After installing a package, check on day 3 that the queen is out of her cage (see the previous chapter). Then give them a week. Around **7 to 10 days after installing** a package, or after moving a nuc into its hive, do your first full inspection. The main question is simple: **are there eggs?** Eggs mean the queen is out, alive and laying. Also check that the syrup hasn't run out and that the bees are building comb straight on the frames.

From then on, inspect every 7 to 14 days through spring. Keep your first few inspections of a new colony short, 10 to 15 minutes a hive: there are only a few frames of bees to check, and every time you open the box you chill the brood and set the bees back a little. Once the colony fills its boxes, a full spring inspection of every frame takes longer; Alabama Extension suggests allowing about 45 minutes per colony.

Lighting the smoker

Pack the smoker with pine straw, burlap or cotton fuel, light it, and pump the bellows until it's burning well. Then pack more fuel on top so it makes **cool, thick white smoke**, not flames or hot puffs. Smoke masks the bees' alarm scent and keeps them calm. Give a couple of puffs at the entrance, wait a minute, then a puff under the cover as you open it. Use it lightly; you're calming them, not fogging them.

Opening the hive

1. Stand beside or behind the hive, never in front of the entrance (that's the bees' runway).
2. Take off the outer cover and set it upside down on the ground as a place to rest boxes.
3. Pry up the inner cover with your hive tool.
4. Remove an outside frame first; it usually has fewer bees and gives you room to work.
5. Lift each frame straight up, slowly, and hold it over the box so a dropped queen lands back home.
6. Put every frame back in the same order and facing the same way.

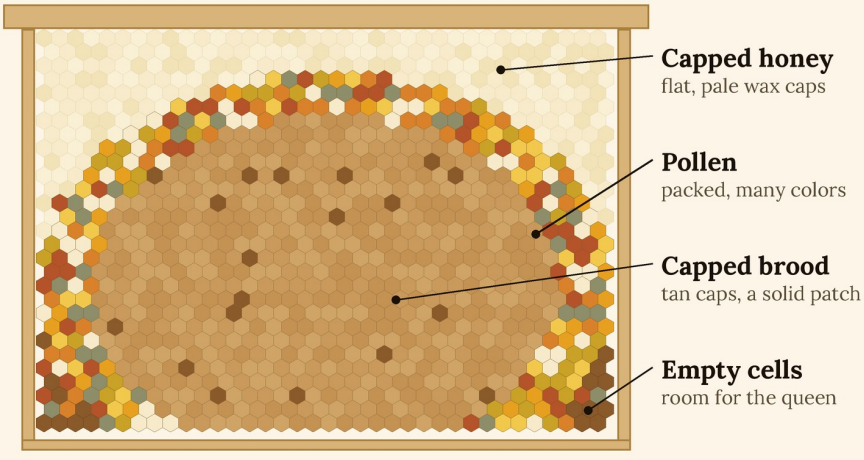


Looking down into an open box. Each wooden bar is the top of a frame. Photo: Bootstrap Beekeeping

Reading a frame

A healthy brood frame looks like a rainbow: a band of capped honey across the top, a ring of colorful packed pollen below it, and brood in the middle. Learn to spot:

- **Eggs:** tiny white grains, like a grain of rice standing on end in the bottom of a cell. Tilt the frame toward the sun to see them.
- **Larvae:** white, C-shaped grubs curled in the cells.
- **Capped brood:** tan, slightly domed wax caps. A good queen makes a solid patch with few empty holes.
- **Pollen:** cells packed with yellow, orange, red or gray powder.
- **Nectar:** shiny liquid in open cells.
- **Capped honey:** flat, white wax caps.



A simplified drawing of a healthy brood frame. Real frames are messier, and the two sides of one frame can look different.



