



FARMER'S

Beginning
BEEKEEPING

BOWTIEDFARMER.COM

by
Bowtied Farmer & Bowtied Miss Farmer

Copyright © 2022 BowtiedFarmer.com

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the publisher, except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law. For permission requests, write to the publisher, addressed “Attention: Permissions Coordinator,” at the website below.

Any references to historical events, real people, or real places are used fictitiously. Names, characters, and places are products of the author’s imagination.

Printed by Bowtied Farmer, in the United States of America.

First printing edition 2022.

www.BowtiedFarmer.com

[@BowTiedFarmer](https://www.instagram.com/BowTiedFarmer)

[@BowTiedMissFarm](https://www.instagram.com/BowTiedMissFarm)

Contents

Introduction	4
To Begin	4
Bee Basics	7
Planning Your Operation	9
Equipment	10
Acquiring Your Bees	23
Bee Arrival	26
First Inspection	28
Harvest	30
Storing Equipment	32



GETCHU SOME!

Now Only

\$24.69

(1 Qt Jar)

BOWTIEDFARMER.COM



Introduction

Imagine, if you will, being invited backstage to your favorite music artist's concert. A VIP invitation to the mind of what you would consider a musical genius. The greatest of all time, a rare glimpse into the life of an artist and how it feels to create something so beautiful and enjoyed by so many people all over the world. Lucky you! You get to see where the band hangs out, what foods they eat, and how they act when they're not performing. You get an inside look of something that most could only dream of.

This is how it feels to be a beekeeper.

You are given a backstage pass to explore the inner workings of a hive and personally meet the queen. You get to watch your bees bring home nectar and turn it into honey. You get to see eggs in cells and larvae in all stages, and see new bees hatch. You get to see queen cells and how they're made. You'll see drones and worker bees and learn how to distinguish the difference. You'll get to taste honey you've harvested and reap the sweet rewards of your labor and possibly make a little money too.

This is what drew me to the wonderful world of bees. The longing to know what goes on beneath the cover of a hive. To be an insider. To help facilitate these amazing insects and give our beloved pollinators a hand. Fortunately for you, you can step into their world whenever you'd like and I'm going to show you how.

How We Got Started:

I started out with an idea, a thought really. What if I became a beekeeper? What would that look like? We had the land for it and the idea fit snugly with our farm theme of natural living. But how was I going to do it? Where does one start? Fortunately for me, I had two friends that were beekeepers. I reached out and was immediately invited along on a hive inspection. There, I met my bee mentor and he pushed me out of my comfort zone and helped me along the way. Our first harvest we brought in 21 gallons of honey. That's quite amazing for a beginning beekeeper, much to the credit of having an experienced mentor.



To Begin

Starting out, you'll need to decide if you can keep bees on your property. You can contact your local bee club, your town hall, your local zoning board, or your state's Department of Agriculture to find out about what's acceptable in your area. Now that we are getting serious about beekeeping, it's time to get connected with your local bee club and request a mentorship. I cannot stress the importance of an experienced mentorship. Beekeepers consider their trade a valuable skill and typically love sharing their knowledge, bees, and extra equipment to get you started successfully. They want to see you succeed!

When you find a mentor you're comfortable with you can assist on hive inspections and routine bee care. It's good to watch and observe through a mentorship for several months before buying bees of your own. This will increase your chances of success. Hands-on learning is the best when working with bees. They'll also put you in the loop when beginning beekeeper classes are available which I also highly recommend. These beginner classes are very informative and cover a wide range of important topics.

Common Questions:

How much time is required for beekeeping?

You can plan to spend 3-4 hours putting together your equipment in the beginning and typically you'll check your bees every week to keep an eye on things in the spring. This will help you learn how they operate. It usually takes 2 hours to check your bees starting out. Time gets away from you in a hive. Later in the summer you could get by checking every other week.

A day or so is required for the extraction process which is usually 1 to 3 times in the summer/early fall. After that you will take 4-8 hours storing your honey supers and equipment for the winter. Through the fall and winter you will still want to check your bees at least every other week.

Obviously, the more hives you have, the more time will be spent checking, harvesting, extracting, and storing equipment. Get to know your bees and you'll find that you want to go to them often just to explore how they operate.

What's the startup cost?

It's good to look at beekeeping as an investment, almost like a side business. There are considerable costs associated with beekeeping equipment. However, the equipment needed to start doing hive inspections with another established beekeeper is much less. A good estimate is around \$300-\$400 to be able to ride along and inspect another beekeeper's hives, which is what I recommend for all beginners.

You should buy your own personal new beekeeping tools to get started on hive inspections. These are the basic required tools to do a hive inspection, which will be your most used tools in your journey to bee-ing a beekeeper. Feel free to buy the higher quality tools here, it will pay for itself in the long run.

You'll need these to go on hive inspections:

- [J-hook hive tool](#)
- [Ventilated bee suit](#)
- [Beekeeping gloves](#)
- [Boots](#)
- [Hive Smoker](#)



A first step for beekeeping is acquiring these tools and becoming familiar with how they work.



Bee Basics

Ecology

Honeybees and native bees are an integral part of the pollination system, responsible for successful seeding of more than 90% of all flowering plants, and for fruiting 30% of our food. Bees become covered in pollen when foraging, and then groom the pollen into specialized structures on their legs called pollen baskets to bring back to the hive. Any pollen caught in “safe zones” on hairs on their backs that they cannot reach to groom is transferred from flower to flower.

