

## BEEKEEPING (APICULTURE)

True honeybees belong to the family Apidae subfamily Apinae and genus Apis. They are social insects living in colonies. A colony consists of a queen, several thousand workers and a few hundred drones. There is division of labour and specialization in the performance of various functions. They build nests (combs) with wax, which is secreted from the wax glands of worker bees. The bees use their cells to rear thin brood and store food.



### Indian bee (Apis cerana indica)

This is the domesticated hive bee in Kerala. A colony consists of a queen, 20,000 to 30,000 workers and a few drones. This species is with gentle temperament and responds to smoking. Lack of flora leads to absconding and also has a strong tendency for swarming. It yields 8-10 kg of honey per colony per year.

**Bee-box:** ISI Type-A box is recommended for the state of Kerala. A division board may be added to the bee box for adjusting the internal space depending on the strength of the colony. It can also be procured from beekeepers. Wild feral colonies can be hived. Beekeepers in different regions use local hives made of low cost wood. The wood should not have a strong smell. Kail (Pinus excelsa), teak (Tectona grandis), toon (Toona ciliata) anjili (Artocarpus hirsutus), punna (Calophyllum inophyllum) are some of the suitable woods. The hives should be preferably painted white on outside to protect the timber from weathering.

**Extraction of honey:** Honey is extracted only from super combs using honey extractor. The sealing of cells on combs is removed with sharp knife before placing in the extractor. Extractor should be worked slowly at the beginning and at about 150 rpm at the end for about 1 to 2 minutes. Then the sides of the frames are reversed and the extractor is again worked. Extracted honey is filtered through muslin cloth. Providing a bee escape between the brood and super on the day prior to honey extraction keeps the bees away from the super. Remove the escape soon after honey extraction.

**Unit cost:** In the present model, the unit cost for installing 10 boxes of bee colony works out to Rs. 10,300/-. The details of the project cost are presented below:

Sl. No.	Item of investment	Amount (Rs.)
1	Cost of bee colony (1000 x 4)	4,000.00
2	Cost of empty bee box (12 x 400)	4,800.00
3	Extractor, bee knife, etc.	1,000.00
	<b>Total cost</b>	<b>10,300.00</b>

Under production sector, a unit of five boxes will be given to a beneficiary at a unit cost of Rs. 3500.00