

Apiculture

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ABSTRACT

Apiculture is the scientific method of rearing honeybees. “ The word '**apiculture**' comes from the Latin word 'apis' meaning bee. So, **apiculture** or beekeeping is the care and management of honey bees for the production of honey and wax.

Keywords: Apiculture; Honeybees; Honey

IMPORTANCE OF APICULTURE

1. Provides honey, which is the most valuable nutritional food.
2. Provides bee wax which is used in many industries, including cosmetics industries, polishing industries, pharmaceutical industries, etc.
3. Plays an excellent role in pollination. Honey bees are the best pollinating agents which help in increasing the yield of several crops.
4. According to the recent studies, the honey bee's venom contains a mixture of proteins which can potentially be used as a prophylactic to destroy HIV that causes AIDS in humans.

SPECIES OF HONEY BEE

Apis dorsata

The giant honey bee is a honeybee of South and Southeast Asia, found mainly in forested areas such as the terai of Nepal. They are typically around 17-20 mm (0.7-0.8 in) long, and. These social bees are known for their aggressive defense strategies and vicious behavior when disturbed. Though not domesticating it, indigenous peoples have traditionally used this species as a source of honey and beeswax, a practice known as honey hunting.

Apis mellifera

The western honey bee or European honey bee is the most common of the 7-12 species of honey bees worldwide. The genus name *Apis* is Latin for "bee", and *mellifera* is the Latin for "honey-bearing", referring to the species' production of honey.

Apis cerana

The eastern honey bee, Asiatic honey bee or Asian honey bee, is a species of honeybee native to southern, southeastern, and eastern Asia. This species is the sister species of *Apis koschevnikovi* and both are in the same subgenus as the western (European) honey bee.

Apis florea

The dwarf honey bee (or red dwarf honey bee) is one of two species of small, wild honey bees of southern and southeastern Asia. It has a much wider distribution than its sister species, *Apis andreniformis*. First identified in the late 18th century, *Apis florea* is unique for its morphology, foraging behavior and defensive mechanisms like making a piping noise. *Apis florea* have open nests and small colonies, which makes them more susceptible to predation than cavity nesters with large numbers of defensive workers. These honey bees are important pollinators and therefore commodified in countries like Cambodia.

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BASIC BEEKEEPING TECHNIQUES

- Starting a Colony.
- Working with a Bee Colony.
- Inspecting a Colony.
- Collecting a Swarm.
- Dividing a Colony.
- Moving a Colony.
- Removing Surplus Honey.
- Smoker Maintenance.

CLASSES OF HONEY BEE

Queen Bee

It plays a vital role in the hive because she is the only female with fully developed ovaries. The queen's two primary purposes are to produce chemical scents that help regulate the unity of the colony and to lay lots of eggs .

Worker bees

They are shorter and more slender than drones and the queen, and their back legs have special baskets to help them collect pollen. Like the queen, they also have stingers, but they can only sting mammals once and then they die. They can, however, sting other insects over and over again to protect the hive.

Drone

It is a male honey bee. Unlike the female worker bee, drones do not have stingers and gather neither nectar nor pollen. A drone's primary role is to mate with an unfertilized queen.

ECONOMIC IMPORTANCE OF APICULTURE

According to the Natural Resources Defense Council (NRDC); "More than \$15 billion a year in U.S. crops are pollinated by bees, including apples, berries, cantaloupes, cucumbers, alfalfa, and almonds. U.S. honey bees also produce about \$150 million in honey annually." In the UK alone, at least 70 crops are dependent on, or directly benefit from bee pollination. honey bee is the sole producer of honey. Honey is a valuable economic commodity and is used for medicinal purposes. For thousands of years, honey has been used by man for food. It is estimated that about 100g of honey provides equivalent nutrition to 6 liters of milk or 170g of beef. It contains sugars, vitamins and minerals that are easily absorbed by the body. Medically, honey can be used as a sedative, laxative or antiseptic. It is commonly used in Ayurvedic pharmaceuticals.

CONCLUSION

Honeybees provide a variety of goods (honey, wax, pollen, royal jelly, propolis etc) and services (pollination) to human society and ecosystem. Across the world the bees support millions of livelihoods while also enriching the ecosystem. Beekeeping is an important enterprise to rural communities and related to agricultural and horticultural production. Even though, Uttara Kannada district has over 60% of its lands under forest cover, and about 15% under farming, the honey production is far below its expected potential. The case study conducted highlights that beekeeping could be elevated into much more profitable venture requiring small investment of capital and skilled labor for realizing high yield in comparison to other rural employment and poverty reduction programmes. We have taken into account the static performance of the bee-keeping societies, which had in their earlier days played vital role in spreading awareness on scientific bee-keeping and its profitability and assisted people in setting up bee-keeping units in their homes and helped in marketing the products.