

So, you're thinking about keeping bees. That's great! I think the world would be better off if practically everyone kept bees!

How Much Does It Cost?

When nearly a thousand beekeepers were asked what they wish they'd known prior to keeping bees, about 5% mentioned cost as one of the factors (there were often multiple factors listed). A few said this was the best fun-to-cost hobby they'd had yet, but most who cited cost said it was more expensive than they had assumed.

Keep in mind that you could keep bees with no investment, other than hard work and skills for building what you need, and luck in capturing a swarm. Keeping bees with no initial cash outlay can happen, but rarely. For the majority of us, some purchases will be necessary. Here are the assumptions:

- **You will purchase equipment** You'll use a Langstroth hive. There are other options—top bar and Warre hives are becoming increasingly popular. Langstroth though, because of its standardized approach and widespread use, is our recommendation for beginners
- **You will purchase bees**

Three Expense Groups when it comes to beekeeping

- Initial equipment investment: what you need for the housing and care of bees
- Honeybees: the actual bees
- Operating equipment: the equipment that helps you best work with your bees and optimally manage them

1. Initial Equipment Investment

Most of these expenses are an initial investment that will last for years, as would be golf clubs or a fishing boat if you're going to pursue those interests. What you'll need to invest in subsequent years will decrease, unless you add more colonies of bees.

Housing

Each colony of bees requires its own living structure, called a hive. That investment is about \$200/hive. That price varies by hive type, quantity discounts, shipping expenses, and options. This investment typically includes all the needed components of a Langstroth hive, such as a top cover, inner cover, bottom board, frames and foundation, although foundation is considered by some as optional.

Please give careful consideration to 10-frame versus 8-frame equipment, and hive body size. (A hive body is the box into which you put frames and bees.) Opting for medium boxes, versus a combination of deep and shallower boxes, has its advantages. There are pros and cons for the number of frames/box. Research and talk to other beekeepers about their preferences.

Going with all medium equipment means you only have one size to handle for the box, the frames and foundation. Many of our surveyed beekeepers said they wished they'd known about the all-medium option when they started.

Used housing? No. Yes, we sell what you need, but that's not the reason we say no. Unless you know why the equipment is available and how it was used, you may be slowly or quickly killing your honeybee investment by putting them in dangerous equipment. Used equipment may be carrying diseases that killed its previous occupants and left residues that live for years. The equipment, especially drawn wax, may also contain chemicals or a chemical build-up that will negatively impact your bees.

Hive Preparation

Beyond the hive, there are costs in hive preparation. The hive requires painting or something to protect it from the elements and a hive stand and bottom board for bottom ventilation. The hive stand may be as simple as a couple of concrete blocks, to a manufactured hive stand. We'll estimate \$20/hive, although you may already have what you need for preparation.

Apiary Preparation

There may be additional costs in apiary preparation. Some of our surveyed beekeepers said this was where they spent unexpectedly. Once they fell in love with their bees they spent unplanned funds making a friendlier, more bee-supportive area, such as extensive landscaping to include bee-friendly plants, and even including a comfortable sitting area from which to watch the apiary.

2. Honeybees

Purchasing Options

Honeybees are typically purchased in one of two ways, a package, or a nuc.

A package is generally three pounds of bees, with a separately caged queen, all in a screened box. The package bees must be moved into a hive.

A nuc is a small nucleus colony, containing typically 3-7 frames, bees already drawing comb and tending to eggs and larva, and a freed queen working to expand the colony, all in a small hive-like box. A nuc can remain in the small box for a bit.

Each has its pros and cons. I'm personally biased toward packages because, to me, being part of the package-to-thriving-hive process was head-over-heels totally fascinating. From going to the Post Office to pick up a wire "shoebox" of insects and the sea of people parting when I carried it out, to hearing that buzz and feeling the warmth of that cluster, to seeing

how, in only two short weeks, they'd began to transform sheets of formatted wax into the perfect structures that have hosted them for centuries...witnessing that remains one of my highlights in beekeeping. I have a beekeeping buddy who only purchases nucs. He wants a proven queen and a colony well underway. He doesn't want to worry about feeding the package to assist in getting started, and wondering what will happen if it is cold and rainy the first month.

One-time Investment?

