

# Bee Harmony



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## Hive Location

By Ed Erwin, Master Beekeeper.  
BeeHarmony.org  
Hive Location

Regulations and laws:



Before picking the perfect location and investing in a beehive, research local, city, county and neighborhood association laws and regulations about beekeeping and beehives. In some situations, the beekeeper must register their hives with the local agencies. Your local Agricultural Extension Office can provide information on keeping bees in your area.

Location and Space:



Overall, picking a good hive location will help in achieving your ultimate prize – harvesting honey. Honey Bees are found and flourish in every continent, except Antarctica, so you can keep bees almost anywhere. With the loss of habitat, and the general interest in beekeeping, we will focus our attention to keeping bees in an urban environment.

Having beehives does not require a lot of space, nor does it require you to have bee friendly flowers since honey bees will travel several miles to locate and retrieve

nectar and pollen. Although honey bees will travel considerable distance during the foraging season, it is essential that nectar and pollen resources are available in the area. Bees need pollen to provide protein to new brood and the nectar is converted into honey to provide carbohydrates (energy) to the foraging bees. Heavy concentrations of floral sources are needed to produce large honey crops. Wildflowers are excellent sources of nourishment for honey bees.

Pesticides and other killers:



If you plan to become an urban beekeeper, you will need to pay close attention to any future applications of pesticides, fungicides and herbicides in your yard since all three can be extremely deadly to honey bees. There isn't much you can do to prevent your neighbors

from using these products, but be aware that they can be harmful to your bees and the health of your hive.

### Key Considerations

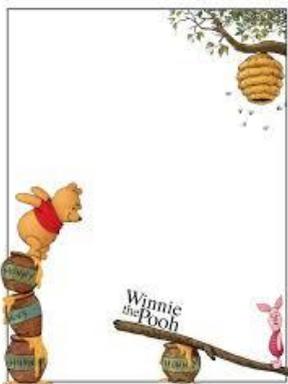
The ideal suburban setting should have easy access, good drainage, a nearby water source, adequate sun exposure and minimal wind. The following are some basic guidelines and key items to consider when selecting a location:

### Access:



Ease of access to the hive is critical. Initially, after installation of a new package of bees will require visiting, inspecting and providing sugar water. If all goes well, later in the year you will be hauling supers full of honey from your apiary to an extraction location. A medium super will weigh 40 to 50 lbs. and a deep super will weigh 70 to 90 lbs. Consider using a wagon or cart to help with moving the super.

### Seclusion:



An isolated, seldom used area is a good place for hive placement. Beehive theft is becoming a big problem today, so select an area that is out of public view. Avoid areas which are frequented by people (particularly children), pets and

subject to constant noise. Consideration should also be given to the noise created by lawn equipment. Although honey bees do not hear, they do detect the vibrations caused by equipment. Vibrations can cause bees to become aggressive and attack anyone in the area.

### Avoid Dampness:



Dampness can become a problem if the hive is placed near water saturated soil or low areas that are susceptible to pooling water. Added water vapor in the air surrounding the hive will require the bees to spend additional time and energy removing moisture from the nectar to produce honey. Damp, moist areas can also lead to mold growing in your hive and increase the chances of disease in your colony, such as Nosema. When putting the hive in place, make certain the hive will not be in an area that is prone to flooding.

### Hive Placement:



The hive should be level from side to side, with the front of the hive slightly lower than the back of the hive to prevent any rainwater from entering the hive. Hives should be off the ground. Consider using a hive stand that raises the bottom board to a height of at least twelve to eighteen inches off the ground. Cinder blocks and wooden pallets can be used in place of a hive stand. A raised hive will also help

reduce pests such as mice, and bugs. Having the hive raised prevents a lot of unnecessary bending during inspections. If you use a hive stand with legs consider placing paving stones under each leg to add support and stability. If the ground is damp and your hive is full of honey, the weight may settle the legs into the moist ground making the hive unbalanced. Although a raised hive is important, don't make it too high. Making a hive too tall makes it difficult to add supers and harvest honey.

Once your hive is in place and your bees have been installed, avoid moving your hive to a new location especially during the day. A hive moved just a few feet will disrupt the bee's internal guidance back to the hive. The returning bees will become disoriented and you may lose many of the foraging bees that were out during your hive move. If you must move your hive, wait until late evening when all the bees have returned to the hive. Seal the bees in the hive and move it to your new location. Then unseal the hive. The foraging bees will re-orient themselves as they leave the hive the next morning.

### Flight Patterns:



It's important to understand that selecting a location also requires an understanding of honey bee flight patterns. With urban beekeeping, you want your bees to fly up and away from people and pets. Bees have a natural flight pattern upon leaving and returning to the hive. If there is not a clear and open area as the bees enter and leave the hive and gain altitude (over 6 feet), consider adding a fence of vegetation to force the bees to fly above head level. Adding barriers will also help with keeping your hive out of sight from theft, vandalism and neighbor who may not appreciate bees in their neighborhood.

### Sunlight and hive temperature:



It is the general view that beehives should be placed so the entrance is facing a Southeast direction to receive the early morning sun. During the cooler times of the year, this will help the bees warm up and begin their foraging. However, full direct sunlight the entire day can be a detriment to the hive in the heat of the summer. This can partially be remedied by placing the hive in a location that receives dappled sunlight. When raising brood, bees must keep the hive temperature in the low to mid 90's. To achieve these temperatures bees will expend a considerable amount of energy trying to cool a hive that receives full sunlight in the hot summers. Bees cool the hive by clinging near the outside entrance, flapping their wings directing cooler air inside and by adding water to the hive. Particularly during the nectar flow, foraging bees bring water back to the hive. The water is transferred to open honey comb cells and as the bees fan the hive with their wings, the water evaporates and helps cool the hive. Helping the bees maintain the hive at an ideal temperature will assist your bees in raising brood and producing honey.