On their foraging flights, bees collect nectar and pollen to take back to the hive. The nectar provides carbohydrates, which, when mixed with the enzymes in their honey gut, can be stored and dehydrated into honey. Pollen, containing proteins and amino acids, is mixed into “bee bread” used to feed growing larvae and the queen.

Bees make a local impact with a global importance. Most animals, including humans, directly or indirectly rely on the pollination efforts of honeybees for their food.

How does it work?

You know that honey is collected from beehives, but how do beehives work exactly? Beehives are actually very simple. Beehives work similarly to how bees would build their nest in nature.

The boxes are meant to keep the honey bee colony safe and protected. The frames of the hive are for the bees to build comb upon.

In the lower portion of the hive (brood chamber, two deep boxes with tall frames), the queen will lay eggs. The brood (eggs, larva and pupa) will hatch into drones (male bees) or workers (female bees).

Worker bees have many different jobs within the colony. Some tend to the queen and brood, some produce wax and build comb, and some forage for pollen and nectar.

Honey bees convert nectar into honey by breaking it down in their stomachs and then drying it out to remove moisture. The honey is sealed and stored in hexagonal honeycomb cells to be eaten (or harvested by a beekeeper) at a later time.

Hive Design Basics:

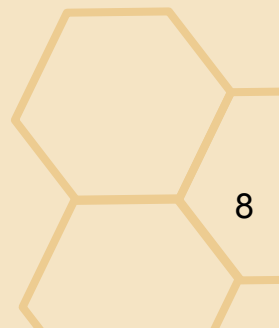


The two deep bottom chambers are the brood chambers. The bottom board that the hive sits on has a raised border creating a small opening for the bees to enter and exit at the bottom front of the hive.

A few inches of plywood extending out from the entrance is necessary to give the bees a landing strip and runway for take off. The top box is where honey is stored and is called a honey super.

The queen is excluded from entering this chamber by a screen placed between the top brood box and the honey super.

This prevents her from entering the honey boxes and laying eggs. The top cover is covered with metal to prevent water from entering the hive. Hives are usually painted white to help the bees see the hive and to prevent rotting of the wooden boxes of the hive from the weather.





Planning Your Operation

As a new beekeeper, it's good to start out small. However, when you are deciding how many hives to start out with, I recommend at least 2 or 3. There are many reasons for starting with more than one hive. Having an additional hive allows you to take brood frames, or honey frames from your healthy hives and help another weaker beehive that might be struggling. Many issues can arise when caring for bees. If you have issues with your first hive, you will have a backup hive or two to keep your project going.

Having one or two extra hives when you are starting out gives you an extra layer of protection and sets you up for success. This is also another reason why it's imperative to find a skilled mentor who can help you out if you have problems with your new hives.

The first year is almost like an experiment. You'll be spending a lot of time observing and learning. Some people choose to have one hive for their own personal honey throughout the year and another hive to sell honey to friends. How many hives you maintain is up to you and what you plan to do with your apiary.

The opportunities for sales in beekeeping are vast. You have honey to sell and beeswax for candles, soap, balms etc. You'll also have growth opportunities within the bee communities in raising queens to sell, harvesting royal jelly and pollen for sale. You can also sell nucs or make honey bee splits for other beekeepers.

I have had the opportunity to teach a yearly beginner beekeeping class to local biology high school students. Spreading the love of the craft and encouraging young entrepreneurs to expand their horizons. You are only limited by your own motivation and drive for success.

Equipment

Hive Equipment:

Deciding what hive equipment to use can be a daunting task. It's important to buy the most popular and trusted hive design which is the Langstroth Hive. It is the most widely used hive design, therefore, components for these types of hives will be easy to find. Other hive setups include, Kenyan Top Bar hive, Warre hive, Flow hive, Nuc hive and observation hives. You can order through Mann Lake, Amazon or a local beekeeping supply store. You will need the following components to make up one complete Langstroth Hive, which I highly recommend starting out with.

There are some basics you need to know about hive equipment. The bottom board and boxes are exposed to the elements, therefore, the wood they are built out of are prone to rot. Hives can be built with different types of wood that are more rot resistant, but it costs more. Pine is the cheapest wood to make hive boxes out of, but it is prone to rot and needs to be coated on the exterior with paint.

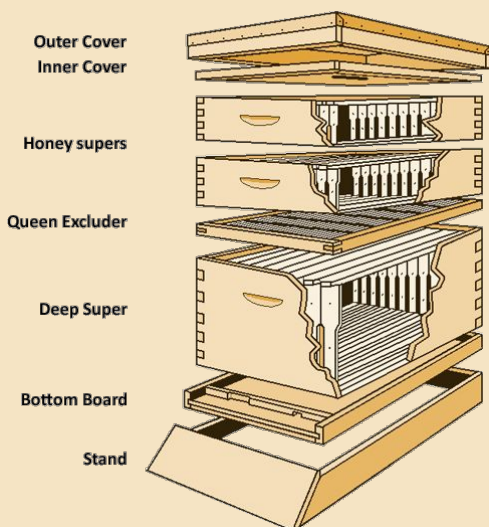
Cedar and Fir are woods that are less prone to rot and can be coated with water seal to last many years. The bottom brood boxes will be in the weather for the life of the hive, the honey supers spend less time in the elements since they are not used during the winter.

The weak point is the top brood box, if these start to rot, they will crack at the top corners when you pry the honey super boxes off. Ultimately, it is up to you to decide what type of wood you would like to use for your hives.