Hopefully you need to buy bees only once. However, honeybees succumb to plenty these days—Varroa mite infestations, small hive beetle (SHB) infestations, hard winters, wet springs, dry summers, Colony Collapse Disorder (CCD), and plenty of beekeeper ignorance. I've known dozens of beginning beekeepers over the years; I don't know of any who haven't lost at least some if not all of their bees on any given year. I also know of only one who hasn't gotten "right back on the horse". Once you get caught up in honeybee magic, it is nearly impossible to escape their spell.

3. Operating Equipment

Operating equipment generally includes the following basics. While we suspect most beekeepers would agree with this list, there are beekeepers who say none of this is needed. Please note that a hive kit, such as those offered by Kelley Beekeeping, includes most everything you need from the following list and then some.

The cost of items in this category may vary widely due to individual preferences.

If I'd written this article five years ago, I would've listed foundation as a required start-up cost. I, and most beekeepers, still recommend foundation...but it isn't required, and the wave of letting bees build their own is growing. Foundation also needs to be replaced over time due to residues. It absorbs chemicals from what bees find on plants they visit, the environment itself, and any chemicals you may elect to use in the hive.

Bottom Line?

If you take advantage of an offering like a beginner kit, and purchase a package of bees, you can get into beekeeping for less than \$500. It is strongly recommended that you don't start with just one hive.

Does It Cost More?

A thriving colony of bees grows exponentially. Our readers shared that their passion for beekeeping usually does as well. There will be costs associated with that, but most of our surveyed beekeepers said those were investments they willingly make, agreeing with Jeff who said he wished he'd known "How expensive it would become. But the experience has been worth it."

How Much Time Does It Take?

If that's the question, most estimates range from 15–40 hours a year to tend one colony of bees. Of course, preparing the equipment the first year takes longer. Also, more hives equals more time, but the time/hive decreases a bit.

A better question is "how much time do you want to give it?" You can play a round of golf in two hours, but doing it well and enjoying the outing may take double that, and learning to do it well takes countless hours, most of which are rewarding as you challenge yourself to become better.

It's the same with beekeeping. You need to spend 15–40 hours that first year, but to learn to do it well takes time. You'll need to research, discuss and study both the bees and information on how to best manage them.

So, figure a minimum of 15-40 hours per hive that first year, knowing that as your interest in and desire to do it well grows, that may easily turn into a couple hundred hours a year counting time at bee meetings, talking with others, studying and researching, thinking about bees, and watching them.

Chances are, the more you put into them the more you'll get out of them.

Dennis from Ohio noted, "I think I found the right activity as I near retirement, one that takes neither too little nor too much time, and carries new learning."

Perhaps Ernie from Oklahoma summarized it best: "Time spent working hives is like a soul refreshing time."

Thinking About Keeping Bees? Varieties, Where to Put Them, and How to Get Them

There's a who, what, where, when, why and how to every good story, and the same will hold true for your beekeeping story. If you're reading this, you've likely already answered "why". Whether it is for honey, money, to help save the planet, or something else, your reasons for want to keep bees are personal and admirable. The world needs bees.

The following focuses on the who, where, when, and how to get started keeping bees.

Who, or Rather, What Kind of Bees?

When you purchase honeybees, you'll need to specify the variety, from options like Italians, Carniolans, Russian Hybrids, etc. Each variety has distinctive traits that impact factors like honey production, cold tolerance, gentleness, etc.

Which bee is best for you depends on many things, like your geographic location and what kind of beekeeper you will be.

You may also want to talk to local beekeepers and clubs for their recommendations. Chances are, if you talk to a half dozen people, you'll get approximately that many different answers. Like many things in beekeeping, there are few definitive answers. But learning why beekeepers have their preferences will be helpful information in deciding which variety is best for you.

Where Should You Set Up Your Hive(s)?

We're addressing "where" next, because if you don't have a good place for bees, you shouldn't and possibly can't have them.

So, what's a good place for bees?

Good question—so many places are. Thriving hives may be found atop buildings in downtown Louisville, Kentucky, and rural cabins in Canada, public parks in Florida, backyards in South Carolina, alleys in Chicago, beautiful farmlands of Pennsylvania, or the near-deserts of Arizona. And ultimately, it is the bees who decide if their location is a good place or not.

