

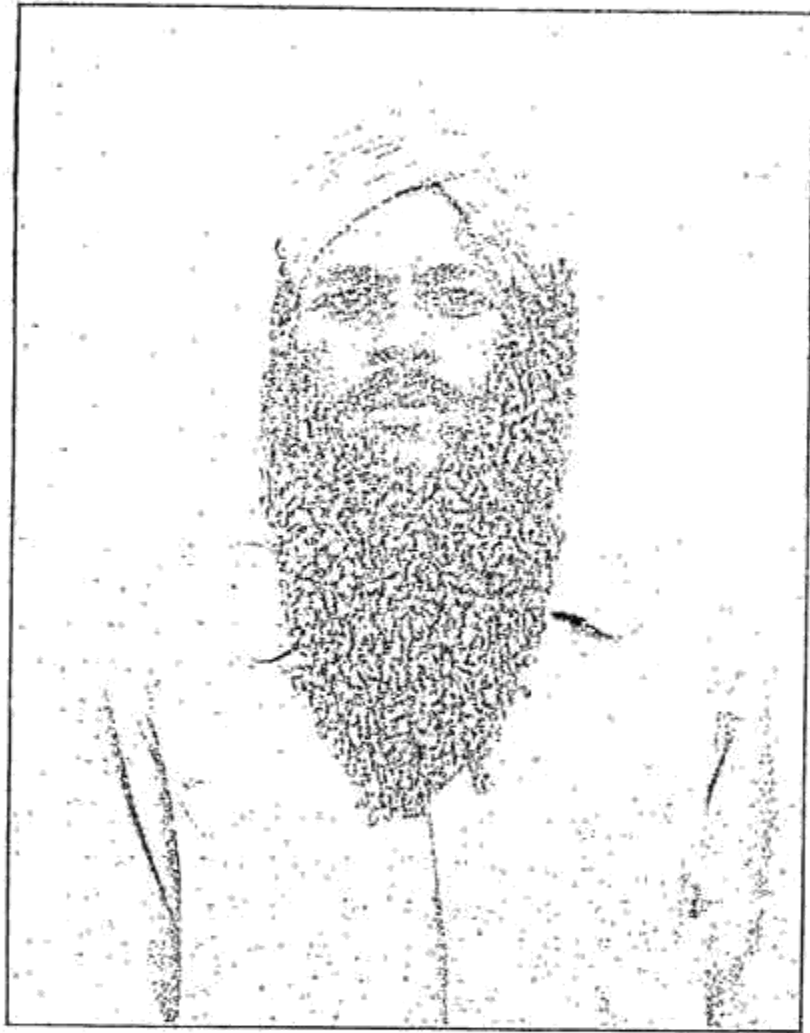
THE PRESENT STATUS OF BEEKEEPING IN MADRAS AND SUGGESTIONS FOR ITS DEVELOPMENT

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Introduction. The uplift of the rural population from their poverty and ignorance and the ways and means of providing sufficient employment for the ryot during his spare time have, of late, been engaging the attention of the Government. It is also well known that numerous private rural reconstruction centres have been organised with a view to ameliorate the condition of the masses, their main programme of work being hand spinning, temperance, education, sanitation, etc. Along with these, beekeeping is being advocated as a cottage industry.

Apart from being a source of profit and pleasure the presence of bees in a particular locality indirectly enhances the agricultural wealth of the locality by the invaluable service rendered by them in bringing about cross-pollination in plants. Our presidency is not lacking in the natural facilities that favour the development of the industry. The very fact that about 45,000 lbs. of honey are being collected by the Madras Forest Department, not to speak of the considerable quantities that are collected locally in the villages, indicates the great possibilities of this industry. Most of the honey is collected by the jungle tribes and it is needless to emphasize here the enormous destruction of life during the crude process of squeezing out the honey and the rapid deterioration of the produce on account of the imperfect method of collection and preservation. In spite of the ignorance about the natural history of the honey bee and of the chemistry of honey, the article has been used as a medicine from time immemorial. The quality of honey that is being used is hardly worth the name and it is only during recent years that the public have been apprised of the availability of pure honey collected in India. But the supply is not at all proportionate to the demand. The enlightened public, due to the non-availability of cheap and pure Indian material have often to purchase imported honey which is being sold, in some cases even up to Rs. 2—5—0 per lb. Though we have no idea about the actual quantities imported, it is evident that large quantities find their way into the Indian market. The expansion of the industry would not only provide us with wholesome honey made in our own homes but also make the country self supporting in this respect.