Brood and super boxes can be bought pre-cut and require assembly with wood glue and a nail gun. Frames can be bought pre-cut with assembly required. There are also many "kits" available. You can buy the brood boxes fully assembled and painted with frames in the boxes already assembled. This costs more money but saves time and effort for you.

Frames come in plastic, one-piece design with the foundation included, or you can buy wood frames pre assembled. I've added some links below but pay attention to what it is to make sure you are getting what you want.

The diagram below shows only one deep brood box, I recommend two deep brood boxes so that your queen has plenty of room and can build a strong hive. The stand shown in this diagram is not necessary, we will place our hives on a different type of stand.



- (2) [Deep Brood Boxes](#) (with 10 Frames each) - These are the boxes where the queen will lay eggs, pollen is kept, workers, queens and drones are raised, royal jelly is made, and some honey is stored.
- (2 or More) [Honey Super Boxes with 10 Frames](#) - This is a shorter box with shorter frames. These boxes are called “supers” and are entirely for honey storage.

Once the bees build out their honeycomb for the queen to lay eggs and the hive becomes strong in the bottom two brood boxes, you will add one honey super with 10 frames on top. After the bees draw out the honeycomb and begin filling these frames with honey you can add another box on top of it with 10 more frames.

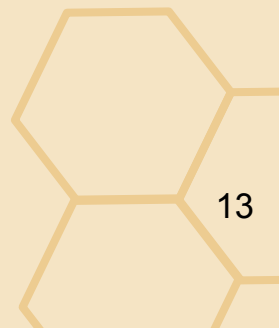
Once your bees get well established, it's a good practice to reduce the amount of honey super frames to 8 per box, this allows the bees to draw the wax comb extra thick and fill more honey in each frame. Depending on how strong the hive is, you can stack up to 5 or 6 boxes of honey frames on top of the brood boxes! After the honey frames are drawn out with wax honeycomb, the bees can fill up a box of frames in about a week during the honey flow. Check on them regularly and add honey supers when they get close to filling the frames up on the first honey super. For this reason, it doesn't hurt to have plenty of extra honey frames and boxes.

- [Queen Excluder](#) - This keeps the queen down in the bottom brood boxes, preventing her from entering the honey super boxes above. The worker bees can fit through the extruder and fill the honey frames with honey. If the queen makes her way into the upper honey boxes, she will lay eggs in the honey frames which can be difficult to remove and contaminate the honey you are planning to harvest.
- [Brood Frames](#) - wooden hardware that houses wax or plastic foundations on which the bees draw out comb, these frames are used for storing brood, pollen, royal jelly, and honey for the queen. 10 brood frames to a box, these frames are 9-1/8" deep. I recommend black frame foundation for the brood frames. The black background helps you to see the young eggs in the honeycomb. When you check your bees, you want to see young eggs in the brood frames so that you know your queen is healthy. There are also one-piece plastic frames with foundation built in, these are nice because they are strong and require less work to assemble. They will not rot if they happen to get wet. The decision to use wooden or plastic frames is up to you to decide.
- [Illinois Super Frames](#) (honey frames) – wooden hardware that houses wax foundations on which the bees draw out the honeycomb for honey. You will start with 10 frames per honey box, later when your hive gets well established you will remove 1 or two frames allowing the bees to make extra thick honeycomb. These honey super frames are 6-1/4" deep. They also come in one-piece plastic designs. Yellow foundation is fine for the honey frames since no eggs are laid in these frames.
- [Foundations](#) - plastic or wax sheets that allow bees to draw out wax comb on and fill with brood, royal jelly, eggs, honey and pollen. You will need one foundation for each frame, whether it's a brood frame or honey frame.

Note: these are only required for wooden, unassembled frame kits. If you buy the plastic, one piece frames, the foundations are included and require no assembly. You can also buy wooden frames pre-assembled

with foundation already in them.

- [Bottom Board](#) - a base to set your boxes on with a raised border around it which gives the boxes a small gap for the bees to enter the hive at the bottom.
- [Top Cover](#) - a protective cover from the elements, These can easily be made with plywood and metal. It needs to be something that will cover the top and is water resistant, with sides to prevent it from falling or blowing off the top of the hive.
- [8, 9, and 10 frame spacers](#) - These help you space the frames properly at various stages of the hive development. It helps to prevent the bees from building the comb out in between the frames if there is too much space between them. This is called burr comb. Burr Comb can make a mess and cause your honey comb to be damaged during harvest.
- [White Exterior Latex Paint](#) - good to have around in case you need to touch up a hive box or are building unassembled kits. Only paint the outsides of the hives. White helps the bees to see the hive.
- [Wood Glue](#) - This is required for assembling hive boxes and frames. Unnecessary if you buy assembled kits and plastic, one piece frames.
- [Air Nailer](#) - Small staple/nail gun to help build strong hive boxes and frames. You must build the honey frames strong because when they are full of honey, the weight can cause the frames to fall apart causing a real mess. This is a cheap nail gun, but it's all you need for building honey boxes and frames. Again, this isn't necessary if buying pre-assembled boxes and frames.