Some Placement Guidelines

To encourage bees to live happily where you want them, there are considerations for hive placement that are helpful. The hive should:

- Face the morning sun to get the hive warm and working early in the day
- Have sunlight in the afternoon, perhaps dappled to reduce summer's heat if it gets too intense in your location
- Be near water, preferably within a half mile, but not where it is too wet and humid in the summer
- Allow for the bees to easily enter and exit, like planes at a busy airport
- Not be placed where it is a public nuisance or outright hazard/temptation. For example, not next to an elementary school, or where curious passerby's might be tempted to investigate
- Be sheltered from prevailing winds if you have tough winters
- Be placed where it is legal according to the law—check your local ordinances, restrictions, etc.
- Be where you can tend to it. Too far away or too difficult to get to in certain seasons may result in them not getting the attention they deserve



Location is important when setting up your hives

And Why These Are Only Guidelines

Only bees can tell you if a location is ideal or not. Unfortunately, they don't tell you in a memo; they will communicate it with an awful thing called "absconding."

When Should You Order Bees?

So, you've decided you want bees, and you know the kind you want and where you'll put them when they arrive. Next comes ordering your bees. When does this need to be done? Usually bees are ordered early in the year (January-February).

The way to obtain package bees (or nucs) works like this: There are only a certain number of bees available throughout the season (generally April through May.) When you order your bees in, for example, January—you're not getting them immediately, you're simply reserving them to ensure they'll be available when you want them. Select a date for either picking them up or having them shipped to you. You need to order your bees as soon as possible because dates sell out. You don't want to find out too late that there are no bees available for any of the dates that work for you.

When Should You Obtain Them?

There are two major factors that decide what date(s) you should obtain bees: Your location and your availability.

1. Location Partially Determines Delivery Date

Typically, southern USA locations have ideal honeybee weather earlier; northern (Indiana, Ohio and northward) tend to order bees for delivery toward the end of April and later. Check with local beekeepers for their advice. Generally speaking though, sustained temperatures should be over 45 degrees, allowing for bees to take supplemental liquid feed during the critical first weeks. We have to speak generally, because weather varies widely, and sometimes wildly, from year to year. A package installed in Wisconsin mid-April one year had already missed some of the blossom season; in previous years it would've encountered snow storms. It is dicey no matter when you get the package. Aim for later rather than earlier. That first warm spring day in April in Massachusetts has everyone in the north wishing they'd selected an early delivery date.

But those warm days in the north don't usually continue. A subsequent hard freeze to a newly installed colony that has not unified and has no stores could be dangerous. It is probably best to select a date later rather than earlier or have two different dates if you're obtaining multiple packages, because unexpected nasty spring weather can diminish a colony's chances for success.

2. Your Availability Also Determines Delivery Date

Package bees require TLC in the beginning, so be sure to only obtain them when you know you can care for them. That care has three critical components:

- a. Care upon getting them home, even while still in the box they are packaged in they need attention to minimize the stress of their transport
- b. Installing them, which should be as soon as practical, weather permitting
- c. Care for them when they're first installed in the hive, to get them well on their way to being all they can, well, bee.

Nucs are fairly self-sufficient for a while, although supplemental feeding may be helpful if the weather isn't cooperating.

How Should You Get Them?

When you order, you'll need to specify whether to have them shipped or if you'll be picking them up. There is a good reason to pick-up your bees: Bees tend to do better when you pick them up than when they're shipped. You can provide the most efficient trip, and better control temperature and variations.

Of course, there's also a good reason to have them mailed: the look of the faces of the folks at the Post Office when you thankfully arrive to take away the box of stinging insects!

And Marking the Queen?

Another question you'll need to answer while ordering package bees is whether to have the queen marked or not. If so, the top side of the queen is dotted with a marker. Spotting the queen will likely be one of the most challenging things about beekeeping for a beginner, so having her marked, while it costs a few more dollars, is helpful. This is especially important to aid new beekeepers to help locate the queen from the thousands of other bees in the hive. When doing inspections it is important to be aware of the queen's location so you don't accidentally injure her.



A marked queen is much easier to spot

Thinking About Keeping Bees? Part 3: Preparing for Your Bees

Preparing the Apiary

We're assuming you've got your hive body assembled and painted (if you're painting it), and its frames ready. If not, please get this done before your bees arrive.