Capped honey. Photo: Bootstrap Beekeeping



Capped brood. Photo: Bootstrap Beekeeping

What to look for on every inspection

1. **Is there a laying queen?** You don't have to find her. Eggs or young larvae mean she was there in the last few days.
2. **Is the brood pattern solid?** Lots of scattered empty cells can mean a failing queen or disease.
3. **Do they have food?** Look for honey and pollen.
4. **Do they have room?** If most frames are full of bees, add a box.
5. **Any swarm cells?** In spring, peanut-shaped cells hanging off the bottom of frames mean they're planning to swarm. Get help from your mentor fast; you have days, not weeks.
6. **Any pests or odd brood?** Small hive beetles are common here. Sunken, greasy-looking caps or a sour smell are worth a call to the state apiary inspector (see the pests and diseases chapter).
7. **How do they act?** Calm is normal. Suddenly hot-tempered bees can mean they're queenless or being robbed.

> **Found swarm cells and no mentor yet?** A simple split buys you time. Move the frames with swarm cells, the bees on them and a frame of honey into a spare box with its own bottom and cover (a nuc box works). Make sure the queen isn't on the frames you move. She stays in the original hive, so give her an empty frame or two to fill. The split raises a new queen from those cells. Utah State University Extension notes that splitting ahead of swarm season can help reduce the effects of swarming, but that some splits fail, so check on it in a couple of weeks and be ready to buy a mated queen if it doesn't take.

Write down what you see every time, even just a few lines. Patterns only show up when you can look back.

Good habits

- Wear light colors and your veil, every time.
- Skip perfume and strong scents. Move slowly and keep your hands steady.
- If a hive gets really defensive, close it up calmly and try another day.

11

A year with bees in Northeast Alabama

This is a typical year in Northeast Alabama. Weather shifts it a week or two either way, so let the bees and the blooms be your clock. Swarm season runs about March through May, the summer dearth hits in July, the key mite treatment is in August and September, and winter is the quiet stretch for an oxalic acid treatment.

January
The bees: Clustered for warmth. The queen starts laying again late in the month.
Your jobs: Lift the back of each hive to check weight; add fondant if light. Oxalic acid mite treatment while there's little brood. Build and paint gear for spring.

February
The bees: Red maple and early pollen. The colony starts growing.
Your jobs: First quick look on a warm, calm day (60°F+). Pollen substitute if needed. First mite count late in the month. Some overwintered nucs are ready by late February.

March
The bees: Fast growth. Swarm season begins.
Your jobs: Install packages and nucs (mid-March on). Inspect every 7–10 days. Feed new colonies 1:1 syrup. Add the second deep when about 7 of 10 frames are covered with bees. Mite count on established hives.

April
The bees: Peak swarm season. The main nectar flow gets going.
Your jobs: Inspect every 7–10 days and watch for swarm cells. Give strong colonies room; put honey supers on established hives. Mite count.

May
The bees: Main nectar flow.
Your jobs: Keep adding room. New colonies keep building comb. Mite count.

June
The bees: Flow tapers off.
Your jobs: Harvest from established hives (usually not in year one). Mite count.

July
The bees: Summer dearth: little nectar, lots of heat.
Your jobs: Reduce entrances to prevent robbing. Make sure water is nearby. Feed if light. Watch for small hive beetles. Mite count.

August
The bees: Colony shrinks; mite numbers peak.
Your jobs: Take supers off. Mite count, and treat if at or over 2%. This is the most important treatment of the year.

September

The bees: Fall flow (goldenrod, aster).

Your jobs: Recheck mites a few weeks after treating. Feed 2:1 syrup if light. Hive registration renews (certificates expire September 30).

October

The bees: Raising the long-lived winter bees.

Your jobs: Feed toward winter weight (40+ lb of stores). Entrance reducers and mouse guards on. Mite count to check that the fall treatment worked.

November

The bees: Quiet.

Your jobs: Check weight. Last syrup while it's still warm. Order next spring's bees.

December

The bees: Little or no brood.

Your jobs: Oxalic acid treatment window (December–January). Fondant if light. Take a class and read up.