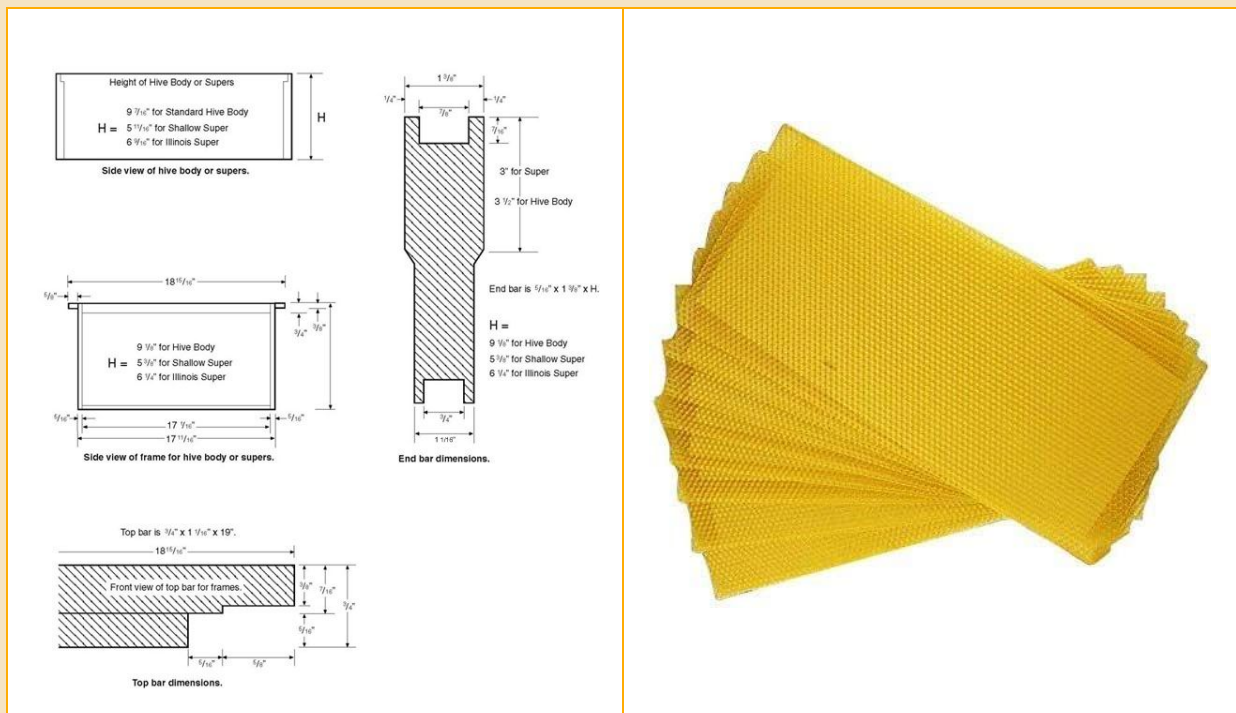


Component Design and Assembly

Frames - Frames are built with either wood or plastic.

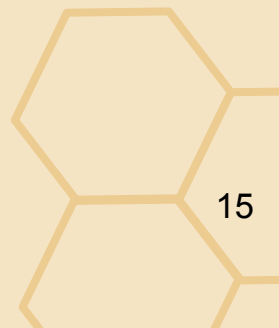
Wooden Frame Design

Wooden frames can be purchased unassembled with the components shown below. Wood glue is placed in each joint and nailed together. These frames need to be strong, a frame full of honey can way up to 4 pounds. The weight of the honey can cause a wooden frame to break or come apart at the joints making a sticky mess. Wooden frames that are built correctly can last a lifetime. Wooden frames need wax foundation added. This is a plastic or wax sheet that fits in a groove inside the frame. The foundation is coated with a light coating of beeswax which helps the bees know to start drawing out honeycomb on the foundation. The foundation usually comes in a yellow color, but you can get black foundation. Black foundation is recommended for brood frames to make the tiny white eggs more visible.



Plastic Frame Design

Plastic frame designs are rather new. Much of the older beekeepers do not use these frames, however, they are superior to wooden frames in my opinion. The one piece design is much stronger. They do not need to be assembled and will literally last forever. The price is about the same as the wooden design.



Boxes

Beehive boxes are made with four pieces. They have handles cut into each side for handling. They are joined together with grooves to make them strong. Wood glue is applied in each groove and then the panels are nailed together for a strong hive box assembly. These can be purchased either assembled or unassembled. The boxes can be made from various wood materials. Boxes made from Pine must be painted to prevent rot. These can be purchased pre-assembled and painted for convenience.



Hive Stand

The next step is to prepare a solid foundation for your bees. You want to create a space that's elevated to allow circulation and minimize dampness. You should elevate the hives at least six inches off the ground so grass will not interfere with flight entrances and exits. Elevation will also make it harder for pests to enter and infest your hives.

If you're handy with woodworking and tools this will be no problem and you could probably use things around your house to create a simple, inexpensive stand to safely house your bees. Go ahead and set up your bee yard with a stable foundation.

Your yard should face east and have a windbreak behind them, if possible, to protect them from strong winds. Two cinder blocks with some landscaping timber creates a nice low platform that works well for holding boxes. You can also buy a premade stand if you choose. You don't want the stand too tall, because once all of your hives are stacked up with a few honey supers on top, the heavy supers full of honey become difficult to remove for extraction. Prepare the grass surrounding your location. Mow or weedeat if need be. Overall, make sure your hives are easily accessible but far enough away to not disturb them while they're exiting and entering the hive. Set up your bottom board and your deep box and top cover



Honey Harvesting Equipment

As you enter the honey harvest season, you will need a variety of other equipment to reap the sweet rewards for all your hard work. You may want to wait until your apiary is thriving before purchasing harvesting equipment. Someone in your bee club will probably help you by letting you use their extracting room.

Harvesting and Honey Basics

Before we get into harvesting equipment, let's cover some of the honey jarring basics. Honey is extracted from the honeycomb. You can do this many different ways, but all methods require "uncapping" the honey. This is a thin layer of wax that is put over the open honeycomb after it's filled with honey. This capping can be removed by a hot knife, or by simply scraping it off with a scraper tool.