When the weather allows (like when the ground isn't frozen) it is time to prepare the site that you selected when you were considering whether you should keep bees. You know that site—the one where the hives will catch morning sun on their fronts if possible, protection from the afternoon sun if you get a lot of heat, nearby water, easy access for you, windbreaks, airflow, etc.

Preparing the Hive(s)

Once the apiary grounds are ready, it's time to place the hive. You need to do this before installing the bees as some finagling of it may be required. Once the bees arrive, you want to be attentive to getting them into the hive.

Leveling: The hive needs to be level from left to right, with a slight tilt from back to front—strive for an inch. That allows any interior water to drain out the front door, as well as water from the top to flow off and hopefully over the front "porch", and not drop onto it. Moisture in the hive is one of the largest challenges your colony will face.

For you perfectionists, go ahead and make things exact. For the rest of us, I've found my eye-balling it has been perfectly acceptable to bees over the years. I even once had a hive leaned severely to one side, and the bees adapted to the three-inch lower left although I don't think they were happy with it.

Leave the hive sitting out? Depending upon when your bees will arrive, you may want to go ahead and leave the hive in position so it can adjust to the local humidity and adapt a more natural scent. There's nothing wrong with having the hive outdoors a few weeks prior to its use. With any luck, perhaps a colony will swarm to it (not likely) and you'll have to order another set-up (quickly!).

Review location: Having the hive out in advance also lets you be sure the location is workable, and you should practice working with its various components. Remember, you'll start with only one level, but will hopefully make the hive much taller down the road. Are there any branches, structures, etc. that will keep it from going up? That will keep you from standing up or easily moving around all sides of the hive? Is there room for two or more people to work the hive? Do you have room on the ground to set your equipment, the bricks you might have on the hive top, the hive top itself? Where will you place the smoker? Can you pull a wagon up to the site for easy loading and unloading of hive bodies in the future?

Practice: Having the hive in place in advance also gives you the opportunity to practice working with it. Because of the circumstances that led me to beekeeping, I was never able to open a hive and manipulate it without thousands of stinging insects reacting to my every move. Success in working bees largely depends upon your attitude and demeanor, so take advantage of the empty hive to get more comfortable manipulating a hive. Wearing your protective clothing (because that makes a difference in how you will move), take off the top cover and ensure you have a good spot to place it while you're working the hive, and that you're familiar with its weight. Take off the inner cover and be sure you know which way it goes back on. Bend, twist, and make sure everything you will need can be reached. As long as you're practicing, load and light your smoker a few times.

Frames in or out? I prefer to put my frames into the hive. While that is a remote invitation to rodents or insects to plunder them, it typically isn't an issue in the spring, and allows the frames to air out a bit. If you've installed wax foundation in frames, storing them vertically is also safer. Wax foundation in frames not vertical may deform. True, some frames will need to be removed from the hive body when the bees arrive for installation, but for now, leaving them all in the hive body is a handy place to store them.

Preparing for the Bees

What an exciting (and possibly "what-have-I-gotten-myself-into?") time! Hopefully the weather is cooperating, and you won't be unexpectedly out of town when the bees arrive or need to be picked up. It happens. It may be a challenge to find a friend willing to pick up your bees if they're arriving at the local post office when you're gone, and care for them until your return. That's one of the benefits of knowing other area beekeepers or joining a local club. If you need to change delivery or pick-up arrangements, let Kelley Beekeeping know as soon as possible.

Preparing Syrup: You'll need to prepare sugar syrup unless you've researched this issue and decided not to supplemental feed in any way

We recommend supplemental feeding your package bees with sugar syrup as long as they want it, to ensure they're off to a good start. You may also want to use a sugar syrup spray to help distract bees during installation, whether you are transferring a package into the hive, or a nuc.

The sugar-water syrup concentration for spring feeding is light, one part water to one part sugar. Use white sugar, NOT brown sugar. There is some research that suggests cane sugar is slightly better for them than beet sugar, as well as research that suggests it doesn't make much of a difference.

Transporting Bees

Bees may be transported inside any vehicle. If you're transporting them in an open bed truck, please be sure that the bees have a wind break (like up against the cab of the truck.) If you're travelling through unexpected cold weather or rain, a tarp is also a great idea.

