



The Importance of Forest Beekeeping for The Sustainable Management of Natural Forests

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ABSTRACT

Making forest conservation pay through adding value to non-timber forest products (NTFPs) is a highly compelling concept, one that is based on the idea that a standing forest delivers significant livelihood benefits is more likely to be retained. It is assumed that NTFP harvesting is more sustainable than timber harvesting. The strong link between forests and traditional beekeeping creates opportunities for promoting beekeeping as an incentive for sustainable forest management. Natural systems are not as productive as farmed systems and natural forests cannot be managed to increase productivity. The lack of management means that the marginal costs of collecting rise rapidly, resulting in low returns to labour.

Forest beekeeping is defined by place i.e. the bee colonies are living within the forest and foraging on the nectar and pollen of forest trees. Forest beekeeping is not honey hunting, which involves the taking of honey comb from wild honey bee nests, located in natural cavities within the forest, usually hollow trees but also cavities in rocks, the ground and cliffs. Forest beekeeping is not frame hive beekeeping or top-bar beekeeping happens to be located within a forest. These beekeeping systems are both movable comb systems allow colony manipulation and are not embraced within the overall definition of African forest beekeeping, which does not involve colony manipulation. The beehive, which is made and owned by individuals, creates security of tenure over the honeybee colony. The beehive ensures a clear distinction between open access NTFP collection and a tenure-based system. Moreover beekeeping can have a positive effect on the conservation of biodiversity because of pollination. Apiculture can be entirely sustainable and does not compete with any other form of agriculture¹.

Beekeeping is a traditional agricultural activity that is carried out in almost every region of Turkey. Twenty percent of the world's 25 bee sub-species can be found in Turkey. Due to this diversity, bee farmers are encouraged to breed bee species native to their region instead of commercial bees. *Marchalina hellenica*, which is the most important insect for the production of pine honey and honeydew². Since 2006, *M. hellenica* has been included in the European and Mediterranean Plant Protection alert list. In addition, the Turkish Ministry of Forestry has taken under protection the forests, mostly located in Mugla Province, in which this insect lives. Turkey has strong prospects in beekeeping since all regions of Turkey are available for this activity and 75 percent of beekeepers are migratory. The honey derived from different regions within Turkey has different local traits. Approximately 70 percent of plants in Turkey are floristic and it is believed that apicultural production has great potential, but faces difficulties³.

Turkey can increase its exportation of honey by improving production of geographically identified pine honey, protecting the pine area within Aegean Region which is the main resource for beekeeping activity, and protecting *Marchalina hellenica* living within this area^{4,5}. Reducing input costs through standardization, production controls such as honey ingredient and residue controls, and packaging should be prioritized in order to increase production and exportation.

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