



# Inspiring Bee's

**Bee-aware and share knowledge!**



**Helping Bees in Your Garden**

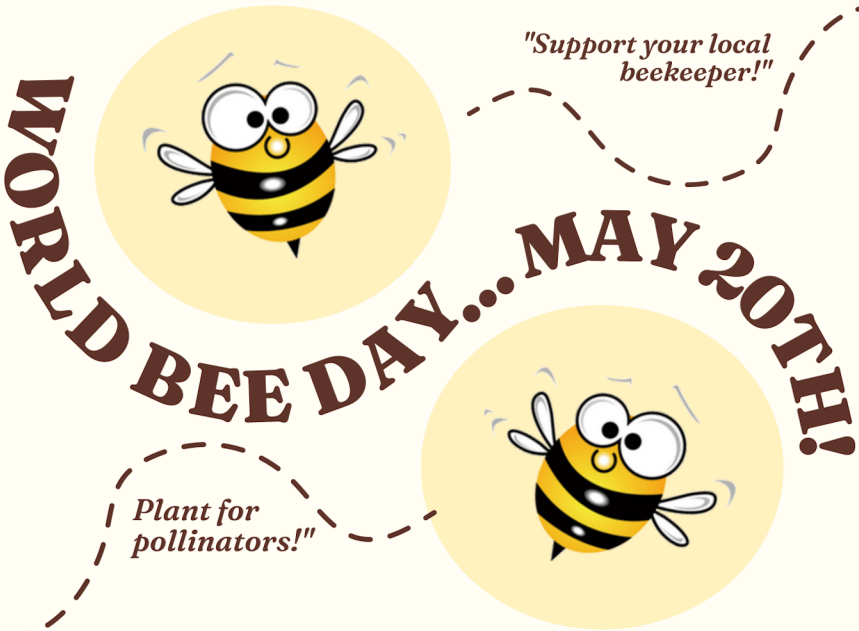
**Tips for Getting Started: Beekeeping for Beginners**



**PHOENIX VOYAGE**  
Inspiring Solutions For a Better World

In an organic garden, we do not grow food alone. We human gardeners should always remember that we are only a small part of a larger ecosystem. We are aided by a wide range of different creatures. Bees are one of the most important garden helpers. Beekeeping could be one way to work more effectively with these beneficial pollinators to grow food where we live.

Natural beekeeping can help bees and help people.



In this guide, you can learn a little more about bees and the problems they face, and discover what you can do in your garden to help them (and yourself). You will learn about why natural beekeeping could be part of the solution for our honey bees, and some of the basics to help you get started with this useful and sustainable garden activity.

**Ban harmful chemicals.**



## Why are bees so important?

Before we look at natural beekeeping, let's consider why taking care of bees is so important in an organic garden. It would be impossible to overstate the importance of pollinators to humanity. While many people are vaguely aware that bees are important, few people truly give much thought to the vital role that pollinators play in gardening and agriculture – and to the wider ecological picture.

The truth of the matter is that without pollinators, it would be very difficult, if not impossible, for human beings to grow the food that we need to survive on this planet. Some estimates suggest that if bees were to go extinct, humanity would have just 4 years left. Certainly, there would be widespread famine and our planet's capacity for food generation would be severely curtailed.



Bees (and other pollinators) move pollen from one part of a plant's flower to another, fertilizing that plant. This agency is essential for certain plants in order to be able to form fruit and/or seed and to reproduce.

While some plants are pollinated by the wind, others require pollinators in order for fertilization to take place. Globally, around 87.5% of flowering plant species requires an animal agency for pollination. The volume of agricultural production that is dependent on animal pollination has increased by 300% over the past 50 years. Bees are one of most important pollinators.

## Why are bees under threat?

Bee numbers are dropping globally at an alarming rate. Tragically, in the last 100 years, we have already lost more than half the world's bee species. Man-made global temperature changes and other human impacts are causing a mass-extinction and bees are just one of many species affected. A U.N. report released in 2016 stated that 40% of pollinators are currently facing extinction. The causes of this are varied, though it is widely agreed that human beings are to blame.

