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Implementable improvements for successful beekeeping in India

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In India commercial beekeeping has been basically restricted to Apiculture means rearing purposely bees of genus *Apis* which is exclusively for honey production. At present the role of these social insects as excellent agents of pollination and in restoring biodiversity is getting little emphasis. In an era of diversification, the literal meaning of commercial beekeeping has become irrelevant. Moreover, though the major impetus is on honey production but many apiaries are running without profit. It is therefore imperative to device few implementable improvements for sustaining the profession and this article can be a tool to the beekeepers and policy makers.

Status of beekeeping in India: It is fortunate that introduction of *Apis mellifera* in India during 1962-64 at Bee Research Station, Nagrota Bagwan, Himachal Pradesh and its commercial adoption was a land mark when Indian beekeeping with *A. cerana* during 1990s succumbed to Thai sac brood disease. Similarly many of the diseases and pests are being reported at time and again of which resultant losses are incremental and being born by the farmers of the country. At present we have the wealth of 10.5 lakh colonies of hived species and about 91658 metric tons of honey production/ year in the country. Use of bees has also been advocated in production system to contribute as pollinators and in an estimate over 5000 crore rupees of national deficit has been documented because of their under utilization. We still require additional 7 million bee colonies for pollination to overcome this loss. The average honey production capability of *A. mellifera* has also reduced from 35 kg to less than10 kg.

Potential of beekeeping in India: In fact we have the best agro climatic conditions and resources in the globe suitable for beekeeping but to harness them we must include the below mentioned improvements in the existing system.

– *Including honeybees as an input in agriculture system***:** Use of inputs like fertilizer, irrigation, pest management, post harvest, etc. are the integral part because their application result in increase in production. Pollination, we all know is even more important than other inputs because it increases production and quality hence policy makers must think to include use of honeybees as an integral part. It will require;

– Enough extension work has taken place to educate farming community, now need is to create provisions for more of bee wealth and their practical utilization in target crops.

– Scheduling use of honeybees in different crops and to emphasize in reducing toxic pesticide applications in blooming crops.

– Encouraging Package Bee Production Technology for pollination and sale.

– Farmers rearing the local strains and wild bees may get appreciation and monetary benefits from the respective state government for his services in restoring biodiversity.

– *Management for increased honey production:* It is impressive that we produce and spare to export but these figures can be improved;

– Policy makers must consider that honey is the only complete food and must be a campaign product in malnutrition programmes.

– Strengthening local societies and markets.

– Plantation of bee floral plants in existing forests.

– Strengthening and setting up disease diagnostic laboratories in all potential regions.

Additional honeybee management practices: In addition to training programmes and existing package of practices of the regional agriculture universities for management a due consideration on these aspects has become very important to sustain this profession.

– In all the states/areas of country the potential sites either shortlisted or need to be investigated to start beekeeping with suitable species. The number of colonies of available wild species may be assessed and used.

– The apiary sizes must be in relation to the availability of flora in the area. As a practice the

beekeepers during migrations saturate the area with colonies hence chances of progressive robbing, disease and enemy dissemination and very low productivity. In this context to be more practical smaller apiaries in the potential pockets with small duration shiftings will help the modern beekeeping rather than conventional long distance migratory beekeeping. An example will explain the position- In Himachal Pradesh during Feb- March for multiflora, May-June (Soapnut, Taur and Oi), during rainy season we can avail Khair and in autamn Pajja in mid hills and Chhichhri (source of white honey) in high hills. In plains October to March for sarson honey while May to avail Sunflower. Such pockets with small units and short shiftings result in build up as well as increased productivity of colonies.

– Migration of apiaries to relatively cool potential sites for queen replacement/rearing during summer.

– Isolate the apiaries at a distance of not less than 4 kilometers will avoid any infection of contagious organism and robbing losses.

– Spacing must be a consideration and colonies should be kept at least 5-6 meters apart in every apiary.

– Diversify for sale of new colonies and new queens at the first stage.

– Label the produce with details of apiary, beekeeper and location to improve sale.

– Always discourage invalid practices and use of unrecommended medicines.

– Stop the use of any medicine a month prior to honey flow.

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