

GREEN BEEKEEPING

A Guide to Using Eco-Friendly
Beekeeping Practices



Green Beekeeping

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Beekeeping can be an inexpensive hobby or a profitable business, depending on your goals and where you live. How much time you spend on your bee colonies will depend on how many you have, what your reasons for doing it are, and how much time and money you want to invest.

A new hive will cost about 150 dollars, depending on where you live and what is available. With the vast dying off happening with bee colonies the last few years, it is very important that as many people as possible get involved with beekeeping in some way.

Using green beekeeping practices isn't always in vogue, but it's better for the environment and it's better for the bees. Although there is a lot of disagreement among beekeepers about the topic with beekeepers blaming treatment-free keepers for colony collapse, there is no evidence that this is true.

What Are Green Beekeeping Practices?

Green beekeeping means that you don't use artificial means to take care of your bees without a good reason. You ensure they have a good supply of organic flowering plants that haven't been ruined with dangerous pesticides, and you're careful not to introduce bacteria to their environment.

Let Them Eat Honey

The way you do this is you don't use all their honey for your harvest. Instead, you leave enough honey so that the bees can live through the winter. You can even freeze some of the frames in case of an emergency. But, leaving the honey bees with their own stores that they produce in the fall is the best way to do it.

Let Them Die

Additionally, instead of trying to save poorly performing hives with fake food, it's probably better to kill off the queen and introduce the hive to a new queen. This will make the colony stronger and healthier in the long run, because you don't keep weak hives alive artificially.

Start with Two Colonies

Beginning your beekeeping enterprise with two colonies is a good green practice; you'll be able to learn faster since no two colonies are the same. Depending on where you got your bees - whether from a package, nucleus (nuc), or swarm - one hive might be stronger than another. And having two can help you keep the strongest, thus building a much stronger eco-system of colonies.

Start New Hives in the Spring

New hives should be started in the spring during the heaviest blooming time, because that is when the most nutrition is available. Leave enough honey for all your hives all the time, so that you don't have to

feed them anything that's bad for them. Feeding healthy bees sugar water is not good nutrition and will produce poor quality honey, leading to more serious problems as time moves on.

Buy Bees That Are Native to Your Area

When you buy bees, buy them from local producers rather than through the mail from a long distance. Locally produced nucs will be healthier and more accustomed to the environment. Some of the behavior of bees is bred into them from the DNA memory of the bees that came before them. Stick to hives from home.

Smaller Honey Harvests Are Best

It's better to have a smaller harvest to keep your bees well fed than it is to harvest everything and feed them junk food to keep them going. All that happens when you do the latter is that your bees will produce weaker and weaker offspring due to the low nutrition.

Give Them Space

The other tip that you should consider is not allowing the population of any of your hives to get too high. Always ensure that they have plenty of room. Also, ensure that you keep your hives clean from dead bees to avoid any type of infestation.

Even though providing the habitat for honey bees is artificial, the closer you can stay to nature in terms of how you care for your bees, the better for the bees, the environment, and your honey harvest. That's why it's so important to learn all that you can about bee behavior in addition to problems that can happen.

Why Beekeeping Helps the Environment

Honey bees are the most important pollinators that exist in our environment. Unfortunately, disease, pesticides, and other factors have caused the honey bee population to plummet the last few years. When you become a beekeeper, you become part of this important environmental circle of life. Helping pollinators become more abundant is essential to our eco-system.

Without bees, we won't have fresh food from the garden anymore. We'll have no more honey (obviously), no more almonds, apples, avocados, cashews, blueberries, grapes, peaches, peppers, strawberries, tangerines, walnuts, watermelons... And about 100 more flowering plants will be gone, including your morning cup of coffee.

So if honey bees were to become extinct, we would lose many species of plants that rely on them. That would end up affecting the animal population that eats these plants and makes their habitats with these plants. It would be devastating to our entire ecosystem and some believe it would lead to the literal collapse of our planet.