Escaped Insects, Hitchhiking & General Freaking Out: Remember how your Mom told you hitchhiking was a bad idea? Apparently the queen mom never shared that news with her thousands of children. The scent of the queen is compelling, and therefore, any out-wandering bee who catches whiff of it may decide to hang on the outside of the cage or nuc. Folks not used to seeing this understandably find this unsettling.

Two things to keep in mind:

Hitchhiking happens. No matter how alarmed the postal workers are when they call and say the bees are escaping, chances are about 99.99% that they are not. Plus, hitchhiking honeybees are not aggressive, so advise anyone concerned to just let them be and you'll get there as soon as possible. If you're transporting your bees in the back of a truck and see bees wandering outside of the box, chances are about 99.99% that they are NOT from inside the box. They're just hanging around a very attractive scent.

Wear gloves or carefully look at the cage/nuc before you pick it up. If a postal worker needs to pick up the cage to hand it to you, advise them to do the same. A bee trapped under your fingers will let you know how much she doesn't like that very quickly.

When You Get Them Home

Package Bees

Immediate actions: Place the bees in a dark, cool area if possible, like a closed garage, or a basement room. Cool means about 50 degrees, much colder than that is not desirable. Dark conditions will calm them down, and keep them from too quickly eating their supplied syrup.

Set them on a couple sheets of newspaper or a sheet. There will be debris falling from the cage.

Spritz them morning and evening with the sugar solution if you're not hiving them that afternoon. If you don't do this, they may run out of the syrup that was shipped with them.

Bees can survive for several days in the cage, but they should only be contained when there is no other option (i.e., bad weather making it impossible to install them.) Life in the cage is stressful and the more quickly you can move them into a hive, the happier and more productive they'll be, and the greater your chances for success.



Package of bees being emptied over frames

Nucs

The bees in a nuc have resources from which to draw, and presumably are already on their way to being a thriving colony. Thus, they should be placed in the location where they will live and allowed to get to work. If the weather isn't cooperating, it isn't necessary to transfer the frames from the nuc box into the hive immediately. However, be sure to open the nuc box entrance so they can come and go. If there's a nectar shortage, consider a community feeder.

Nucs can remain in the box they came in for several days—a week or more if necessary. Just be sure it is secured against gusts of wind.

Installing

When to Install: Late afternoon is probably the best time to install bees. If you have a nuc, most of the foragers should be back by then. In either case the bees will know it is about time to settle in for the evening and they're more likely to stay if installed later in the day.

While a nuc colony can remain in the nuc for a while, the faster you can get the package installed the better. So, if the weather's cooperating and the only time you can install your package is at 9 a.m., go for it.

Protective Gear? There are plenty of awe-inspiring photos and videos of folks working bees in shorts and a t-shirt. Good for them. Based on the thousands of people I've talked with about bees over the years though, I will never work bees without protective equipment. I've heard some of the horrific stories. It only takes one accidental bumping into the hive or dropping of a hive body to get a fatal or life-altering number of stings.

We especially recommend that new beekeepers wear protective gear. Bees seem to sense any of our unease, whether it is from working them or any other problems we brought into the apiary (trouble at work, frustrations with the family, etc.). Chances are, as a newbie, you have some apprehension. Anything you can eliminate by wearing protective gear is helpful. In time, as you learn to read their mood from the sound and their activities, you can consider not using gloves, or wearing perhaps just a veil.

Smoke: Get it going; make sure it keeps going, have more fuel handy.

Mental Preparation: When working with bees, it is best to "bee" in the moment and focus purely on them and what you intend to do. If not, they have a stinging way of reminding you to be attentive.

Have a Plan. Whenever you disrupt bees from doing what they think they should be doing, you need to be as efficient as possible. Your respect to them will result in more productive bees.

When you're installing bees, your purpose is obviously to do just that. But for all future hive visits, be sure you know what you intend to accomplish before you open the hive.

And yes, especially for newbees, the purpose of "just wanting to see them" is a legitimate purpose, as long as it isn't too often and at the right times.

Acknowledgement: The above information was originally posted on Kelley Beekeeping (kelleybees.com) from whom I have learned much and a place I have also spent much!