Choosing a white or light-colored paint for your hive exterior will help with the internal temperature. You can also help the hive stay cooler by having a screen bottom board and by propping open the cover of your hive to allow for ventilation.

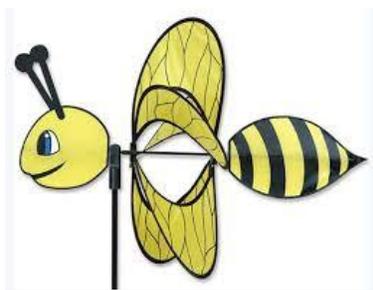
### Water:



Your beehive should have a nearby water source. The source water should be within a reasonable flight distance of the bees. With urban beekeeping consider have a water source in or near your apiary, but not directly under their flight path. Upon leaving the hive, honey bees evacuate their waste and you don't want this evacuation in your water source. If a water source is not provided, your bees may become a nuisance to your neighbors by gathering their water from a nearby swimming pool, or bird bath. Once the bees become accustomed to a water source, it is very difficult to get them to accept a new water source, so provide a suitable, and consistently supplied water source from the very beginning of establishing your hive. Along with regulating the internal temperature of the hive, water is also used to dilute and de-crystallize honey, and raising brood.

The water source does not need to be clean, pure water. Studies have shown that bees prefer water from a natural source that has some organic matter. Bees prefer standing water and you will need to furnish a safe landing location for the bees to avoid drowning. A small stack of rocks/pebbles or some form of floating device in the water is sufficient. A container filled with moss and water is a good option that allows bees access to natural organic water with a safe landing spot.

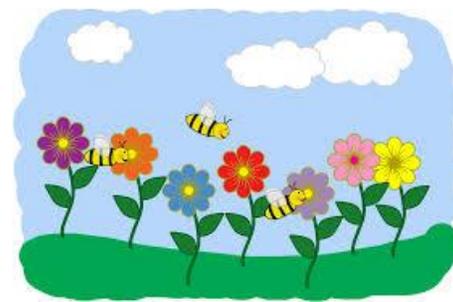
### Wind:



In the southern U. S. having a windbreak to fend off the cold winter wind isn't as important as it is in northern latitudes with icy-cold winters. However, hives can be susceptible to falling over or the top outer cover blowing off in severe weather with strong winds. If the top of the hive blows off and is not replaced quickly it can spell the beginning of the end for your bees. A heavy rock or brick

can be placed on top of the hive to prevent hive tops from blowing off. Some beekeepers use a ratchet strap to secure the entire hive. As mentioned previously, ventilation of the hive is important so placing the hive in an area that can receive breezes is beneficial to cooling the hive in the summer months.

### Forage:



As mentioned previously, Honey Bees will travel several miles to locate and retrieve nectar and pollen. Don't obsess about having sufficient flowering plants in your yard. But, having a yard full of flowering plants will attract lots of pollinators, including bees, butterflies and hummingbirds. Focus on planting wildflowers in large bunches to attract pollinators. Also remember to stagger the timing of planting the flowers so the pollinators will have foraging material during the foraging season - spring and summer.

### Other considerations:

When inspecting or working with your bees, try to open your hive on warm sunny days when most of the foraging bees are out of the hive. Work slowly and patiently. You don't want a hive full of defensive, aggressive, swarming bees that might disturb your neighbors or become a public nuisance.

Install and keep only gentle colonies, if your hive becomes aggressive, consider re-queening. Re-queening should change the temperament of the hive within six weeks.

Keep only the minimum number of hives on your property that the area forage can support. In most situations, two hives should be your maximum.

Keep hives away from property lines and areas where the public might pass.

Consider using a fence or vegetation to separate your bees from the public and control the flight path.

Don't forget, sharing some honey with your neighbors goes a long way in accepting your bees into the neighborhood...

#### Hive Location Check List



<b>Regulations</b>
<b>Space</b>
<b>Pesticides</b>
<b>Access</b>
<b>Seclusion</b>
<b>Dampness</b>
<b>Flight Path</b>
<b>Sunlight</b>
<b>Water</b>
<b>Forage</b>
<b>Other</b>

**Bee Harmony is a 501 (C) 3 Non-Profit Organization dedicated to confronting Colony Collapse Disorder (CCD) and providing the public with an opportunity to learn about Honey Bees and providing Honey Bees with bee hives in environmentally friendly locations safe from pesticides.**

#### **Other Presentations presented by Bee Harmony**

##### **Honey Bee Biology - Sensory Organs**

How a Honey Bee communicates, sees, and smells is facilitated through a highly-developed set of sensory organs. This PowerPoint presentation describes the unique importance of the honey bees two antennae that house thousands of sensory organs specialized for: touch (mechanoreceptors), smell (odor receptors) and, taste (gustatory receptors). The five eyes of the bee - Two compound eyes made up of 13,800 individual facets that see movement better than still objects and see ultraviolet light but not red, and three eyes on top of its head that see polarized light and act as a GPS. And one for the most fascinating sensory organs Pheromones, which are involved in almost every aspect of the honey bee colony life including development and reproduction (including queen mating and swarming), foraging for nectar and pollen, defense, orientation, and the integration of colony activities.