

BEEKEEPING INDUSTRY IN INDIA: FUTURE POTENTIAL

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ABSTRACT

India, one of the largest honey producer and exporter in the world, plays an important role in world honey production and trade. The change of world honey production and trade affects the development of Indian apiculture. This paper analysed distribution of honey producing regions in the world, the change of relative status of major honey producing countries and the trade structure of international honey market, compared the competitive ability of main honey export countries. The study analyses the future prospects of the beekeeping industry and the policy changes that are required for the same.

KEYWORDS: Honey, India, Apiculture, Beekeeping Industry, Trade

INTRODUCTION

Honey has a long history of human consumption, and is most commonly consumed in its unprocessed state (i.e. liquid, crystallized or in the comb). It is taken as medicine, eaten as food, or incorporated as an additive in a variety of food and beverages. India has been known as 'land of honey.' Since centuries, honey is used to treat a variety of ailments through a wide range of applications.

In India beekeeping has been mainly forest based. Thus, the raw material for production of honey is available free from nature. Bee hives neither demand additional land space nor do they compete with agriculture or animal husbandry for any input. The beekeeper needs only to spare a few hours in a week to look after his bee colonies. Beekeeping is therefore ideally suited as a part-time occupation. Beekeeping constitutes a resource of sustainable income generation to the rural and tribal farmers. It provides them valuable nutrition in the form of honey, protein rich pollen and brood. Bee products also constitute important ingredients of folk and traditional medicine.

Honey has so far been consumed mainly as a medicine and for religious purposes. A small quantity has been used in kitchen as an ingredient of pickles, jams and preserves. With the increasing production in recent years, there is an increasing trend to use honey in food. This is obviously the case with the affluent segments of the population. Forest honey is used in pharmaceutical, food, confectionery, bakery and cosmetic industries.

Macro benefits of Beekeeping include:

- Excellent source of employment for the rural unemployed: currently approx. 250,000 farmers in India are employed through beekeeping.
- Provides an excellent source of income for the landless farmers: since beekeeping is migratory in nature, even the landless farmers can take up this profession.
- No farm land is wasted as apiaries are kept on the boundaries and not cultivable land.

- Increases crop yield by cross —pollination: can increase yields in some crops by up to 200%.

Despite the simplicity of technology and its tremendous advantages as well as its potential of providing employment, honey production has not realised its full potential. The per capita consumption of honey in India is just 8 grams, whereas in Germany it is 1800 grams. About sixteen lakh people are directly or indirectly engaged in the bee keeping and allied activities. Major honey producing states in the country include Punjab, Haryana, Himachal Pradesh, UP, Bihar and West Bengal. However, quality honey reportedly comes mainly from the states of Jammu and Kashmir and Himachal Pradesh.

Number of institutions are established to contribute to the development of beekeeping and disseminate information.

- The All India Beekeepers' Association has made laudable contributions to the development of beekeeping and has been disseminating information about honey trade through its informative publication Indian Bee Journal.
- Host of institutions have been set up both by the government of India and the state governments to promote export of honey.
 - Agricultural Products Export Development Authority (APEDA) under the aegis of the Ministry of Commerce and Industry, government of India, is the nodal agency to promote exports of honey.
 - Tribal Cooperative Marketing Development Federation of India Ltd (TRIFED) has been playing an important role by providing training to tribals in the scientific cultivation and harvesting of wild honey. A lot of work has also been done on honey related issues like Indian bees and beekeeping by individuals, agricultural experts, agricultural colleges and institutions.
 - The Central Bee Research and Training Institute, Khadi and Village Industries Commission (KVIC) not only contributed to the science of bees, bee plants and beekeeping but also developed several appropriate technologies suited to Indian beekeeping.
 - In India the Export Inspection Council (EIC) under the Union Ministry of Commerce arranges for tests on residues, antibiotics, etc., in the honey meant.