12

Varroa mites and treatment options

If you remember one thing from this guide, make it this: **varroa mites are the biggest threat to your bees.** They're tiny reddish-brown parasites, about the size of a pinhead, that feed on bees and spread viruses. Every colony has some. Left alone, the mite population grows all summer and usually kills the colony by the following winter or spring. In a USDA study, only 3% of ordinary colonies survived the winter when they got no fall mite treatment.

Count them every month

You can't judge mites by looking. You have to count. The Honey Bee Health Coalition's *Tools for Varroa Management* (9th edition, 2026) recommends sampling **about 300 bees (roughly ½ cup)** from a brood frame, monthly from early spring through fall, using an alcohol wash or sugar roll. Using fewer bees won't give an accurate count.

The math is easy: divide the number of mites by 3 to get mites per 100 bees. Three mites in a 300-bee sample is 1%. Six is 2%.

When to treat

Colony stage (rough NE Alabama timing)	Treat when the count is
Winter and early spring growth (about Nov–Apr)	1% or more (3+ mites per 300 bees)
Summer peak and fall decline (about May–Oct)	2% or more (6+ mites per 300 bees)

Thresholds from the Honey Bee Health Coalition guide. The month ranges are an approximate local translation of its colony stages.

Common treatments

Treatment	Honey supers on?	Notes
Oxalic acid (Api-Bioxal and others)	Yes	Dribbled in syrup or vaporized. Works best when there's little brood, so it fits our December–January window.
Formic acid (Formic Pro)	Yes	Pads laid on top of the brood frames. Follow the label's temperature range closely.
Amitraz strips (Apivar)	No (original)	Strips hung in the brood box. Often used in late summer once supers are off.
Thymol (Apiguard and others)	No	Made from thyme oil.
Hop beta acids (HopGuard 3)	Yes	Strips made from hops.

"Honey supers on?" per the Honey Bee Health Coalition guide (Apivar 2.0 differs from original Apivar; check the label of what you buy).

A simple plan that works here

1. Count mites once a month from February through October.
2. Treat in August, after supers come off, if the count is 2% or higher. This protects the winter bees that carry the colony to spring.
3. Recount a few weeks later to make sure the treatment worked.
4. Treat with oxalic acid in December or January, when there's little brood for mites to hide in.
5. Rotate between treatment types from year to year so mites don't build up resistance.

What if an early-spring count is high?

From about November through April the threshold is lower, 1%, because the colony is small and mites hit it harder. If a February or March count comes back at 1% or more (3 or more mites in 300 bees), treat then rather than waiting for August. Cold days and growing brood make the choice trickier than in summer, so here's a beginner-safe way to think about it, based on the Honey Bee Health Coalition guide:

- **Apivar strips** are usually the simplest choice this time of year. The guide lists no temperature limits for them, and they work while brood is in the hive. They stay in for 42 to 56 days, can't be in the hive with honey supers, and have to come out 2 weeks before supers go on, so only use them if your supers won't go on for about 8 to 10 weeks.
- **Formic Pro** becomes an option once daytime highs stay between 50 and 85°F and the colony covers at least 6 frames. It isn't ideal for newly split or nucleus colonies, which matters if you started with nucs this year.

- **Oxalic acid** works less well once there's a lot of capped brood, so a single treatment in spring often isn't enough. Some labels allow repeat treatments a week or so apart; follow yours.

If you're unsure, call your state apiary inspector or ask your club before you treat. Whatever you use, recount a few weeks after the treatment ends.

> **Safety:** the label is the law. Follow it exactly, including doses and temperatures. Oxalic acid vapor is dangerous to breathe. The Honey Bee Health Coalition guide calls for a respirator, goggles, long sleeves and long pants, and standing upwind. Goggles or a face shield are needed when mixing oxalic acid, too.

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Other pests and diseases

Varroa is the big one, but here are the other problems you're most likely to see in Alabama. The good news: a strong, well-fed colony fights off most of them on its own. Management notes below follow NC State Extension's honey bee disease guide.

