

WV State Honey Festival

Honey Bee Facts

This page includes important information and fun facts about honey and the honey bee.



Pollination

Agriculture depends greatly on the honeybee for pollination. Honeybees account for 80% of all insect pollination. Without such pollination, we would see a significant decrease in the yield of fruits and vegetables.

Pollen

Bees collect 66 lbs of pollen per year, per hive. Pollen is the male germ cells produced by all flowering plants for fertilization and plant embryo formation. The Honeybee uses pollen as a food. Pollen is one of the richest and purest natural foods, consisting of up to 35% protein, 10% sugars, carbohydrates, enzymes, minerals, and vitamins A (carotenes), B1 (thiamin), B2 (riboflavin), B3 (nicotinic acid), B5 (panothenic acid), C (ascorbic acid), H (biotin), and R (rutine).

Honey

Honey is used by the bees for food all year round. There are many types, colors and flavors of honey, depending upon its nectar source. The bees make honey from the nectar they collect from flowering trees and plants. Honey is an easily digestible, pure food. Honey is hydrosopic and has antibacterial qualities. Eating local honey can fend off allergies.

Beeswax

Secreted from glands, beeswax is used by the honeybee to build honey comb. It is used by humans in drugs, cosmetics, artists' materials, furniture polish and candles.

Propolis

Collected by honeybees from trees, the sticky resin is mixed with wax to make a sticky glue. The bees use this to seal cracks and

repair their hive. It is used by humans as a health aid, and as the basis for fine wood varnishes.

Royal Jelly

The powerful, milky substance that turns an ordinary bee into a Queen Bee. It is made of digested pollen and honey or nectar mixed with a chemical secreted from a gland in a nursing bee's head. It commands premium prices rivaling imported caviar, and is used by some as a dietary supplement and fertility stimulant. It is loaded with all of the B vitamins.

Bee Venom

The "ouch" part of the honeybee. Although sharp pain and some swelling and itching are natural reactions to a honeybee sting, a small percentage of individuals are highly allergic to bee venom. "Bee venom therapy" is widely practiced overseas and by some in the USA to address health problems such as arthritis, neuralgia, high blood pressure, high cholesterol and even MS.

OTHER BITS OF INFORMATION

Honeybees are not native to the USA. They are European in origin, and were brought to North America by the early settlers. Honeybees are not aggressive by nature, and will not sting unless protecting their hive from an intruder or are unduly provoked. Honeybees represent a highly organized society, with various bees having very specific roles during their lifetime: e.g., nurses, guards, grocers, housekeepers, construction workers, royal attendants, undertakers, foragers, etc.

The queen bee can live for several years. Worker bees live for 6 weeks during the busy summer, and for 4-9 months during the winter months.

The practice of honey collection and beekeeping dates back to the stone-age, as evidenced by cave paintings.

The honeybee hive is perennial. Although quite inactive during the winter, the honeybee survives the winter months by clustering for warmth. By self-regulating the internal temperature of the cluster, the bees maintain 93 degrees Fahrenheit in the center of the winter cluster (regardless of the outside temperature).



Queen Bee

There is only one queen per hive. The queen is the only bee with fully developed ovaries. A queen bee can live for 3-5 years. The queen mates only once with several male (drone) bees, and will remain fertile for life. She lays up to 2000 eggs per day. Fertilized eggs become female (worker bees) and unfertilized eggs become male (drone bees). When she dies or becomes unproductive, the other bees will "make" a new queen by selecting a young larva and feeding it a diet of "royal jelly". For queen bees, it takes 16 days from egg to emergence.

Worker Bee

All worker bees are female, but they are not able to reproduce. Worker bees live for 4-9 months during the winter season, but only 6 weeks during the busy summer months (they literally work themselves to death). Nearly all of the bees in a hive are worker bees. A hive consists of 20,000 - 30,000 bees in the winter, and over 60,000 - 80,000 bees in the summer. The worker bees sequentially take on a series of specific chores during their lifetime: housekeeper; nursemaid; construction worker; grocer; undertaker; guard; and finally, after 21 days they become a forager collecting pollen and nectar. For worker bees, it takes 21 days from egg to emergence. The worker bee has a barbed stinger that results in her death following stinging, therefore, she can only sting once.

Drone Bee

These male bees are kept on standby during the summer for mating with a virgin queen. Because the drone has a barbed sex organ, mating is followed by death of the drone. There are only 300-3000 drones in a hive. The drone does not have a stinger. Because they are of no use in the winter, drones are expelled from the hive in the autumn.



THREATS TO BEEKEEPING

Mites

The greatest threat to beekeeping are two varieties of mites (Varroa and Tracheal). And although these mites can be kept under control by a persistent beekeeper, the negative effects on the honeybee population has been devastating. The Back Yard Beekeepers Association surveyed its membership and learned that over 40% of the membership's hives died in 1996. These mites are greatly reducing the overall honeybee population in the USA. The mites are of no concern to humans, except for the effect they can have on honey production.

Disease

Beekeepers are on the watch for various diseases unique to honeybees, and harmless to humans. "Foul Brood" and "Nosema" are two such diseases. These problems can easily be addressed by good management and proper medication.

Urbanization

With more and more urban development and the growth of cities, there is less and less foraging available to bees. However, areas like Fairfield County contain a rich assortment of nectar and pollen for honeybees, thanks to homeowners' gardens and the lush, wooded countryside.

Africanized Bees

The arrival of so-called "killer bees" in a few southern states has received sensationalized treatment in the media. In some areas of the country, this negative publicity has stimulated local restrictions and ordinances on the hobbyist beekeeper.