- Number of beekeepers : 150 000
- Number of beehives: 600 000
- Average production honey/bee hive/year: 8.5 Kg
- Average honey prices wholesale/retail: 1.5 to 4 US \$ / Kg
- Tons of exported honey: 1997- 3,000 tons, 1998- 1,500 tons, 1999- 750 tons
- Addresses of national associations:
 - Dabur beekeepers association , Chandigarh, INDIA
 - Dabur beekeepers association, Bihar, INDIA
 - West Bengal beekeepers association, West Bengal, INDIA
- Addresses of relative government ministries:
 - Department of Food Processing Ministry of Agriculture, New Delhi, INDIA
- Diverse : research centers, laboratories, annual congresses, WEB, etc. :
 - APEDA (agricultural and processed food products export development authority), Ministry of commerce, Government of India.
 - All India Co-ordinated Project on Honeybee Research and Training Bee Research Station, Nagrota, Himachal Pradesh
- Average annual per capita consumption of honey in India is 8.4 grams.
- Average honey production per colony has increased from 1.5 kg per colony in 1953-54 to about 8.15 kg in 1993-94.
- The following are the main species of bees used for honey production in the country: Apisdorsata, Apisceranaindica, and Apismellifera

Source: Beekeeping.org

Figure 1

HONEY TRADE

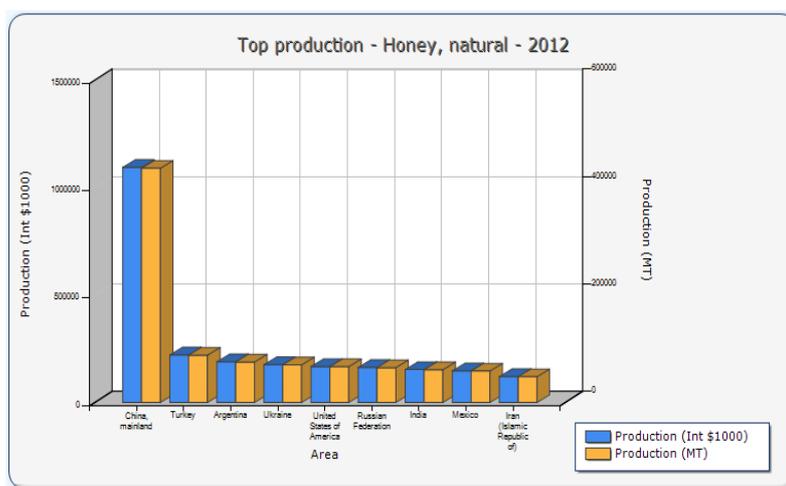


Figure 2



Figure 3

The majority of the production of honey takes place in developing countries, while the developed countries are the largest consumers. India has exported 25,780.74 MT of natural honey to the world for the worth of Rs. 356.28 crore during the year of 2012-13. Major Export Destinations (2012-13) are United States, Saudi Arabia, United Arab Emirates, Yemen Republic and Morocco.

HIMACHAL PRADESH

There are over 85,000 families in Himachal Pradesh engaged in beekeeping and the state produces 1600 tonnes of honey annually. The state is becoming the biggest producer of Himalayan honey. Under the bee keeping programme, 530.64 MT of honey has been produced upto 31.12.2013 in the State.¹ "Himachal Pradesh, owing to its varied agro-climate, has a great variety of bee forage sources that provide the basis for development of beekeeping industry in the state.

Scientists in the horticulture department trace the state's history of bee-keeping to 1934, when it was first started in Kullu valley and then in Kangra in 1936. While *Apis cerana indica*, the Indian honeybee, was reared initially, *Apis mellifera*, an Italian bee, was introduced at Bee Research Station, Nagrota (Kangra) in 1961. The fruit producing areas of Kangra, Chamba, Kullu, Mandi, Sirmour and Shimla in Himachal Pradesh are catering to the growing demand, transforming the state's rural economy and giving locals a popular vocation in bee-keeping.

The production of honey has already increased to 1,600 MTs against 700 MTs in 2005-2006. Some of the private bee-keepers have started exporting honey to the UK, Maldives and Kuwait, owing to increasing demand for pure bee-honey. The state government helps small entrepreneurs, providing incentives and marketing facilities. Himachal Pradesh will become biggest producer of Himalayan honey.

In Kangra alone, 30,000 farmers are engaged in bee-keeping, producing 1,200 MT honey annually for the last few years. Blessed with immense flora and fauna, Himachal's quality of honey is of very high grade.

¹ Economic survey of Himachal Pradesh, 2013-14

COUNTRY SPECIFICATIONS FOR HONEY TESTING

There are a number of country specifications for honey testing- European union standards, United States FDA, SASO (Saudi Arabian standards organization), codex / BIS, FSSAI (The Food Safety and Standards Authority of India, Ministry of Health & Family Welfare, Government of India (FSSAI). Out of all, EU specifications are the most extensive and detailed --accepted to be the highest industry standard

In June 2010, the EU banned Indian honey due to a lack of traceability regarding origin, adulteration, and contamination by heavy metals² and antibiotics. The US has not banned Indian honey, but there is strong suspicion that a considerable portion of imports from India are of Chinese origin. From 2001-2011, US imports of Indian honey increased from 20 MTs to 26,837 MTs.