Therefore, if you have any land you're not using and even if you don't want to be a beekeeper, you might consider allowing other green beekeepers to use it for their hives. This will help replenish nature with more honey bees that can be pollinators for all our flowering plants that need them.

What Beekeeping Involves

As a beekeeper, you essentially manage your bees. Some beekeepers focus on renting out their bees to farmers to pollinate their growth, while others focus on producing honey for sale. Some do both. It depends on the beekeeper's goals and ideas about beekeeping. But in any case, they keep their bees healthy, prepare colonies for production, and replace the queen bee when needed. If they produce honey, they need to follow local food safety guidelines for harvesting and processing the honey.

In the spring, beekeepers get their bees ready for the honey-producing time by ensuring that their bees are healthy and parasite free, as well as ensuring that the queen is healthy enough to produce eggs. Then during the summer months, if they have chosen to harvest the honey, they add and remove honeycomb boxes to ensure that the bees have enough space to produce at their optimum level.

Eventually, the beekeepers also harvest the honey. They use a smoking device to tame the bees and wear protective clothing to remove the combs from the hives, replacing them with empty space for the bees to create more honey. In natural and green beekeeping, you don't take all the honey. You leave some for the bees to use for food instead of giving them artificial food choices.

Some beekeepers also become consultants and help remove swarms where they're not wanted, saving the bees from being killed. In addition, there are some beekeepers who keep hives for renting as pollinators for farmers. This is a great way to use hives and to help ensure they have plenty of food. Make sure that you know what type of farmer you're working with to ensure you don't accidentally let your bees eat poor quality nectar.

A large percentage of beekeepers are hobbyist, while some do it for a full-fledged business. The average beekeepers (also known as apiculturists, apiarists and honey farmers) make about 70 thousand dollars a year and usually need to travel a lot to the various locations of their hives. If you want to earn money, you'll make more if you live in a climate that gets colder. But, that doesn't mean you can't enjoy beekeeping, earn a little money on the side, and contribute to our natural ecosystem, no matter where you live in America.

Would Beekeeping Work for You?

Some people have romantic notions about being a beekeeper. They think that they just have a few hives and the honey appears magically. But you must care for your bees, keep the right flowering plants around for them to pollinate, and watch for common diseases that can wipe out bees overnight. Plus,

you must try to avoid using the wrong pesticides or falling for the need to use a lot of antibiotics and other artificial means to care for the bees.

In some areas of the country, beekeeping is more for the process of keeping pollinators around so that plants can grow than for the collection of honey. For example, if you live in a hot climate, you might not get as much honey as if you lived in a cooler climate. So, you should do it for the right reasons depending on where you live.

Before you start beekeeping, look at the following questions and answer them honestly.

Do You Enjoy Being Outdoors?

Not everyone likes being outdoors. Beekeepers need to like the outdoors because they may need to go outside a lot for gardening, as well as ensuring that their bees are safe. Plus, if someone in your area has a swarm that needs to be taken care of without killing the bees, you must be willing to do it.

Do You Like Gardening?

As you will have gathered, to have a healthy bee colony you need to provide food to them in the form of flowering plants. Cultivating specific plants can also affect how the honey looks and tastes, so there is a lot of fun in deciding what type of plants you want to use for your honey bees. If nurturing plants seems like something you'd like to do, you may love being a beekeeper too.

Do You Like to Be Challenged?

Beekeeping isn't as simple as just getting a hive and you're done. It's a science that you'll need to learn over time to keep your bees healthy and safe - and if you wish, produce honey for use and sale without starving your bees.

Do You Have Allergies?

If you are allergic to bees, it is not recommended that you try to keep honey bees. What you can do instead if you want to help the environment is allow other beekeepers to keep some hives on your land away from your primary residence or places you tend to use. That way, you're helping improve the quality and quantity of the honey bee population without having to do it yourself. Typically, if the bees do produce enough honey, you'll be given some of it as your fee for providing some of your land for the bee colonies.