Pests

- **Small hive beetle:** small dark beetles, about a third the size of a bee, that run from the light when you open the hive. A few adults are normal here. Trouble is when their grubs show up and the honey turns slimy and smells like fermenting fruit. *What to do:* keep colonies strong, keep hives in the sun, don't give a small colony more boxes than it can guard, and use beetle traps between frames. There's no in-hive chemical treatment for the larvae.
- **Wax moths:** big grubs that tunnel through comb and leave silky webbing. They go after weak colonies and stored frames, not strong hives, and they're a threat any time it's warmer than about 40°F. *What to do:* keep colonies strong, and freeze spare frames for a day or two before storing them in a cool, airy spot.
- **Ants, mice and others:** a hive stand keeps most ants off; a mouse guard on the entrance in fall keeps mice out of winter hives.

Brood diseases

- **American foulbrood (AFB):** the serious one. Capped brood looks sunken and greasy, sometimes with pinholes, and the dead larvae turn brown. A matchstick pushed into a cell and pulled out slowly draws a brown "rope" an inch or more long. The spores live for decades. *What to do:* don't move any frames, and **call the state apiary inspector**. Infected equipment usually has to be burned.
- **European foulbrood (EFB):** young, uncapped larvae die and turn brown, often with a sour smell; the remains are rubbery, not stringy. It's a stress disease, mostly in spring, and colonies can recover. *What to do:* call the inspector to confirm, don't swap frames with other hives, and help the colony with feeding or a new queen. Antibiotics now require a veterinarian's prescription.
- **Chalkbrood:** a fungus that turns larvae into hard, white or gray "mummies" you'll see in cells or on the ground at the entrance. Often shows up when brood gets chilled in cool, damp spring weather. *What to do:* there's no treatment. Keep the colony strong and ventilated; requeen if it keeps coming back.
- **Sacbrood:** a virus; dead larvae look like little fluid-filled bags with their heads curled up like a canoe. *What to do:* usually clears up on its own in a strong colony; requeen if it doesn't.

Adult bee problems

- **Viruses carried by varroa:** bees with crumpled, shriveled wings (deformed wing virus) are a sign mites are out of control. *What to do*: do a mite count and treat.
- **Nosema:** a gut parasite. Sometimes you'll see brown streaks of bee droppings on the front of the hive in late winter, but often there are no clear signs. *What to do*: keep colonies strong and well fed; a lab check is the only way to know for sure.

> **When in doubt, call.** Alabama's state apiary inspectors will look at a suspicious frame with you, and it costs nothing. Never use a product on bees that isn't labeled for them, and follow every label exactly.

Treatment options at a glance

Problem	Main tools
Varroa mites	Monthly counts; labeled miticides (oxalic acid, formic acid, Apivar, thymol, HopGuard), rotated year to year
Small hive beetle	Strong colonies, sun, beetle traps, right-sized boxes
Wax moth	Strong colonies; freeze and store spare comb properly
AFB / EFB	Call the state inspector; no do-it-yourself fix
Chalkbrood, sacbrood	Strong colony, good ventilation, requeen if it persists
Nosema	Strong, well-fed colonies

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First-year losses: the honest part

Losing a colony is part of beekeeping, and it's most likely in the first year or two, while you're still learning to read the bees.

How common is it?

- The U.S. Beekeeping Survey, led by Auburn University with Oregon State University and the Apiary Inspectors of America, found beekeepers lost **39.9%** of their colonies from April 2025 to April 2026, including **30.3%** over the winter. More than 2,300 beekeepers managing 219,000 colonies took part.
- The year before (2024–25) was worse: **55.6%**.
- Backyard beekeepers with fewer than 50 colonies lost a bigger share than commercial operations.
- Alabama Extension puts the average at about **45% a year** over the last five years.

With two hives, it's realistic to lose one at some point. Losing both happens too. That's a big reason to start with two: if one fails, the other can often give you a frame of eggs to raise a new queen, or a split to replace what you lost.