When all of the honey comb has been uncapped, it is placed in an extractor which spins the honey frames and the honey flows out of the comb and down into the bottom of a barrel that is part of the extracting equipment.

From there the honey is usually lightly filtered with a woman's stocking to remove any wax particles into a bucket. It is then either bottled straight from the bucket, or put into a heated holding container.

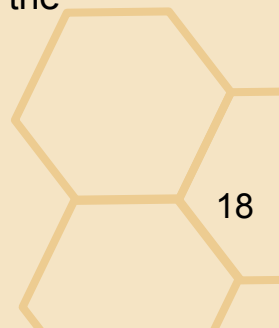
Most beekeepers gently heat their honey in the storage tank through a double boiler method to about 116 degrees. This helps to remove any excess water content to help prevent crystallization. The higher temperatures also make bottling from the valve at the bottom of the tank much easier.

Honey Terms

You've probably noticed different terms describing honey like raw, all natural, unpasteurized, wildflower, organic, unfiltered, etc. These are all terms used to describe honey, buzz words if you will. Let's cover each one:

Raw - Raw honey has not been heated to the point of pasteurization (no higher than 118°F). The benefit of not heating honey is that the naturally-occurring enzymes, vitamins and minerals are preserved and you get the full benefits of them from eating raw honey.

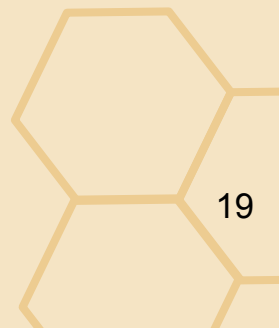
Pasteurization - Pasteurization is a process that destroys the yeast found in honey by applying high heat, well above 118 degrees. This helps extend the shelf life and makes it smoother.



Unfiltered Honey - Refers to the term ultrafiltration, which is a specific kind of filtration used in the food industry, and should not be confused with other light straining methods generally used in the honey industry. When applied to honey, ultrafiltration involves adding water to honey and filtering it under high pressure at the molecular level, then removing the water. It is a much more involved and expensive process, which results in a colorless sweetener product that is derived from honey but is not considered honey in the U.S. Most honey processed by local beekeepers is strained to remove particles, but is not filtered.

Organic Honey - Organic honey is produced from the pollen of organically grown plants, and without chemical miticides to treat the bees. Buying organic honey ensures that you avoid contact with pesticides that may be sprayed on or near the plants visited by honeybees. Of course, bees usually fly up to 2 miles from the hive looking for flowers, which means that all the flowers within this 2-mile radius must be certified organic in order for the honey to truly be organic. As you would expect this can be difficult to control, but an Organic certification is a good way you can be sure the apiary is taking care to ensure it. It's also important to remember that honey labeled "organic" is not necessarily raw or minimally processed unless labeled as such. Much of the certified organic honey available in the United States is imported in large quantities from Brazil or other foreign countries and undergoes pasteurization and heavy filtration. Look for both raw and organic on the label.

Pure Honey - A "pure honey" label means that you are getting 100% honey, without any other ingredients (such as corn syrup, which is sometimes added to industrial honey to reduce costs). However "pure" honey alone doesn't always tell you much about the varietal or how the honey is produced, so it's good to look for more information to make sure you're getting all the benefits you can from honey when it's produced in the most bee- and environment-friendly way.



It's important to note that none of these terms for describing honey are regulated by the FDA or USDA. There is a real gray area in these certifications for honey due to the nature of how honey is made. Most organic honey comes from other countries where it is not regulated and the honey is highly refined through pasteurization. You really are left on your own to find a good beekeeper for a trusted source of honey, I know someone!

Equipment

There are many tools and pieces of equipment needed to extract honey. Don't let this scare you, there are small versions for people starting out. Your honey mentor probably has a honey room with all of this equipment that you can use starting out. Your biggest investment will be an extractor and a heated honey storage tank.

There are two types of extractors. Manual hand crank, and electric. The manual extractors are less expensive but as the name suggests, they require more effort and only do three frames at a time. These require you to crank the handle to spin the honey out of the frames. The electric extractors can get quite expensive but are worth the investment if you plan to grow your hives and expand your apiary. We personally have 4 hives and use a three-frame manual extractor and it's fine for what we do.

The heated honey storage tank is where the honey goes after it's extracted from the hive frames. The storage tank is not necessary, but without it, your honey could crystallize quicker resulting in upset customers. Today's consumers are looking for liquid honey that stays on the shelf for long periods of time.

The equipment required for honey harvesting are as follows:

- [Uncapping Knife](#) -heated electric knife used to easily open the capped honey efficiently with minimal work
- [Manual Extractor](#) - This manual extractor holds 3 frames. Helps to spin the honey out of the frames and is conveniently collected in the bottom of the extractor container. There is a drain on the bottom that is used to dispense honey through the hose stockings into a honey bucket.