The Present Status of the Industry. The Agricultural Department and agencies such as the Gandhi Ashram, Pudupalayam, the Y. M. C. A. Rural Reconstruction Centre, Ramanathapuram, have all been trying to popularise this industry. The work of the department consists of taking part in all the important Exhibitions, holding demonstrations, supplying hives and other appliances, training students every year and occasionally training departmental officers. In addition to these, a "Honey Week" is being organised on a Presidency basis during the past two years when the department



A Beardful of Bees.

concentrates its attention towards popularising the industry. Two publications—one a priced bulletin (Beekeeping in South India) and the other a small pamphlet (Practical hints on beekeeping) have been issued. Along with propaganda work, intensive research work is being carried out at Coimbatore with a view to simplify the art and make it more remunerative. Among the tangible results achieved so far, mention may be made of the evolution of simplified honey extractors, cheap appliances such as the drone trap, queen excluder, methods of control for the bee enemies, etc., and besides these a fund of general knowledge has been collected on the peculiar habits of the Indian honey bee. As a result of the work of the department and agencies mentioned above, there are at present over 3000 hives distributed all over the Presidency. The industry is gaining a firm footing in most of the favourable localities. While this growing popularity is to be viewed with satisfaction it is felt that there are greater possibilities for the spread of this industry.

Factors that stand against the Spread of the Industry. At the time of the Honey Week in April last a questionnaire was sent by the Entomologist to all the district staff. This, among other topics, asked for information regarding the factors that stood against the spread of the industry in their respective localities. The replies received together with the information gained by the authors during their tours in the various parts of the Presidency have revealed the following factors as standing against the spread of the industry— (1) lack of adequate trained staff to popularise the work, (2) use of non-standardised bee appliances, (3) lack of facilities for marketing the produce, (4) limited bee pasturage in certain localities, and (5) a few inherent habits of the bees that render them unmanageable for the beginners such as the proverbial fear of bee sting, desertions of newly hived colonies and swarming.

The items mentioned under No. 5 are not so very serious at present since the Entomology Section is able to offer some definite advice to overcome these drawbacks. Fear of the bee's sting is but natural for the amateur, but after one gets to know the habits of these interesting insects he may wonder whether they are capable of stinging at all (*vide photo*). The desertion of newly hived colonies in Malabar appears to be a common feature. The provision of a piece of queen excluder at the entrance or the removal of the queen and allowing the bees to rear a new queen has been found to mitigate the trouble. Swarming in bees is another serious handicap. It is Nature's method of dispersal of the species. The impulse is very strong and the strength of the colonies gets reduced considerably if the bees are allowed to have their own way. Some of the methods which are given below may be tried. The first swarm, if it occurs early in the season, may be allowed to issue and hived separately. The issue of "after—swarms" from the parent colony should be prevented by cutting away the queen cells. The other alternative is to divide the colony when it evinces the swarming impulse. The reigning queen with one or two combs of brood and bees is taken out

and kept separately. The bees get over their swarming fever by the time the fresh queen emerges and gets ready for egg-laying. The wax moth is another serious menace to the progress of beekeeping. Very easy and simple methods of control such as scraping the eggmasses from the crevices of the hive, frequent changing of the hive body, sun drying the stored combs that have been infested have been evolved and these can be adopted with advantage.