Why first-year colonies die

- **Varroa mites and the viruses they spread.** The most common cause by far, and the most preventable.
- **Starvation.** A colony that didn't store enough, or a hungry stretch in late winter or the summer dearth.
- **Queen problems.** A queen that fails or goes missing and isn't replaced in time.
- **Swarming.** Half the bees leave, and sometimes the new queen doesn't make it back from her mating flights.
- **Going into winter weak.** A small fall colony can't keep itself warm.
- **Pests and robbing.** Small hive beetles can take over a weak hive, and strong colonies will rob a weak one's honey.

How to improve your odds

- Start with strong, local, overwintered nucs.
- Count mites every month and treat at the threshold, not after you see sick bees.
- Feed new colonies, and make sure each hive goes into winter heavy.
- Check for eggs on every spring and summer inspection.
- Give them room in spring to head off swarming.
- Keep entrances small on weak colonies and during the summer dearth.

- Keep notes, and ask for help early. A mentor can usually tell what's wrong in a minute.

If you do lose a colony, try to figure out why. A dead hive tells you a lot, and nearly every experienced beekeeper has a few behind them.

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Other things to know

You will get stung

Not often if you're careful, but it happens. Scrape the stinger out with a fingernail or hive tool. Alabama Extension notes most people get local swelling, redness and itching that usually fades within 24 hours. A reaction that spreads beyond the sting site is different; see an allergist before keeping bees if you've had one. Beekeeping isn't advisable for anyone who has had anaphylactic shock from a bee sting.

Swarms

Swarming is how colonies reproduce. A hanging ball of bees is usually calm, but it means you've lost half your workforce and much of that season's honey. Giving the bees room in spring, and splitting crowded colonies, prevents most swarms.

Feeding

New colonies need sugar syrup until they've built comb. Light syrup is 1 pound of white cane sugar to 1 pound (2 cups) of warm water; fall syrup is 2 parts sugar to 1 part water. In winter, a light hive gets solid sugar fondant on top. Alabama Extension advises against entrance feeders in summer and fall, because they invite robbing.

Lifting is real work

Boxes get heavy fast. A full deep box can weigh 60 pounds or more, according to the University of Florida's bee lab, and a full medium is lighter but still a load. Lift with your legs, decide where a box will go before you pick it up, and get a second pair of hands for full boxes. Many beekeepers use mediums for honey for exactly this reason.

If a hive loses its queen

Signs of a queenless colony: no eggs or young larvae for a couple of weeks, bees that are suddenly edgier than usual, and no new queen cells. If you start seeing several eggs in one cell, or eggs that sit off-center in the cells, worker bees may have started laying. That's harder to fix, so get help.

You have two good options. You can **buy a mated queen** and introduce her in her cage so the bees get used to her scent first (Purdue Extension covers the methods). Or, if the colony is small, you can **combine it with your other hive** using the newspaper method: put a single sheet of newspaper with a few small slits on top of the stronger colony, then set the weaker, queenless box on top. The bees chew through the paper over a few days and merge peacefully. Having two hives is what makes this an option.

Watch for nearby spraying

Insecticides sprayed on nearby fields, lawns or gardens can kill your foragers. Get to know the people who spray near your hives, whether that's neighbors, a farmer or a lawn service, and ask for a heads-up before they spray. In some states you can mark your hives on a free, voluntary map called BeeCheck that applicators check. Visit fieldwatch.com to see whether your state participates. Either way, a friendly conversation with your neighbors does most of the work.

Insurance and liability

Call your insurance agent before your bees arrive and ask whether your policy covers a neighbor or visitor who gets stung. Louisiana State University's AgCenter cautions beekeepers not to count on a homeowner's policy to cover this, and separate apiary liability coverage is available.

Winter: keep them dry

A winter cluster keeps itself warm, but it also gives off moisture, and in a hive sealed up tight that moisture can build up inside. Leave some airflow. University of Florida Extension suggests a small upper entrance, a hole near the top of the top box, or a vented rim. Our winters are mild but damp, so this matters here.