**Bee the change.**



## Habitat Destruction

### **Mono-crop agriculture can harm our bees.**

Changing land use, growing cities, and intensive mono-crop agriculture are all significant threats to a range of different bees. Wilderness areas, meadows and hedgerows are being lost and this has had a huge impact on all wildlife – including bees. Habitat loss makes it harder for bees to find food and shelter.

## Poisonous Pesticides

The use of harmful pesticides and other pollutants in non-organic farming and gardening is one of the key issues for bees. Pesticides such as neonicotinoids are applied to crops to control and kill the pests that plague them.

These harmful chemicals act on a bees central nervous system – making them confused and unable to feed and eventually killing them. Seeds coated in these substances grow into plants that will continue to poison bees and other pollinators as they grow.

These poisons remain toxic in the environment for a long time – harming wildlife and also contaminating soil and waterways and air nearby. While some of the most harmful substances have now been banned in some parts of the world, sadly, many are still in use.

## The Varroa Mite

Honey bees also face another threat: the Varroa mite. The Varroa mite attaches itself to a honey bee and sucks its blood. These pests can spread through a hive, bringing with them viruses and disease. Once they get into a hive, Varroa mites can kill a whole colony in just a couple of years. They have been found to be one of the leading causes of colony collapse disorder in North America. Sadly, an infestation can also make honey bees more susceptible to the toxic effects of the pesticides and other pollutants mentioned above.

**Bee organic.**





## Colony Collapse Disorder

Colony Collapse Disorder (CCD) is the name given to a phenomenon that occurs when the majority of the worker bees in a honey bee colony disappear, leaving behind a queen, plenty of food, and a few nurse bees to look after the remaining, immature inhabitants of the hive. This phenomenon has been more widespread in recent decades and is a cause of concern for beekeepers and agricultural producers, who rely on bees to pollinate their crops.

Unfortunately, the exact causes of CCD are not known. Current consensus is that a number of factors in combination, either additively or synergistically, cause the problem. The mechanisms are still not fully understood, but factors such as pesticides (such as neonicotinoids), mites, fungi (such as the Varroa mite), beekeeping practices such as the use of antibiotics or long-distance transportation of hives, malnutrition, poor quality queens, starvation, habitat loss, pathogens and immunodeficiencies are all potentially implicated. The precise impact of climate change on bees is also unknown, and could be a factor in the rise of CCD.

Being aware of the problems bees face can help us to determine how best to save them. It is vitally important that we all wake up to these issues and work together to tackle them. Choosing organic food (or better yet, growing at least some of your own), working to conserve natural environments, and taking good care of bees and other pollinators is vital if we are to continue to survive and thrive on this planet.

## Helping Bees in Your Garden

**Create a bee and bug hotel!**





*As gardeners, we can do our part to help bees. Large or small, you can make your garden into a haven for bees.*

The first thing, of course, is to make sure that you garden organically and don't use any polluting chemicals that harm honey bees and other pollinators. Before you think about keeping bees yourself, it is important to think about how you can make your garden as bee-friendly as possible. Some of the things you can do include:

Allow a wildflower meadow to flourish instead of creating a grass-only, neatly mown lawn.

Plant fruiting trees – five blossoming trees could provide the same amount of pollen and nectar as an acre of meadow!

Plant or sow a wide range of flowers that bees will love. Try to provide blooms that will provide nectar for different native bees all year round. Generally speaking, bees are most attracted to single blooms, and white and blue/ purple flowers. Different bees will appreciate a range of different flower shapes. When choosing annual plants, it is best to aim for as much biodiversity as possible.

**Make sure there is a water source for bees in your garden.**



Buy or make a 'bee hotel' for solitary bees to make their home. You can buy many models ready made, though you can also simply make your own. Hollow sections of bamboo cane in a waterproof roofed box are a great alternative for those not able to keep their own hives.