The European Economic Commission (EEC) has lifted the ban on import of Indian honey, with effect from November 1, 2011.

Change of Relative Status of Main Honey Producing Countries

In the past thirty years the relative status in world honey production of China, Turkey, Argentina and Spain has shown an uptrend. While that of Mexico, Germany, India, Australia has shown down trend.

In India, production of honey is very low compared to China — the highest producer — which exports 80,000 tonnes annually compared to India's 7,000 tonnes. Its consumption is also very low in India. Honey production in the country is only about 27,000 tonnes a year. It is estimated that 9,000 of honey is produced from six bee colonies.

According to a survey, there is Rs 1,500 crore world market for health foods and India's share is stated to be negligible. In the world market the demand for honey is around one million tonnes. There is an immense possibility for India to increase its export share from 7,000 tonnes to three lakh tonnes if more people invest in bee colonies.

Quality testing facilities are also not easily available to beekeepers and packers in India. The European Union will not import honey from countries where the use of pesticides is not regulated and where samples are not specifically tested for insecticidal residues. Some honey importing countries also insist on a certificate to the effect that the honey has been procure from disease-free colonies. However, there is no arrangement for diseases surveillance. Honey is often stored in undesirable and inappropriate containers which deteriorate the quality.

Above all, the processing of honey has to be of high standards so that quality deterioration is minimal. Imports from China and Argentina, the two large exporters, are now being avoided due to the poor quality of honey and many counties are turning towards new exporters like India. Europe, the USA and Japan are the major honey importers. India needs to build the confidence of world buyers.

The price, supply, purity and service are the major determinants in the honey industry. The sale price of honey by beekeepers in India varies from Rs 25 to Rs 45 per kg whereas in countries like the USA, Argentina and Brazil, the price varies from Rs 55 to Rs 80 a kg. the beekeepers are thus getting a lesser price for their produce in India as compared to other countries.

²<http://www.americanhoneyproducers.org/Members/Tsunami%20of%20Indian.pdf>

FUTURE PROSPECTS

Honey industry in the country can well become a major foreign exchange earner if international standards are met. Beekeeping is an age-old tradition in India but it is considered a no-investment profit giving venture in most areas. Of late it has been recognised that it has the potential to develop as a prime agri-horticultural and forest-based industry. Honey production is a lucrative business and it generates employment.

The informal sector is providing up to 70% of the honey & bees wax market in India.³

Indian honey has a good export market. With the use of modern collection, storage, beekeeping equipment, honey processing plants and bottling technologies the potential export market can be tapped.

The problem is one of quality honey production. From a buyer's point of view, quality honey is essential. But India, he said, is lacking on that front. There is a need to look specifically at how to promote quality production and develop an export market.

Indian honey offers tremendous export potential. For tapping its potential, there is need to chalk out suitable export strategy. Some of the points which merit attention of the policy makers in this respect include:

- Application of advanced technology for collection, and processing of honey
- Adhering strictly to the quality standards including health regulations laid down by markets such as the European Union, Japan and the USA
- Recognition of bee keeping as agro-industry
- Priority allocation and concessions to be made applicable for material needed for beekeeping, like wood for bee boxes, sugar for supplementing feeds to bees and medicines for bees' diseases
- Campaigning abroad about quality of our honey
- Developing an efficient export marketing network to optimise the production and exports
- Creating an Indian logo as a joint effort of exporters, APEDA and the Ministry of Commerce and Industry, government of India. The brand equity thus created can be better marketed for higher sales realisation.

Timely implementation of the above steps is likely to pave the way for a quantum jump in the export of honey from the country in the coming years.

NEED FOR CERTIFICATION

Certifications are an indicator that the honey manufacturing company is competent and this has been established through a third party analysis, done professionally, using the most recent and up to date technologies, procedures and equipments.

- India is becoming an increasingly important supplier of high quality, mild honey with versatility for the North American market.

³(Bees for Development: <http://www.beesfordevelopment.org/info/info/species/bee-diversity-accros-atr.shtml>).

- India has been identified as a potential point of transshipment for Chinese honey en-route to the United States.
- Certification will help identify and certify honey that has met the expectations of Government, Industry and Consumers: Fully traceable, high quality honey of pure Indian origin.
- Would help to preserve the image of Indian honey and that of legitimate Indian exporters and validate the livelihood of approximately 250,000 beekeepers.

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