Is Your Climate Right for Honey Bees?

Honey bees can thrive in many climates, and you can have honey bees in every single state in the US. In fact, surprisingly the biggest producer of honey is North Dakota. Even though honey bees thrive best in forested and tropical areas, they can generally thrive in any environment that has a lot of flowering

plants. They will produce more honey in colder climates because they need to build bigger and more insulated nests to protect the queen in the wintertime.

So, you can have honey bees anywhere but you may not get as much honey production in warmer climates as you will in colder, more temperate climates.

Legal Considerations Surrounding Beekeeping

There are federal and state laws that regulate the importation of bees due to disease. Each state is different, so you should look up the laws within your own state. But for the most part, it's just about keeping diseases controlled so that we can keep the honey bee population healthy. Most states have a registration process for your honey bee colonies.

A simple search for your state honey bee registration is likely to produce results for your local honey bee association, plus links to forms to register your colonies. It's usually not very expensive to register your bee colonies, but it is a necessity if it's the law of your state. Doing so can help cut down on bee diseases and give you access to a lot of information, help, and warnings of issues.

Supplies You Need

To become a beekeeper, you really don't need that much equipment. It's all pretty standard. But, there is an investment. You want to be safe, keep your bees healthy, and use the right equipment for the job. Some people have developed their own homemade tools, but you don't need to do that; you can buy tools that are already tried and tested.

- Hives – You can buy hives of all types. Before you buy a hive, consider how large of a hive you can handle. If you aren't strong, you will want to buy smaller hives. If you're strong and can pick up a lot of weight or afford tools to help you, then you can get a larger hive. Plus, there are top bar hives which you don't need to lift. You also need to know whether you just want to support pollination or if you want to produce honey.
- Bees – When you buy bees you really buy a "nuc", which is a nucleus colony or a starter hive of bees that consists of five frames. When you get it home, you remove the empty frames from your hive and add those. You can also get free bees by attracting them to a hive using lemon grass oil.
- Hive Tool – This is a hook device that you use to lift the frames. It has a flat side that is used to scrape off wax and propolis that gets on the frames and hive walls. Some people open their hives with screwdrivers, but it's always nice to have the right tool so you avoid harming bees or yourself.

- **Smoker** – When you want to calm honey bees, you'll use a smoker. A smoker does what it sounds like; it generates smoke. When you put smoke near bees, it turns off their internal pheromone alarms and interrupts their defenses so that you can move them or collect honey. Some people think smokers are used to control swarms but this is not accurate, as honey bees that are swarming aren't really as interested in attacking as one might think. Honey bees only attack when protecting something.
- **Protective Gear** – You'll need a bee suit, which is a jacket with a hat veil and gloves. This will keep you from being stung due to a bee getting caught someplace and getting scared. Honey bees don't typically attack and sting in high numbers, but you must be protected always. It keeps your bees safe and healthy, and avoids painful situations that can arise.
- **Bee Brush** – When you need to remove bees from a surface, a bee brush is the tool of choice; it's long and soft so that you can gently remove bees off your honeycombs without damaging anything. But it's also firm enough that it can remove bees from frames and other equipment without harming the bees.
- **Feeders** – You'll need different types of honey bee feeders depending upon your goal. You can get entrance feeders which are inserted via a tray into the entrance of the hive without bothering them or going into the hive. There are also open air feeders which are not preferred methods of feeding honey bees; other wildlife will use them, which can transmit disease. Many beekeepers swear by the baggie feeders, which is just a zip-locked bag filled with food placed in a space and cut open so the bees can get to it.
- **Bee Food** – There is a lot of different thoughts about bee food. Some people just use Karo syrup but others like to use more natural options. Even though bees forage for nectar, pollen, propolis and water, you may want to feed your honey bees if they don't have enough food. But, you may want to avoid feeding them poor nutrition such as corn syrup and fake substitutes and instead ensure that they have enough honey by not harvesting it all.
- **Lemon Grass Oil** – This oil acts as a pheromone to attract swarms to hives. It's one way to bait and attract honey bees to make your hives their home. Most people purchase hives but if you know that you have swarms on your property, this is a good way to get bees to your hives without spending a lot of money. However, you may have to find a queen.
- **Strainers** – When collecting the honey, dead bees, wax and other debris can get into the honey. Therefore, it's best to strain it so that it looks clear and beautiful instead of looking as if it has trash in it. There are stainless strainers, nylon strainers, and various types of strainers that you can get. It depends on your goals, and sometimes the local laws if you're going to sell the honey. It also depends on whether you're harvesting on a large or small scale.