**It will be beneficial to leave plenty of dark fissures and holes for bees to hide in around your garden. Leave lawn areas alone and soil undisturbed to give ground-dwelling bees a chance.**



**FIND OUT MORE ABOUT THE BEES THAT LIVE IN YOUR AREA,  
SO YOU CAN CREATE HABITATS TO ATTRACT THEM,  
AND IMPLEMENT GARDENING PRACTICES TO KEEP THEM SAFE.**

**THERE ARE OVER 20,000 KNOWN BEE SPECIES IN THE WORLD,  
AND 4,000 OF THEM ARE NATIVE TO THE UNITED STATES.**



**Honey is not the only reason to keep bees.**

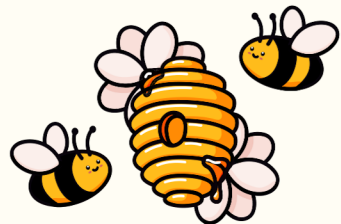
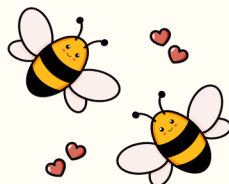
*Before starting out, it is important to establish your aim in beekeeping quite clearly.*

*Do you wish to keep bees to aid in pollination, for honey and other natural yields, or a bit of both?*

*Do you want to keep bees to help them, or to help you as a gardener - or both?*

**WHY EXACTLY YOU WISH TO KEEP BEES WILL DETERMINE  
THE BEST WAY TO DO SO.**

**THE BEST BEEKEEPING SYSTEMS HELP  
THE BEES AND THE GARDENERS!**





## Fantastic benefits for the gardeners!

Keeping bees increases resilience for the garden as it helps ensure pollination for food producing crops. Even where wild pollinators are available to do the job of pollination, keeping bees can help increase pollination rates and therefore increase the yield from fruiting crops.



Of course, keeping bees can also allow you to gain additional yields in your garden. You can get some honey, and also perhaps, other ancillary yields, such as beeswax, royal jelly, propolis and bee venom. All of these are healing products, that can be wonderful for your health.

**Gardeners can have access to healthy raw honey.**

***Heating honey (as commercial honeys are usually treated) destroys the enzymes with in the product, so being able to make your own healthy, raw honey at home is another reason why beekeeping can be good for your health.***



Natural beeswax, honey and other yields from hives can be used to reduce reliance on damaging products and systems. For example, they can be used to create a range of health, beauty and cleaning products. This can also help reduce plastic waste and other forms of waste, and help gardeners move towards a more sustainable way of life.



Natural 'sun' hives, like conjoined skeps, allow the bees to make honeycombs as they would in the wild, are not smoked and are largely left undisturbed to come and go as they please. While honey can be harvested occasionally (of course making sure to leave enough for the bees), the emphasis is on pollination and is apicentric.

***With such an approach, the bees' needs come first. Natural beekeepers may gain a yield of honey from hives, but always leave plenty of the bees over the winter months, and view the bees mostly as garden helpers, and a valuable part of the garden ecosystem.***





## **Getting Started: Beekeeping for Beginners**

Beekeeping can be a hugely rewarding experience. But it is important to be informed and to do your research before you attempt to get started. Contacting local beekeepers or finding a local beekeeping association can be a good place to begin.

### **Choosing Your Hives**

For many years the Langstroth hive (made from wood) has been the norm for bee keeping. This type of hive has removable frames. Some people, however, believe that opening up the hive to remove frames causes unnecessary stress for the bees, and so turn to alternatives.

The recently developed free flow hive allows a view into the hive and has an external tap that allows for the frame to split and honey to flow into a container without disturbing the bees by smoking them and opening up the hive.

There are a number of hive designs for more natural and bee-centric beekeeping such as the Warre Hive, and the 'sun' hive that are worth considering. You could also consider keeping bees more naturally in trees.

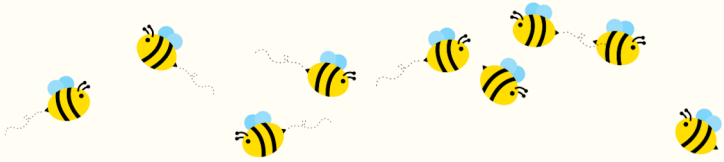
### **Situating Your Hives**

Situating beehives is an art that requires consideration. It is important to find a place that is not too hot or too cold: Place hive openings facing south or south east (in the northern hemisphere) so the bees will be exposed to as much morning sun as possible.