- [Electric Extractor](#) - A honey extractor that can hold anywhere from 3 frames up to 32 or more. Working the same way as a manual extractor, except has the convenience of an electric motor turning the frames. Honey is drained from the bottom, usually using a stocking to lightly filter the leftover wax particles.
- Jars/containers-various sizes, most popular are [glass quart with smooth sides](#) and [½ pint squeeze jar](#).
- [Uncapping scraper tool](#) - This tool helps uncap any remaining full honey cells the electric knife missed
- [New knee high stockings](#) - This is an old beekeeper's trick to filtering beautiful honey, put around the spout at the bottom of the extractor to lightly strain your honey.
- [Uncapping tanks](#) - These are used to catch the capping wax and excess honey dripped from the process of uncapping.
- [Honey strainer](#) - that fits snugly on to your honey bucket for a second light strain of your honey to ensure no unwanted particles end up in your honey jars.
- [Honey bucket with gate](#) - valve at the bottom that you'll use to bottle your honey (if you don't have a storage tank)
- [Bee brush](#) - This tool helps brush bees off frames that you pull, it's not a bad idea to purchase one of these early on in your beekeeping journey. They are useful when doing hive inspections and other tasks on the hive.
- You'll also need an available water source to clean up any messes and keep your area clean. I highly recommend harvesting in an airtight space that won't allow your bees to smell the honey and try to come collect. The last thing you need is hundreds of bees flying in while you're trying to extract honey.

Some of the equipment used:



Acquiring Your Bees

Now that you have your beekeeping equipment and your hives are set up and ready, it's time to put some bees in their new home. This is a very exciting time for a new beekeeper!

Your mentor will be able to provide you with a reputable dealer for package bees. These are small boxes that can be shipped to you through the postal service! They come with about three pounds of bees and one queen, you need one package per hive.

Another way to get bees is to make a “split” from a strong, established hive. In the spring, bees begin to rapidly grow their hives to prepare for the honey flow. A strong hive can overpopulate a hive if they are very healthy and the conditions are right. If they get too crowded the hive will swarm, which means that it will leave the hive and start a new hive somewhere else. They can do this in a tree, a house, or really just about anywhere.

To prevent this from happening, beekeepers will perform what's called a split. Where you take young brood frames from the strong hive and shake many bees into a box called a nuc. You then relocate the nuc 2 miles from the original hive, there they will grow a new queen and build a new population of bees. When the nuc box becomes strong, it is ready to move into a new hive to start a new beehive! Your mentor may be able to sell you some of his splits, as this is a common practice for large apiarys.

You may also need to purchase a mated queen for your hive split.

Let's cover some bee basics quickly.

What kind of bees should you get?

The honeybee species most frequently used in the United States is European in origin and is referred to in the scientific community as *Apis mellifera*, of this species is the Italian honey bee.

These are calm, hardy, and produce a great amount of honey. Other popular honeybee species include, Carniolan, Caucasion, Russian, Buckfast(hybrid), Cordovan(hybrid), and of course Africanized(hybrid), the so-called Killer Bee. The last breed is neither desirable nor commercially available for obvious reasons.

Honeybees have three social castes, each with a specific role or set of roles that divide all of the labor inside a colony. The colony is made up of thousands of individuals working as a whole.



The Queen

Each hive will have 1 queen bee who is the only reproductive individual in the colony. She leaves the hive under two circumstances: as a virgin queen to mate, and in some cases, as an experienced queen with a swarm. On mating flights the queen locates a “drone congregation area” to mate with up to 80 drones before returning to the hive. She will store all this sperm to use for the rest of her life, which can last up to 5 or 6 years.

The queen will lay all of the eggs for the colony, “deciding” when to lay drones (unfertilized eggs), or workers (fertilized eggs).

Worker Bees

Worker bees are sterile females who do all of the foraging, feeding of young, honey production and storage, wax production, cleaning, and defending the hive against intruders. Each worker bee will do a variety of jobs in her lifetime, which can last about 4-6 weeks during the active season. As they age, their duties will become riskier, and require venturing further from the hive.

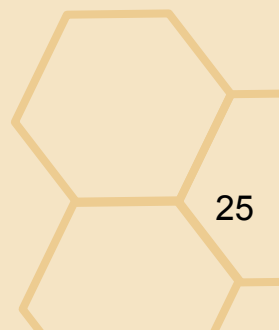
Drones

The only male bees in the colony are drones. Their sole purpose is to spread the genetics of the colony by mating with virgin queens from other colonies. Once they mate, they die successful bees. Unsuccessful drones return to the hive to eat honey and pollen. Once swarm season is over, drones become a drain on resources inside the hive, and are evicted by workers.

Package Bees

When ordering your bees, time your order so your bees arrive in early spring. You will ensure time enough for your colony to grow strong, so you'll have a nice honey flow come summer. Suppliers typically start mailing package bees in early April and go through to the end of May. After that, it's too hot for bees to survive the shipping process. Place your order early, October or November of the previous year is fine.

If you decide to order bees yourself, a simple search online will provide countless suppliers. Be sure to look for a vendor that has a good reputation, who's been in business for a long time and provides dependable shipping and good customer service. Try to find a local supplier, to keep shipping time to a minimum, even better if you can drive to their location. Ask about a replacement guarantee in case they don't survive shipment. Consulting with your local bee club or state's apiary inspector will no doubt put you in the right direction for a quality supplier.



Bee Arrival

Unless you're picking up bees from a local supplier, you probably won't know the exact day that your bees will arrive. Most suppliers will give you an approximate week they plan to ship so when that week approaches, it's time to get prepared. Start by setting up one deep box with a bottom board, 10 brood frames, and a top cover. When your bees arrive, set them in a cool place until you are ready to transfer them into their new hive. Remove three to four frames out of the middle of the deep box.

Remove the can of feed in the center of the package of bees and shake all of the bees into the center of the brood box.