There is a lot more equipment you can get for your beekeeping enterprise, but these are the basics that you'll need to get started. The most important thing to do is read about green beekeeping practices, and make sure that anyone you talk to about it is also wanting to use green beekeeping practices.

Books to Help You Learn about Beekeeping

You can never learn too much about honey bees. The more you learn, the more successful you'll be. There are some good books to read about beekeeping that you'll want to add to your library and look to any time you have an issue, and to avoid issues. Bees are animals and they get sick, so the quicker you can identify and deal with their illness, the better.

1. [Beekeeping: 15 Important Rules for Successful Beekeeping](#) by Julie Daniels

This book is also available via Kindle Unlimited free of charge. It's a short, 38-page self-published book about beekeeping.

2. [The Complete Idiot's Guide to Beekeeping](#) by Buzz Bissinger and Dean Stiglitz

You must have this book handy. It's easy to look up the information you need in the "idiot" books. So, don't take the name of the book in a bad way. It's set up to allow complete novices to find the information they need.

3. [Honeybee Democracy](#) by Thomas D. Seeley

This is a wonderful book to help you understand the behavior of bees. The more you can understand the behavior of your hives, the better you can care for them. This book is also illustrated and we highly recommend getting the print edition to best enjoy it.

4. [Top-Bar Beekeeping: Organic Practices for Honeybee Health](#) by Les Crowder and Heather Harrell

Bees are facing a hard time right now with entire colonies collapsing. You can raise bees successfully in a green way without antibiotics, miticides, or chemicals. This book shows you the way.

5. [The Complete Guide to Beekeeping for Fun & Profit: Everything You Need to Know Explained Simply \(Back-to-basics Farming\)](#) by Cindy Belknap

Many people like to keep bees as a hobby, but some want to make a profit too. You can do that if you know what to do. Cindy Belknap helps you understand the ins and outs of making a profit with beekeeping.

6. [Natural Beekeeping: Organic Approaches to Modern Apiculture, 2nd Edition](#) by Ross Conrad

If you want to practice natural beekeeping, this book will teach you about the biology of bees, how to control mites, and parasitic conditions that bees can get. It addresses urban beekeeping, how to identify the queen, and more.

7. In addition to these books, look at the [American Bee Journal](#) which is both online and a magazine. As a magazine, it's been around since 1861 and offers the most up to date and complete information about beekeeping in America.

The more you read about beekeeping, the more it will become a passion for you. Beekeeping is so fascinating that you can never learn everything there is to know. But, if you immerse yourself in the world of beekeeping, you'll soon know plenty to get started with green beekeeping - in your backyard, or by using other people's land, or on larger areas of land that you own. It's more than possible to earn money doing it as well, if that is of interest to you.

The Different Types of Bees in a Colony

Honey bees are very social insects that break up their society into definite classes to help protect and serve the colony. In many ways, you can see honey bees as a collective, all working together for the benefit of each other and most importantly the queen. Each hive consists of at least three types of adult bees.