It is also important to consider the needs of humans in the vicinity. Bees can sting when agitated, and so of course, safety should be a paramount concern. Take care not to place hives too close to areas where humans congregate, or where there will be a lot of through traffic. If you plan on harvesting honey etc. from the hives, make sure you have access and space to do so safely.



## **Sourcing Bees** **A natural swarm.**



The key thing is that bees should not be imported. It is vital to choose native bees that are suited to the climate and conditions where you live. Ideally, natural swarms should be enticed to your garden and your hives, though where this is not possible, bees should be chosen as locally as possible and introduced sensitively to their new environment, with the aid of local experts if required.

### **Caring For Bees - Naturally**

Natural beekeeping differs from traditional beekeeping in that it advocates interfering with bees as little as possible. Traditional beekeeping usually condones practices which are considered by some to be detrimental to these beautiful, useful creatures.

For example, honey is harvested to a degree that leaves bees with too little food for themselves. They are then fed with nutritionally inferior sugar instead. Rather than doing this, a natural beekeeper will only take surplus honey, and only at a time of year when it will not interfere with the function and health of a bee colony.

Instead of ripping apart hives, smoking bees and harshly controlling queens and swarms, natural beekeepers will work with the bees – to the benefit of both the bees themselves and, in the long term, the gardener and humanity in a wider sense. While traditional beekeeping can yield more honey, natural beekeeping has much larger and more long-lasting longer term rewards.

There is a lot to learn about beekeeping. But whether or not you decide to place some hives in your garden, doing what you can to care for the different bee species where you live will not only benefit the bees themselves, but will also be beneficial to you and your community.

More information on alternative hives for natural beekeeping can be found at:  
[www.permaculture.co.uk/articles/sun-hives-conservation-honey-bee](http://www.permaculture.co.uk/articles/sun-hives-conservation-honey-bee)  
<https://warre.biobees.com/>  
[www.naturalbeekeepingtrust.org/tree-beekeeping](http://www.naturalbeekeepingtrust.org/tree-beekeeping)



## Did you know?



Honey, the golden, sweet, sticky substance produced by bees, has long been a nutritional addition in our diets. Search the supermarket shelves and there are 100s of varieties depending on climate, types of flowers and whether it's raw, organic or regular honey.

So how do we know which one to choose?

Regular honey is pasteurized. It is put through a heating and filtration process for commercial mass production, giving it more shelf life but less nutrients and has merely become a delicious healthier alternative to sugar.

Raw honey, is honey that still contains the bee pollen and is taken straight from the honeycomb in the hive, strained to eliminate unwanted elements and bottled, meaning it retains the nutrients and antioxidants that are beneficial to our health. It is slightly cloudier in appearance because it contains these extra components. One of these components is an enzyme called glucose oxidase which helps to produce the molecules that give honey its antimicrobial and antibacterial properties.

Honey is linked to some impressive health benefits and can reduce certain risk factors found in high cholesterol and blood pressure. It has been used for centuries in wound healing and alleviating coughs. In Ayurveda, it has been linked in reducing obesity due to the cleaning effect it has on the colon. Bee pollen which is still an active ingredient in raw honey contains amino acids, vitamins A and C, and small traces of nutrients including calcium, magnesium, and sodium, making raw honey the ultimate choice when presented with the various different types.

*Disclaimer: It is not our intention to prescribe or make specific health claims for any products. Any attempt to diagnose and treat illness should come under the direction of your health care practitioner.*

# Mikey's mission to save the bees!



Since 2001 we have had the goal to work as a global community to save the essence of this motherly planet. Mikey is helping with the mission by sharing information about the fantastic, inspiring bees and encourage people to support bee colonies around the world. Our booklet is free to share, so please spread the word with your networks.

*Thank you for your time!*



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