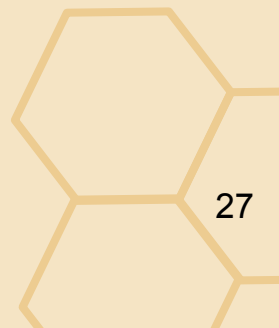
Queen and attendants in mailing cage



The queen will come in her own private queen cage. It is designed with a hole capped with a candy plug on one end. The bees will work to remove the queen after they accept her. Make sure the candy plug is intact and is facing up. Attach the queen cage by hanging it between the two frames closest to the empty spot you removed the frames.

Then close your hive and DO NOT open for at least a week while they release the queen and the workers to get to know and accept her. If you purchased a split from someone, set the nuc box to the side of the deep brood box. Gently open the nuc box and transfer the deep nuc frames in the center of the brood box where you've removed several frames. Shake as many of the bees out of

the nuc box holding it directly over the brood box. Leave the nuc in front of the brood box so that any stragglers will enter the new hive. If you have purchased a mated queen for your split, take your queen cage, and insert her as you would above and follow instructions on keeping the hive closed for at least a week.



First Inspection

Here's the moment you've been waiting for! Your first peek into your hive. Hopefully you've been practicing lighting your smoker by now and have that skill somewhat under your belt. A little dry pine straw in the bottom of your smoker, light that and give your smoker a pump or two after closing the lid. After about 2 minutes it should be smoking pretty good and now is the time to roll a tight ball of pine straw and insert it into your smoking pine straw. Be gentle so as to not put your fire out. Gently pump the bellows and it should light. Make sure your smoke is cool to the touch so as not to burn the bees. This is a skill all on its own so don't be disheartened if your smoker goes out more than a few times. Even the seasoned pros have their smokers go out or not light right away some days.

Pick a nice sunny day that's not too windy. The temperature should be 65 degrees or above. You'll want to see in the hive clearly to check for eggs so you'll need bright sunlight to help you spot them correctly. In addition, you can always carry a mini flashlight in your suit pocket to further assist in identifying eggs.

Suit up! Make sure you are fully zipped because any nook or cranny is an entrance for a tiny bee and trust me, you don't want them getting trapped in your suit or even worse, your veil. Zip it up! Light your smoker and grab your hive tool. Put your gloves on and you're ready to enter your hive!

When you approach your first hive, smoke the entrance a couple times to let them know you're there. Always try to work your bees from the back. Lift the top cover and give them another few puffs into the brood chamber. Set your smoker to the side. Grab your hive tool and gently peek inside. It's important to be quiet and try to keep any banging to a minimum as to not upset the bees. Check to see if the workers removed the candy plug and released the queen. If not, close the hive back up and check back in a couple days. If she has been released, proceed with your inspection.

Remove the first frame closest to the end of your deep by prying it gently on each end, being sure to remove it straight up and never at an angle. See if you can identify workers and drones. Drones are larger than workers and have a more pronounced head. Check to see if they are drawing out comb. Set that frame aside and gently pry the next frame very carefully. They will begin to build their hive by drawing out comb and filling the cells with pollen, nectar, royal jelly, honey, and eggs.

Peek around and see if you can find the queen. She is elongated and larger than the other bees. Sometimes they come marked with a dot on their back for easy identification but the hunt for the queen is fun and can be difficult depending on how thriving your hive becomes.

After two weeks you will need to begin checking the frames for new eggs. If you started with brand new frames, it will take some time for the bees to build out honeycomb for storing eggs for the larva to hatch out of. Many beekeepers feed their bees to help them build wax comb. A young hive will appreciate all the help they can get! Once you begin to see wax comb in your frames, it's time to look for eggs. Eggs will be in the center of a cell and look like a tiny grain of rice.

Typically, the brood is kept in the center frames of the deep box. It will look like a crescent shape when they cap it off and that's exactly what you want to see. If you see eggs, congratulations, you are well on your way to a great year!

That completes your first inspection. Well done! You've successfully completed your first hive installation and inspection. At this point, you probably won't have to worry about hive beetles or mites, but you should go ahead and start researching and deciding how you want to treat them over the summer. You should consider whether you want to keep organic bees or medicate. There's also such a thing as natural beekeeping which is using no chemicals or artificial feedings. To each their own for their specific needs. The main thing is to make sure your bees stay healthy and to do that you must inspect regularly. If you do decide to treat your bees for mites, hive beetles etc... you can find all the available treatments on Mann Lake or Amazon.



Harvest

As Spring progresses, your bees will fill in that entire deep box and at that time, you'll need to add a second brood box to give them plenty of room. After they put a significant dent in that box and your honey flow starts, that is when you'll add your queen excluder. Remember you only take honey from the supers. When your supers completely fill with capped honey you can check your water content of the honey with a refractometer. The water content of honey will determine if there's a chance for fermentation and spoilage. Your honey should test under 20%. If it tests correctly, it's time to harvest!

Set up your honey processing assembly line. Like mentioned above, you'll want a place that is mostly airtight so as not to allow your bees to come retrieve the honey you robbed. You'll want to place your double uncapping tanks first. With access to an electrical outlet for your electric knife.

Follow that with your Extractor. Under your extractor you'll place a honey bucket with a pour valve at the bottom. On top of your bucket, you'll place your strainer.

To help filter your honey use a clean lady's knee high stocking attached to your pour valve on the bottom of the extractor tank. I know it sounds bizarre. My mentor uses this method, and it works perfectly for beautifully strained honey. Place several clean slightly moist rags around your area to quickly clean up spills or wipe your hand. You will be very grateful for them because as you can imagine, this is a messy job!

