



Fun Facts---Interaction of Honey Bees & Plants

Bees actively forage in an area of 8,000 acres surrounding the hive---It is well established that bees will **travel up to 3 ½ miles** (one way) from the colony to get food. This means that any flower of value within about **8,000 acres surrounding the hive** will likely be visited by the colony to collect food.

Bees visit a large number of flowers---One typical colony of **60,000 bees** may **visit over 225,000 flowers in a single day.**

Pollen and Nectar is their food---Like us, bees need carbohydrates and protein in their diet. Bees turn flower nectar into honey. **Nectar is their source of carbohydrates.** Bees turn pollen into “bee bread”. **Pollen is their source of protein.**

Four pounds of flower nectar are required to make one pound of honey--- Nectar is typically 80% water. To be converted to honey, the bees need to reduce the moisture content to 18% and cause a chemical change in the type of sugar. This over four-fold reduction in water content means that **four pounds of nectar is needed to make each pound of honey.**

A colony needs about 600 pounds of nectar to make the honey they store away for food—At the end of a season, a healthy and mature hive will have stored away about 150 pounds of honey in the wax comb. Thus, to produce 150 pounds of honey, a colony will need to **collect some 600 pounds of nectar to store as honey.** Beekeepers usually harvest this stored honey but leave about 50 pounds behind for the colony to eat during the winter.

Total nectar requirements per hive per season may exceed 1,000 pounds---The nectar requirement of 600 pounds to make honey stored as winter food, noted above, does not include honey eaten by the bees during the warm months. It is estimated that the **total nectar collected by a single hive in one year may exceed 1,000 pounds.** This would include nectar used to make honey to eat during the warm months and that stored to eat during the winter.

Each hive needs to collect up to 125 pounds of pollen per year--- The research shows that in a year a typical bee colony brings back **60 to 125 pounds of pollen** to the hive.

Bees need to eat 6 pounds of honey to produce one pound of wax---Old time beekeepers say that “honey is very valuable, but wax is gold”. For bees to produce one pound of wax comb they need to eat 6 pounds of honey. If you translate this to nectar collection, **a pound of wax comb requires 24 pounds of nectar.**

Pollinating crops---Common recommendations are for 1 bee per 100 flowers. Stated another way, for a typical colony of 60,000 bees, **a single hive can effectively pollinate a crop with 6,000,000 flowers in a matter of a couple of weeks.** To note, this does not fill the annual food requirements of a hive, but only what is needed for most efficient crop pollination while the flowers are in bloom.

Nashville Area Beekeepers Association

<http://nashbee.org>