Register your hives

Alabama requires beekeepers to register with the Alabama Department of Agriculture & Industries each year. It's **$4 a year for 1 to 9 colonies**, you can do it online or on paper, and certificates run through September 30. You list where your hives are kept, which helps inspectors and pesticide applicators know your bees are there. State apiary inspectors are also available to help with questions or a suspected disease.

Join a club and find a mentor

This is the single best thing you can do. The Alabama Beekeepers Association connects local clubs around the state, and most parts of the state have a local club. Clubs run classes, lend equipment, place group orders for bees, and are full of people happy to look at a frame with you.

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Is beekeeping for you?

Check the ones that sound like you:

- ☐ I can give an hour or two most weekends from March through May.
- ☐ I'm OK around stinging insects, and I don't have a known serious bee-sting allergy (or I'll check with a doctor first).
- ☐ I can spend $1,300 to $1,700 on two hives this first year without expecting honey back.
- ☐ I can accept losing a colony and learning from it.
- ☐ I have a sunny, reachable spot with water nearby, away from walkways and close neighbors.
- ☐ I'll count mites monthly and treat when the numbers say to.
- ☐ My neighbors, HOA and town rules are fine with it.
- ☐ I like learning. The bees will keep teaching you for years.

If most of those are checked, you're in good shape.

Next steps for spring

1. **Now through December:** order two nucs from an Alabama seller. Good producers fill up early and may take a deposit.
2. **This winter:** take a class (Alabama Extension has a free online Beekeeping Basics course), join a local club, and read.
3. **January and February:** buy, assemble and paint your equipment. Pick and level your hive spot.
4. **Before the bees arrive:** register with the Alabama Department of Agriculture & Industries, and buy sugar and your mite test kit.
5. **March through May:** pick up and install your bees, feed them, and inspect every 7 to 14 days.
6. **Anytime:** ask a club member or mentor if you can tag along on an inspection before your bees arrive. Seeing a frame up close beats any book.

Questions?

Ask your mentor, your local club or your Extension office. No question is too basic, and it's a lot easier to ask before a problem than after. You'll also find more free articles and tools at bootstrapbeekeeping.com.

Glossary

Alcohol wash / sugar roll
Two ways to count varroa mites. You shake about 300 bees in a jar with rubbing alcohol (or powdered sugar) to knock the mites off, then count them.

American foulbrood
A serious bacterial disease of brood. Sunken, greasy caps and a sour smell are warning signs. It spreads on old equipment; call the state inspector if you suspect it.

Apiary
A bee yard: the place where you keep your hives.

Brood
Baby bees in any stage: eggs, larvae or capped pupae.

Brood box (deep)
The tall box at the bottom of the hive where the queen lays eggs.

Candy plug
Sugar candy in one end of a queen cage. Workers eat through it over a few days, releasing the queen slowly so the colony accepts her.

Capped
Covered with a thin wax lid. Capped honey is finished honey; capped brood is a bee pupa about to emerge.

Chalkbrood
A fungal brood disease that turns larvae into hard, chalky white or gray mummies.

Colony
One family of bees: a queen, her workers and drones.

Comb
Sheets of six-sided wax cells the bees build to raise brood and store food.

Dearth
A stretch with little or no nectar coming in; here, mainly July and August.

Entrance reducer
A wooden strip that shrinks the hive entrance so a small colony can guard it.

European foulbrood (EFB)
A bacterial disease of young larvae, mostly in spring. Less serious than American foulbrood; colonies can recover.

Fondant
A solid sugar cake placed on top of the frames as emergency winter food.

Foundation
A thin sheet of wax or wax-coated plastic in a frame that guides the bees to build straight comb.

Langstroth hive
The standard U.S. hive: stacked boxes with removable hanging frames.

Nosema
A gut parasite of adult bees; often no obvious signs.

Nuc
Short for nucleus colony: a small starter colony with a laying queen on about five frames of comb.

Package
About 3 pounds of loose bees plus a caged queen, sold without comb.

Propolis
Sticky plant resin the bees use to seal cracks and glue parts of the hive together.