- **Worker Bees** – There are more worker bees than any other type of bee. There will be literally thousands of worker bees in any one colony. The worker bees collect food, build nests and raise the brood. There are also laying workers that activate when a colony loses its queen for some reason, to produce an emergency queen.
- **Drones** – Usually there are also several hundred drones. The drones are large male bees which are responsible for fertilizing queens, and then they die. They don't do any work other than mating, but they can feed themselves once they're about four days old. They eat more food than any of the other bees. They leave the hive to mate with other queens, not the queen that produced them.
- **Queen** – There is usually only one queen in a colony at a time. Her only function is reproduction and she lays up to 1500 eggs per day and up to 250,000 eggs per year during her lifetime. Queens can live for several years, but are usually only productive for two to three years. She mates with the drones in flight, away from the hive to avoid inbreeding.

There are also different types of brood that the queen lays: eggs, larvae, and pupae. Eggs are laid that become larvae in about three days, which become pupae and finally (depending on what type of adult bee they will become) the new workers, drones, and even queens will emerge if the queen is lost.

As you can see, bee life is very interesting and fascinating. The way they work together and the way the brood workers feed the larvae and take care of the pupae to adulthood is an amazing thing to witness. In many ways, you're just a facilitator by giving the honey bees a place to live and food to eat. Everything happens in the right season at the right time depending on the weather, the available food sources, and signals of the environment - mostly without your intervention.

Mistakes to Avoid

There are mistakes that many beekeepers make, old and new. Here are a few to know about up front so that you can avoid them before you even get started.

- **Not Studying Everything** – Some people think they can read one book and know everything they need to about beekeeping. But, this isn't true. The reason is that there are many different options about green beekeeping, so you need to learn about a variety of opinions including scholarly studies.
- **Not Observing Your Hives Often** – It's important to try to observe your hives as often as possible, if not daily. You don't want to disturb the hives daily, but you do want to pay attention to what your bees are bringing back to the hive. Is there pollen? Are there ants nearby? How many bees are flying in and out of the hive? By constant observation, you can know what's normal for your hive and when you may have a problem.
- **Not Physically Inspecting Your Hive** – At least monthly, you should inspect your hive more deeply. While these inspections are stressful, it's best to do it so that you can catch problems sooner rather than later. Plus, this is the only way for you to truly learn about your bees' activities and life cycle.
- **Harvesting All the Honey** – The best way to keep your bees healthy is to let them eat what they're meant to eat, which is honey. If you take it all for your harvest, you'll have to supplement with fake food that has no nutritional value (such as corn syrup). The best food for honey bees is honey, but there is still going to be plenty left for you to harvest. It might take some trial and error, but you'll learn what your hive needs.
- **Harvesting Honey Too Soon** - It's hard to wait, but you shouldn't harvest honey from your hives in their first year. It will take into the second year for your hives to be strong enough to produce enough honey to take the extra for your harvest. Remember, in green beekeeping you prefer for your honey bees to eat honey. How much you leave the bees will depend on your climate and how long your winters are.
- **Not Knowing that Your Queen Has Left the Hive** – This is where inspection comes in handy. Sometimes the queen will die or be killed. After all, to mate, the queen must leave the hive. So, if you inspect and notice a lack of eggs, as well as an increase in pollen and honey, you have a couple of choices: see if the bees will produce a new queen, or introduce a new queen yourself. If eggs are available, then it is likely they will replace the queen. But if no eggs are available, you will need to replace the queen yourself quickly.
- **Not Keeping Your Hive Full of Frames** – Don't leave frames out of your hive. Keep it full of the number of frames it's designed to have, otherwise your hive will build combs wherever it can and it'll be harder to control your hive, take care of them properly and inspect them correctly.