There are multiple ways to remove your supers from the hive. Our first year I was working with a mentor, and he used a stinky cover to drive the bees down and out of the hive. This is called a fume board. It's efficient but it is a chemical and you'll have to determine if you want to work with that. This summer, we decided to go chemical free. We used a bee brush and individually brushed bees off each frame. This was time consuming, and we got a few stings but it was worth it for what we were trying to accomplish. It's important to remember

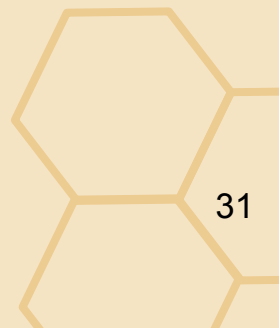
not to remove all of the honey supers.

Leave at least one box with full honey frames for the bees to use over the winter. You don't want your bees to starve or struggle over the winter.

After you get your supers in your area where you are preparing to harvest. Go ahead and plug in your uncapping knife. To begin, take one frame of capped honey and starting at the bottom of your frame, gently slide your knife along the frame to remove as much of the capping as you can on both sides. Go back over any remaining cells with a scraper to be sure you'll get every drop of that gold goodness. Place your frames into your extractor until you've filled up all available slots. Now either turn on your extractor or manually get to spinning! After several minutes check your frames to make sure they are light, and no honey is left. Set them back in honey super box and move on until you've uncapped all your honey.

It is likely you will need to bottle honey when your bucket gets full. Bottle in your container of choice carefully to make sure they're airtight as you don't want to risk moisture getting in. Continue this process until you've spun all your frames and jarred up all your honey. Bask in the glow of all your hard work and enjoy tasting your beautiful honey.

Great job friend!



Storing Equipment

Clean up time! How do you get your supers clean you ask?

Simply sit the supers outside near the hive and the bees will clean every bit of the remaining remnants of honey off the comb. Make sure not to leave them out if there's a threat of rain, after a few days, collect your supers and store them for next year.

By now you will have noticed that it takes a while for the honeybees to build the honeycomb on the new frames you purchased. They work very hard to build each hexagonal comb, it's critical to protect this valuable frame of honeycomb over the winter. The biggest threat to your honeycomb frames is wax moths.

Wax moths destroy honeycomb by laying eggs inside the frames. These tiny wax holes are a perfect place for their eggs to hatch and grow thousands of tiny worms which begin to eat and destroy the beautiful comb. When this happens, there's nothing you can do but scrape it all out and start over next spring.

Storing Honey boxes and frames

After the honey frames have been cleaned out by the bees they will return to the hive and you can move them back indoors to prepare them for storage. Start by using a hive tool to scrape all excess propolis and wax off of each frame and the edges/sides of the honey boxes.

If possible, place these boxes and frames in a chest freezer for a couple of days. This kills any wax moth eggs that may have already been laid in the honey supers. You cannot see the eggs, they are microscopic. If you can't put them in a freezer, that's ok. Try to do your best to prepare them for winter storage, by taking necessary precautions as follows.

The boxes and frames need to be stored somewhere off of the ground so they don't get wet, with a roof or some covering so that they don't get rained on. However, be careful how you store them because sunlight and ventilation is a major deterrent for wax moths.

Try to find a place that is out of the way, but receives maximum breeze/sunlight throughout the day. Somewhere you can easily check on them to make sure there are no signs of wax moths.

Stacking the boxes of frames criss-crossed in a well lit place will help prevent wax moth infestations. You can also store the boxes up on their sides with two or three frames removed to allow plenty of light and ventilation.

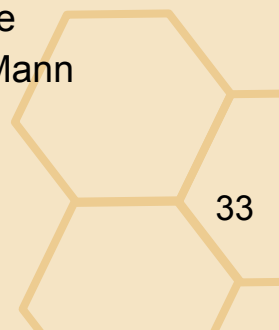
There are also pesticides that are designed to deter wax moths, one popular brand is called Paramoth. To use this method, set a honey box with all your frames in the box and place a sheet of newspaper on top of the frames, pour a small pile of crystals on the paper. Then stack your next honey box full of frames on top of it stacked sideways so that there is an opening on each side to allow ventilation and sunlight. Repeat this process until all your honey boxes are stacked with empty frames.

Winter Season Routine

Continue to check your bees on warmer days with clear skies. If you've taken too much of their honey you will need to feed your bees so make sure they have plenty to survive the winter. Sugar water is an easy way to feed them, or you can purchase feeder patties or premade bee food.

There are feeders you can attach to the front entrance of the hive, or you can feed them inside the hive, it's just whichever you prefer. Some beekeepers put a bucket of sugar water out with pine straw and branches for them to land on to drink so they don't drown. They are your investment, so you get to choose what you think is best for them.

If you live in a very cold climate you will need to provide protection for the bees, so they don't freeze. Insulation wraps can be purchased through Mann Lake or Amazon.



In most warmer climates they don't require insulation. Depending on where you live, you may need to protect your bees from cold winter temperatures.

Conclusion

So there you have it! Now you can rock-n-roll anytime you want with your bees and invite friends and family to participate. Most are all too eager to throw on a bee suit and go on a hive inspection with you. Congratulations on your first year. You rocked it! Wishing you the ultimate success in your newfound hobby and many years of bountiful harvests.

[@BowTiedFarmer](#)

[@BowTiedMissFarm](#)



GETCHU SOME!

Now Only

\$24.69
(1 Qt Jar)

BOWTIEDFARMER.COM



BowTiedFarmer

BOWTIEDFARMER.COM