Districts such as Vizagapatam, Godavari, Kistna, Tanjore, Trichinopoly, Tinnevely, Coimbatore, etc., have been found to be very favourable for beekeeping whereas conditions in the drier districts of Cuddapah, Bellary, Guntur, etc., are not very encouraging and the main reason for such variation is the availability or otherwise of bee pasturage. Even in favourable localities variations in the progress of the colonies, kept within a range of few furlongs, have been noted, thereby indicating the limited range of flight of the Indian bee. It is therefore necessary, even in favourable localities, to start apiaries, as near the available pasturage as possible.

As regards the disposal of the produce, apiarists especially in some of the out of the way places are not able to find a ready sale for their honey, though there is a consistent demand for the pure stuff even at fancy prices, near towns. This may purely be due to the absence of reliable central agencies to stock and sell the produce and partly due to the market being, of late, flooded with spurious qualities.

It is also a regrettable fact that a number of enthusiasts have not sufficiently realised the importance of the prescribed standard sizes for hives. The standardization of the hive and its parts, apart from giving the maximum comfort to the bees, facilitates the easy interchange of the various parts and also the use of a uniform type of honey extractor.

Suggestions for the improvement of the Industry. The following are some of the suggestions for the improvement of the industry:—

1. More insistent and more effective propaganda is necessary for the furtherance of the work to effect which additional qualified staff is required. In this connection mention may be made about the elaborate staff provided in the western countries exclusively for this work. Almost every state or county is equipped with a Bee Expert together with a number of Bee Inspectors to travel through the country and render advice. Such a development may not be possible in the near future in this presidency but, under the existing circumstances, the Agricultural Demonstrators working in favourable localities may be trained and made to include beekeeping as one of the items of propaganda. Since the inclusion of this line of work is likely to interfere with the existing items a trained worker of the status of a Fieldman may be provided for each district. Again rural schools would be a good media for disseminating the knowledge in beekeeping. In this connection mention may be made of a recent resolution of the Malabar District Board to introduce the subject in all the schools under its management. The idea is

commendable and we wish it all success. The inclusion of Rural Broadcasting in the programme of the All-India Radio at Madras may also be taken advantage of for approaching the villagers.

2. Co-operative Societies and Beekeepers Associations as those at Tenkasi and Namakkal can attend to the sale of honey and the distribution of standardised appliances.

3. Arrangements may be made to translate the departmental bulletin and the pamphlet into the various languages so as to make them useful to the villagers.

4. The Government have recently sanctioned a temporary scheme for the introduction of the industry in Chittoor Dt. It is hoped that similar schemes will be provided for all the districts where facilities for the development of the industry exist.

GROWING, CURING AND MARKETING OF VIRGINIA TOBACCO IN GUNTUR*

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From time immemorial Guntur was an outstanding centre for the production of tobacco in India and in recent years it accounts for the major portion of the total export of cigarette tobacco. Guntur with its good retentive black soil and an average rainfall of 35 inches a year is the most suitable tract for the cultivation of cigarette tobacco which should be grown only as a dry crop in order that the leaves may be of mild flavour. For long, India produced and exported nothing but pipe tobacco and very low grade cigarette tobacco. Up to 1920, only country tobacco leaf of narrow body, with a thick and stout stem, with practically no colour, was produced and exported in leaf form to England, pressed into bales of 250 lbs. nett each. After 1920 owing to the imposition of heavy import duty on tobacco in England, the London market wanted the tobacco to be in the form of strips i. e., with the major portion of the thick mid-rib removed. The saving in terms of money can easily be appreciated when one considers the fact that the stems that are removed weigh as much as 25% of the whole leaf. After 1920, Virginia tobacco cultivation spread gradually in Guntur district and by 1924 large areas were grown. This Virginia variety contained less wood than the country, and the leaf was broad and silky. In the country variety the percentage of bright coloured leaf was between 1 to 2 of the total yield and the rest was a mixture of light brown, brown and dark leaves. In the Virginia tobacco the yield of bright coloured leaf is found to range from 5 to 10%. The introduction of flue curing improved the colour of the cured leaf and the percentage of bright coloured leaf increased from 5 to 10% in the case of sun cured, and to 40 to 50% in

* Paper which won the Ramasa-trulu-Munagala Prize, 1938.