

Ames Farm - Beginning MN beekeepers equipment and tool guide.

Suitable location

The ideal year around location in Minnesota for a bee hive is on a hill with the hives facing east or south and some shade during midday or afternoon. Obviously property constraints or suburban locations have more limited choices.

Honeybees need water to drink and if neighbors have a swimming pool there could be issues with bees hanging around the water. A variety of watering devices can be built or assembled.

Depending on the sources of food and prevailing wind bees set up a flyway from their hive entrances in the first 10-20 feet, so leaving that area clear is important. Keeping the hive away from walkways or paths, kennels or horses is a good idea as well.

Honeybees frequent the area within a .75-1.5 mile radius so using google maps in satellite view is useful to see what the nearby landscape can offer them for forage. Trees and shrubs are sources of nectar and most importantly in the spring pollen. Large expanses of grass, corn and soybeans offer little food for honeybees and pollinators. River valleys and parks often have good forage for honeybees, so do wooded areas that have basswood trees

Beekeeping Classes

Some agricultural activities like gardening or raising chickens can be learned by reading and watching videos and by trial and error. Beekeeping is a bit more complicated and understanding some critical facts about their biology and life cycles is key to being a successful beekeeper. In addition the varroa mite that jumped hosts from Asian Honeybees to European Honeybees in the 1980's have spread around the world and impacted every continent except Australia. They are the leading cause and vector of death of hives in the USA. Learning their biology and modern methods of mitigating their damage is also indispensable.

We offer a [Beekeeping in MN Class](#) Saturday April 26, 2025 and a [Beekeeping Class and Nuc Bundle](#)

We also offer a [Hands on Beekeeping Class](#) at the farm in July 19th 2025 where we open hives and look at the brood nest and look for mites etc

Hiveware

First let's clear up some terms that can be confusing about the wooden hive bodies we use for a bee hive. A brood box is any size box you are using for the brood nest. Honey is never extracted from brood comb and over time the combs get dark from brood rearing. A honey super is any size box that is used on top of the hive stack to collect honey. Often I have 2-5 honey supers stacked on a hive by the end of July. Having enough honey supers and frames assembled and ready for the honey season (late May to August) is important as it can take time to obtain and have ready.

Most beekeepers use a 10 frame type of hive body and that is the most universal. I personally don't like using all 10 frames in that size box because they're difficult to remove, for that reason many beekeepers use just 9 frames. There is also an eight frame system of boxes that are also available but less common. The downside of using eight frame equipment is the covers and bottom boards don't fit the universal 10 frame. The main reason to use the eight frame box is the overall weight is less

The wooden boxes that make up a beehive come in 3 different sizes and use 3 different size frames of combs. A frame is usually made of wood that provides some structure to the combs. Foundation is a starter sheet made of beeswax or beeswax coated plastic for the bees to build their wax hexagonal combs. One piece plastic frames are also available and save money.

The deep size hive body uses a 9 ½ inch frame filled with either plastic foundation or beeswax sheets of foundation. Deep hive bodies are most often used as brood frames in the nest.. When used to produce honey the full box can weigh 80-90 pounds which is hard for someone to lift. We use this size frame for the nucs we sell and so do most beekeepers.

The medium sized hive body uses a 6 ¼ frame and the lighter weight when full of 34 pounds makes them the most used honey super and I recommend them as well.

The smallest size of hive body is called a shallow size box and uses a 5 ⅝ frame and is mostly used to make edible cut comb. I use the thin surplus type of foundation for cut comb. Its the thinnest foundation and intended for cut comb honey production.

Any size box and frame could conceivably be used for brood or the nest. If weight is an issue then using medium boxes or 8 frame boxes is the best approach.

We recommend using at least one deep box for the brood nest and just leave it on the bottom of the stack so you don't need to lift it often.

Another consideration is that most nucs like what we sell to replenish a hive in spring, use deep frames and that's true for most nuc sellers. Finding a nuc made up from medium frames can be difficult.

The two main bee supply houses are <https://www.mannlakeltd.com> or www.dadant.com.

Mann lake is a MN based company that has a good website and offers discounts on a regular basis. Look for their big spring sale that often has a 11% discount at the beginning of March. Since they sold out to an investor, the quality of some products has declined. We also like Dadant & Sons based in Illinois, which is an old company dating back to the mid 1800's. Their website is not as nice but their bee suits cost less and work well and I like their goatskin gloves better too.

Both sell individual pieces of equipment or a starter hive kit.

A complete bee hive should contain the following

2 deeps for brood nest, 2-3 mediums for honey collection

OR

1 deep and 1-2 mediums for brood and minimum of 2 mediums for honey collection.

OR

3 mediums for brood and then again 2-3 mediums for honey collection.

All these configurations need a bottom board for the hive to sit on and an inner and outer covers to provide a vented and waterproof roof over the hive.

Remember 8 frame equipment has a different box dimension but the same size frame as 10 frame. Because the size of a eight frame boxes are smaller, you need a specific bottom board and covers to fit them then 10 frame

Here is a [link](#) for a Mann Lake starter hive kit that's assembled and painted. These same items can be purchased unpainted and unassembled at a lower cost if you buy them individually on their website.

Placing hives on pallets or concrete blocks for a platform of wood is a good idea, you want to keep the hives off the ground or they get wet and rot from contacting the ground.

Protective Gear

The best protective gear is a bee suit and veil that zips on the full length suit. Bees like to crawl up your boot under the pants leg and you get stung. A full length bee suit has an elastic cuff that prevents this from happening

Other variations include buying a bee jacket with a veil

\ or just a veil and then finding a combination of shirt and pants that keep the bees out.

Most beekeepers use leather gloves to protect their hands from stings. I prefer goatskin gloves from Dadant because they can be machine washed and don't shrink or get stretched out like the more common rawhide gloves do.

Tools

The two essential beekeeping tools are a hive tool and smoker. The hive tool is an extension of your fingers and allows you to pry or move frames around. The smoker is used to calm the bees when you have the hive open and doing an inspection.

There are many suitable materials for smoker fuel. I prefer untreated Sisal baling twine because it burns really long and it's a cool smoke, meaning it's not too hot for the bees. You cannot use plastic or green treated sisal twine. Other beekeepers use burlap or pine needles for smoker fuel.

It seems that smokers won't stay lit when you need them. I prefer using a low cost propane torch to light the smoker. One must be careful though to not fill the smoker with propane gas and then lighting the torch and getting a flash of fire in you face,

Extracting

Once you have successfully made a honey crop and want to extract the honey, use centrifugal force so that the combs can be reused the following year. I don't recommend crushing and straining the frames to harvest the honey. The drawn combs are valuable and it takes 8 pounds of honey for bees to build a medium box of 9 frames of beeswax comb on the foundation.

There is no good method to remove the honey from the combs without an extractor. Cut comb honey production is harder to make work for a new beekeeper. I don't advise trying cut comb until you learn how to get the bees to fill a honey super.