

APICULTURE

Bee-keeping is an absorbing hobby to some, and to others it is an industry for producing honey and wax, since ancient times, honeybees have been kept in a crude manner in India, Bee-keeping, today is based upon improved methods using the principles of movable frame-hive, honey extractor and the smoker. Rearing of honey bees is called, apiculture. In India, Honey bee farming is commonly done by the people in the hilly region, but nowadays, this business has also started in the plains by the local people to earn more money. People are earning a lot of money by keeping bees. Since there is no need to engage full time labourers in this business, it is increasing day by day in rural areas. Bee-keeping is quite profitable in areas with good floral pasturage. Possibility for the development of beekeeping in India is tremendous due to its diverse environment and inexhaustible floral resources obtained from natural vegetation and cultivated crops. According to recent statistics, about 50 million hectares of land is under the cultivation of oilseeds, pulses, orchards and other crops which is useful to bees and benefitted by bee pollination. In addition, there is about 60 million hectares of forest area with beekeeping potential. This vast area of agriculture and forest may easily sustain at least one crore bee colonies. Bee keeping can profitably be pursued by men, women and children, by farmers, orchardists, and by those who are landless or underemployed. Bee hives can be kept to the History backyard or on house tops. A subsistence farmer can get higher income from bee keeping than from other avocations. Those who have the time and interest can manage a number of bee hives and make beekeeping a profitable enterprise by selling the surplus honey and wax. Several people in a village or group of villages may join, together and start a co-operative, generating work and income, since the manufacture of the basis beekeeping equipments such as hives, frames, smokers, extractors and containers, as well as the processing of honey and bee wax can be done locally.

Beekeeping History

- Primitive man used to rob bee colonies found in the cavities of hollow trees or on rocks and in traditional mud houses and this is still being followed by some tribes
- There was no development in beekeeping until 16th century.
- Proper beekeeping started only when man started giving protection to colonies found in the nature
- Idea to keep bees in log hives has been reported to come from the fallen trees which were nested by the cavity nesting bees.
- Development of modern beekeeping has its origin between 1500 and 1851 when many attempts were made to domesticate bees in different types of hives but were not successful because bees attached their combs together as well as to the walls of hive and combs required had to be cut for honey.
- The discovery of the principle of bee space in 1851 by L. L. Langstroth in USA resulted in first truly movable frame hive. This bee space was 9.5 mm for *Apis mellifera*.
- This discovery was followed by subsequent innovations like comb foundation mill, honey extractor, smoker, etc., which helped in the development of modern beekeeping we see today.

Beekeeping in India

- In India first attempt to keep bees in movable frame hives was made in 1882 in Bengal and then in 1883-84 in Punjab.
- In south India, Rev. Newton during 1911-1917 trained several beekeepers and devised a hive for indigenous bee *Apis cerana* based on principle of bee space (which was named after his name as “Newton hive”).

- Beekeeping was also started in the Travancore state (now Cochin) in 1917 and in Mysore in 1925.
- In Himachal Pradesh modern beekeeping with indigenous honey bee *A. cerana* started in 1934 at Kullu and in 1936 at Kangra.
- The exotic bee *A. mellifera* was successfully introduced for the first time in India in 1962 at Nagrota Bagwan (then in Punjab state and now in Himachal Pradesh), because this bee has potentials to produce more honey.
- At present both the hive bee species are being used in modern beekeeping and lot of honey is also being collected from the wild bees viz. *A. dorsata* and *A. florea*.
- India is producing approximately 70000 metric tons of honey annually from all the four species of honey bees.