

## Beekeeping –A profitable Enterprise for Punjab

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India is agriculture based economy with majority of population living in rural areas. The land holdings are getting fragmented and emerging small holdings are becoming unviable. Increasing inputs and low yields are resulting in poor income to the farmers. Beekeeping offers an immense potential for providing employment to rural people where many crops, vegetables, forests and orchards etc. provide required flora. The capital investment required for beekeeping is small and unlike many other industries, it does not need raw material as nature offers the same in the form of nectar and pollen. Further it can be practiced equally by men, women, grown up children and old persons. Beekeeping does not bring any pressure on agricultural land. It produces honey, bee wax, pollen, propolis from the flowers which otherwise dry up in nature and go waste. Beekeeping is an agricultural and forest based decentralized industry and does not displace persons from their villages. It is a subsidiary, complementary, supplementary and a family business enterprise which is also pollution free. Honey bee specie *A. mellifera* has established in the northern states for commercial beekeeping. The most important factors in the development of the beekeeping are favourable climatic conditions, flora, trainings and extension, availability of essential equipment, pest and disease control measures and marketing of honey. Government of India also subsidized the occupation under NHM scheme for the beginners. However the complete knowledge of the beekeeping rearing is very important to maximize the profit from this enterprise. The important points to start beekeeping are as under



### Training

Before starting any occupation a beginner must acquire theoretical and technical know how about that occupation. The Krishi Vigyan Kendras established by ICAR, New Delhi are training institutes which are providing various vocational trainings including bee keeping for creating self-employment among rural youths in India. State Govt. and SAUs also organize such type of trainings to uplift the economic status of rural youth. After attaining training the beginner should work some time with the established beekeepers to have practical experience in the field.

### Suitable time to start beekeeping

The suitability of the period to start beekeeping depends upon the availability of flora and climatic conditions. Generally the climatic conditions are mild during February- April (spring) and September –November (post monsoon). These two seasons are very suitable to start beekeeping

enterprise. Spring season is comparatively more suitable for the beginners as weather become favourable after winter.



### Essential equipments

Beekeeping requires simple and cost effective equipments and recurring expenditure in this profession is also not very high as compare to other subsidiary occupations (dairy, piggery, goatery, poultry etc). The equipments like bee veil, hive tool, smoker, gloves, boxes, honey extractor etc are required at initial stage.

### Purchase of honey bee colonies

The income from the beekeeping depends upon the quality of honey bee colonies. In beginning healthy nucleus colonies of italian bees having four or five frames having new queen should be purchased from registered beekeeper. It is essential to have knowledge about a young *A. mellifera* queen bee. The young queen bee has orange colour, shining, long and gradually tapering abdomen. In case of old queen bee the colour of abdomen turns brownish and dull. The purchased colonies should be free from bee disease, insect pest and it should have sufficient worker brood , eggs, honey, pollen and less drone brood. This profession should be started with twenty colonies which can be expanded only after gaining sufficient experience n the field. There is provision of subsidy for farmers under National Horticulture Mission scheme by Govt of India. This scheme is very useful to expand the beekeeping enterprise.



## Suitable Site

For the success of this enterprise it is prerequisite that suitable site should be selected very carefully. It should have minimum disturbance, easily approachable, plenty of fresh water, sun, shade, bee flora throughout the year. The site should not be flood prone. During summer months the colonies should be placed under shade whereas during winter months direct sun light is required. So, apiary should have trees which shed their leaves during winter months and give ample shade during hot period. There should be availability of running water at a short distance of the site.



## Transportation and placement of colonies

Agricultural crops are seasonal and provide bee forage for limited period and bee colonies cannot be sustained throughout the year. During the forage scarcity period between two crop seasons bee colonies are moved to areas where bee flora is in abundance. Among various plants, sunflower, *berseem*, cotton, rapeseed-mustard, pear are most important for providing flora during different period of the year. Besides this many other plants such as maize bajra, temperate fruit plants, litchi, citrus, *shisam*, *khair*, ber, forest trees also provided nectar and pollen to the bees. The colonies should be migrated to the area when these plants bloomed. The colonies should be shifted only when all the bees are in boxes and they are not active. The colonies should be packed in such a way that they remain ventilated but bees can't escape from the boxes. While loading the colonies, care should be taken that vehicle give minimum jerk during travelling. If the tractor trolley has to be used for shifting, fill half of the trailer with sand/soil. After reaching the destination the hives should be placed at least 10 feet apart rows with 6-8 feet distance between two adjacent hives to minimize the chance of drifting and robbing. Care should be taken that entrance faced south east and preferably away from common passes. After placement of the hive, their gate should be opened and colonies may be examined at least one day after the placement because due to shifting bee got irritated and often sting to the examiner.

## Expenditure and returns

It is important to know the expenditure and profitability of any enterprise before starting. During trainings, it is common question raised by the trainees that what will be profit of this occupation. For getting more profit, maintenance of financial record is key factor. Initial expenditure on equipments and 100 bee colonies is Rs. 5 Lakh (approximate). Apart from this annual maintenance cost of Rs. 2.60 incurred on labour, wax sheet, sugar, transportation charges

etc. If the colonies are migrated to the suitable areas, the returns from the sale of honey, wax and extra colonies are estimated to the tune of Rs. 6.00 lakh. The net annual profit from the 100 bee colonies are Rs. 3.40 lakh. In this way a beekeeper can earn a profit of Rs. 3400/ colony per annum.

So, beekeeping is profitable enterprise and if adopted on scientific lines can not only provide additional income to the farming families but can generate substantial employment opportunities.

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