4.41/T_4-179

Experience with Experiential Learning Programme on Beekeeping

A.A. Mehta*, L.K. Behera, S.K. Sinha, H.T. Hegde and R.P. Gunaga
College of Forestry, Navsari Agricultural University, Navsari-396 450, Gujarat, India
*Email: aamehta@nau.in
Keywords: Apiculture, *Tetragonula laeviceps, Apis cerana,* beeflora, pollen, nectar, honey

1. Introduction

Beekeeping is very potential enterprise which can give good employment and income to large number of people. While doing beekeeping one can develop many skills and acquaint oneself with the real economic conditions that are prevalent in the current market system. Keeping all these ideas on the focus and to educate students, farmers and entreprenuers about the practical aspects of beekeeping, an experiential learning programme (ELP) on beekeeping was started.

2. Material and methods

ELP was started at department of Forest Products and Utilization at College of Forestry, Navsari Agricultural University in the year 2011. In this unit, students get exposure to various activities of honeybee rearing and management; simultaneously, faculty members are engaged in the research on various aspects of beekeeping. The research aspects covered are bee flora survey, important floral plant during the dearth period, habitat study of stingless bees, foraging behavior of stingless bees and pollen study. Besides, market study was also carried out for knowing the honey consumption pattern among the consumers. Moreover, many research works are going on for further strengthening beekeeping in South Gujarat in general and ELP in particular. Among them, some of the important ongoing researches are evaluation of different floral honeys, market study of bee products mainly honey, self life of honey, *etc*. Further, many farmers and entrepreneurs were benefited through training and other services by ELP facilities.

3. Results and discussion

In the beeflora survey during the dearth period of July and August it was found that *Apis cerana* and *Apis mellifera* visited 25 numbers of plant species including climbers, herbs, shrubs and tree species for the collection of nectar and pollen. Out of these plant species most frequently visit was found on nine plant species namely *Vitex negundo*, *Hamelia patens*, *Calliandra* spp., *Cocos nucifera*, *Tamarindus indica*, *Acacia auriculiformis*, *Acacia catechu*, *Samanea saman* and *Anthocephalus cadamba*. In the stingless bee foraging study, the more activities of bees have been recorded during summer season as compared to winter and rainy seasons indicating stingless bees prefers high temperature for more activities that ultimately influence on pollination and storage of honey gathering. The habitat study of stingless bees indicated that there is lot of variation in the nesting habitat and nest architecture of stingless bees (*Tetragonula laeviceps*) in South Gujarat. The maximum number of colonies observed in a particular place was 11 colonies. Database for pollen identification was generated for about 50 different bee floral plants based on size, shape and structure of pollen. The potential and constraints in marketing of honey was identified. The ELP on beekeeping helps the students, farmers and entrepreneurs to enhance their entrepreneurship skills which simultaneously generate the income. Further, the ELP on beekeeping helps to generate research database of different aspects of beekeeping.