Queen excluder
A grid that lets workers through but keeps the larger queen out of the honey supers.

Race
A natural subspecies of the honey bee from one region, such as the Italian or Carniolan bee.

Robbing
Bees from a strong colony stealing honey from a weaker one, often during a dearth.

Small hive beetle
A small dark beetle common in the Southeast. Strong colonies keep it in check; in a weak hive its larvae can ruin comb and honey.

Split
Making a new colony by moving some frames of bees, brood and food (and a queen or eggs to raise one) into a new box.

Stock
A group of bees bred or selected for certain traits, such as Pol-line or Buckfast.

Super
A box added on top of the brood boxes for the bees to store surplus honey in. Usually shorter ("medium").

Swarm
When the old queen and about half the bees leave to start a new home. Natural, but you lose bees and honey.

Swarm cells
Peanut-shaped queen cells, usually along the bottom of frames, that show a colony is getting ready to swarm.

Varroa mite
A tiny parasite that feeds on bees and spreads viruses. The leading cause of colony loss.

Wax moth
A moth whose larvae tunnel through and ruin unguarded comb.

Learn more

Everything in this guide was checked against these sources (and the supplier pages listed under the cost table) in November 2026. They're also great places to keep reading.

- **Alabama Cooperative Extension System**: *Beekeeping Basics: Is Beekeeping Right for You?* (ANR-3239, April 2026); *Establishing a Honey Bee Colony*; and a free online Beekeeping Basics course. aces.edu
- **Honey Bee Health Coalition**: *Tools for Varroa Management*, 9th edition (2026). The go-to guide for mite counts and treatment choices. honeybeehealthcoalition.org
- **Alabama Department of Agriculture & Industries, Apiary Protection Unit**: hive registration, the No Comb Law and state apiary inspectors. agi.alabama.gov
- **NC State Extension**: *Disease Management and Guidelines for the Honey Bee* and *The Different Types of Honey Bees*. content.ces.ncsu.edu
- **USDA Agricultural Research Service**, Baton Rouge Honey Bee Lab: small hive beetle guidance and the Pol-line winter survival study (2022). ars.usda.gov
- **University of Delaware, MAAREC**: *The Colony and Its Organization* (bee biology). canr.udel.edu/maarec
- **University of Florida Honey Bee Research and Extension Lab**: *Stocks of Bees in the US* (American Bee Journal field guide series). entnemdept.ufl.edu

- **Penn State Extension**: A *Quick Reference Guide to Honey Bee Parasites, Pests, Predators, and Diseases*. extension.psu.edu
- **University of Saskatchewan**: news release on the Saskatraz breeding program (2014). news.usask.ca
- **Auburn University**: U.S. Beekeeping Survey results (2025–26), led by the Auburn Bee Center. wire.auburn.edu
- **Utah State University Extension**: *Splitting the Hive*. extension.usu.edu
- **Purdue Extension**: *Methods of Introducing Queens* (E-277-W, 2024), including signs of laying workers. extension.entm.purdue.edu
- **Dr. James E. Tew, The Ohio State University (emeritus)**: *Combining Colonies*, Bee Culture magazine. beeculture.com
- **University of Florida**: *The Langstroth Hive* (American Bee Journal field guide series) and *Overwintering Honey Bee Colonies in Northern Climates* (ENY-161). entnemdept.ufl.edu and edis.ifas.ufl.edu
- **University of Arizona Cooperative Extension**: *Honeybee Basic Biology* (2022). extension.arizona.edu
- **LSU AgCenter**: guidance on beekeeper liability insurance. lsuagcenter.com
- **BeeCheck / FieldWatch**: voluntary hive-mapping registry and list of participating states. beecheck.org
- **Alabama Beekeepers Association**: statewide group and a starting point for local clubs. alabamabeekeepers.com
- **Bee Culture magazine**: a directory of local clubs by state. beeculture.com

Prices and rules were checked November 10–11, 2026, and can change. This guide is general information for a hobby beekeeper, not a substitute for product labels or advice from your state apiary inspector.