- **Not Feeding New Bees** – While you don't want to make it a practice to feed your hives sugar water, when you buy a new package of bees you'll need to feed them at first. They don't know where they are, and they don't know where the food is. If you capture a swarm, you shouldn't have to feed them. But when you buy new bees, you will have to just that first spring - and not that much, just until they start producing honey and have their own food stores.
- **Not Placing Your Hives in the Right Places** - There needs to be about a 12-foot radius around the hive where there is nothing to block you from easy inspection or for the hive to bother people, as there will be a lot of bee activity near the hive. It should be placed on a flat surface that's easy to get to, so you can do your inspections and harvest easily. It should also be placed in full sunlight as bees need a high temperature (about 89.6 to 95 degrees Fahrenheit) to stay warm enough to do everything that they do. Plus, you don't want to have to dig through weeds, thorns, or jump into a pool to get to your bees.
- **Avoiding Your Beekeeper Uniform** – There is a reason to wear your gear. Don't try to take care of your bees or inspect your bees without wearing your beekeeping suit. While they may be calm at times, you never know when something will go wrong. Even if you're not allergic to bees, you can wind up in the emergency room if you're stung enough times. Don't put it on half way either; wear your suit every single time, and check for openings so nothing goes wrong.
- **Not Using Your Smoker** – Like the bee suit, sometimes people get lazy and don't use the smoker to calm down their bees before inspection. You don't want your bees to go into defense mode when you're inspecting; this can be dangerous to the health of your bees, and if you're in an urban area it can upset your neighbors.

You can avoid a lot of problems by not making these mistakes. Remember that it's okay to make mistakes, but that when you make them you want them to be things that weren't in your control - not because you didn't study enough or learn enough or follow the information you already learned.

Getting Started

The best way to get started is to contact your state's beekeeping association, who will get you in contact with locals in your area to help you. Beekeepers are very helpful people in general and like to help other people get involved with their passion.

Before you buy any equipment or buy a hive, get involved in your [local associations and groups](#) so that you can learn everything that you need to know.

- **Learn Everything You Can** - The more you can read about beekeeping, the better you'll get at doing it and the more successful you'll become. Never stop reading and learning. Learn from books, and learn from others who are more experienced. Follow people who practice green beekeeping so you can learn from them.

- **Check Your State and Local Laws** – There are going to be different laws and ordinances for different areas of the country. Therefore, before you get started, find out if it's even possible for you to own a hive in your location. If you live in a small neighborhood, it might not be possible to do it on your own land. But, if you are willing to share the harvest, people with a lot of land might let you set them up free on their land.
- **Get Ready for Starting in the Spring** – The best time to start a new hive is in the spring. So as you're learning and planning, check your calendar. Also, talk to local beekeepers who understand more about the procedures than you, because when you start will be very location-centric.
- **Buy Your Gear** – Based on when you plan to start, begin to order all the gear and equipment you'll need. Sometimes you can find used equipment, but you can also buy most of everything you need right from Amazon.
- **Buy Your Bees** – When you're finally ready and have learned all you can from books and others, you're ready to order your bees and get started. Don't be worried about failing. Take what you learned and put it into practice and you will eventually be successful.
- **Start with Two Colonies** – As mentioned earlier, don't start with just one colony. The reason is that if something goes wrong and one hive is weak, having two colonies gives you a higher chance of success. You can manage your hives better and even fix a problem when a queen dies or one hive is weak.
- **Check on Your Hives Periodically** – Once you have your hives going, you should check on them occasionally. You don't need to do so too often in terms of touching them, but there are people who steal hives so you will want to be a regular presence. Also, check for health a few times a year.
- **Harvest Your Honey** – Each hive can produce about 60 pounds of honey, so how much you earn will be dependent on how much honey your hives produce, how many hives you can handle, the weather, and a lot of other factors - just like most types of farming.

Outside of collecting and selling honey, you can also raise hives to rent out for pollination. Once you become more of an expert, you can also become a consultant. There are also people who find unwanted hives on their property that they'll give you if you get rid of them. There is so much you can do as a beekeeper, especially as a green beekeeper, because it is critical for our ecosystem to save the bees.