

INDIA PERSPECTIVES

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AZADI KA AMRIT MAHOTSAV
India gears up to celebrate its 75th
year of Independence in 2022

GOLDEN WINGS
Beekeeping and how it is
aiding farmers' income

CHASING THE CLOUDS

Picturesque waterfalls from across India during monsoon

BE(E)ING Useful



Bees are not just great pollinators but also best friends of farmers as they help increase agricultural productivity and consequently the latter's incomes. We take a look at how apiculture practices are not just aiding farmers to double their yield and revenue but also adding to the Prime Minister's visions of Aatmanirbhar Bharat and Make in India

BY BINDU GOPAL RAO

In his monthly radio address *Mann Ki Baat*, Prime Minister Narendra Modi spoke about the importance of bee farming as a part of the Aatmanirbhar Bharat initiative and its potential in achieving the national goal of doubling farmers' income. Calling it the "sweet revolution", he highlighted Gurdum in north (West) Bengal, Banaskantha district of Gujarat and Haryana's Yamuna Nagar, where farmers have seen much success because of bee farming.

BUSY AS A BEE

Beekeeping is the rearing, caring and management of honeybees (*Apis cerana indica*) in boxes that recreate a beehive. It has been observed that low-cost beekeeping can increase the yield of local crops with minimum efforts. Therefore, beekeeping is an alternative and additional source of

“**BEE FARMING IS BECOMING THE FOUNDATION OF A HONEY REVOLUTION OR SWEET REVOLUTION IN THE COUNTRY. HONEY BEE FARMING DO NOT LEAD TO INCOME SOLELY FROM HONEY, BUT BEE WAX IS ALSO A VERY BIG SOURCE OF INCOME. ..OUR COUNTRY CURRENTLY IMPORTS BEE WAX, BUT, OUR FARMERS ARE NOW RAPIDLY TRANSFORMING THIS SITUATION...THAT IS, IN A WAY CONTRIBUTING IN THE ‘AATMANIRBHAR BHARAT’ CAMPAIGN. THIS WILL LEAD TO AN INCREASE IN THE INCOME OF THE FARMERS TOO AND WILL ALSO SWEETEN THEIR LIVES!”**

Narendra Modi
Prime Minister of India



Brijesh Kumar Verma (extreme left), a farmer from the town of Gosaiganj near Lucknow, with his beehive

PROGRESS



income for farmers. With consistent efforts to build awareness and revive the agricultural ecosystem, beekeeping is gradually regaining its place in the ecosystem. Today, it has evolved as a source of additional income for many farmers. It is being adopted by the farmers, as it plays a significant role in increasing the agricultural yields through pollination of oilseeds, pulses, vegetables and fruits.

Sujana Krishnamoorthy, executive director, Under The Mango Tree (UTMT) Society, a Maharashtra-based organisation that promotes beekeeping with indigenous bees says, “The practice [of rearing honeybees] increases the output of fruits, vegetables, oilseeds and pulses – all of which are grown by small farmers who practice subsistence farming. In fact, 10 beekeepers with two bee boxes each can improve crop production for entire villages, as bees pollinate in a two-km radius. Simultaneously, awareness about the importance of bees leads to reduced unsustainable honey hunting practices, which, in turn, improves biodiversity as wild flowering plants and trees also depend on bees for pollination.”

HELPING HANDS

Srinivasan Services Trust (SST), the social arm of TVS Motor Company,



Image: Srinivasan Services Trust (SST)

Top: A beekeeper examines a beehive in an apiculture setup on October 13, 2020, on the outskirts of Srinagar, Jammu and Kashmir. According to a news report published by *hindustantimes.com*, Srinagar generated 1,415 quintals of honey in 2020;

Left: Women of the Venkatesa Perumal Tribal Women Self-Help Group (SHG) of the Javadhu Hills in Tamil Nadu with their raw wild honey



Top left: A beekeeper at a bee farm in the Barpeta district of Assam

Top right: GoBuzzR, an IoT-based device invented by a Chennai-based company, studies the condition of a beehive and communicates through a mobile application. It monitors the weight of the beehive through sensors in the device and messages the same to the respective beekeepers.

"The main intention of the app is to increase honey productivity. Rapid inspections on the hives will interrupt the bee's everyday activities, which results in the recession of honey production," says Kapil Dev G, director, Team Tweaks Technologies (P) Ltd. that has developed the app

Bottom: Apiculture process by bee keepers in West Bengal



has collaborated with the Tropical Institute of Ecological Science in Javadhu Hills, Tamil Nadu, to support farmers in tribal belts by providing honeybee boxes to involve them in apiculture and support their livelihood. This project has provided 150 honeybee boxes to 27 farmers. The successful project is earning an additional income of approximately INR 10,000 per annum for the farmers.

"An inspiring model of honey harvesting is the innovative technique adopted by Venkatesa Perumal Tribal Women Self-Help



Image: Dev Beetech India Pvt Ltd

Group (SHG) of the Javadhu Hills in Tamil Nadu. This region is popularly known for its naturally-sourced wild honey. The 12-member SHG has successfully earned a sustainable livelihood by processing and selling Javadhu wild honey. The honey is collected from local honey collectors, who skillfully gather the golden nectar, ensuring the bees are not disturbed," says Swaran Singh, chairman, SST.

The raw honey collected from the wild contain no added sugar, no added flavour and no preservatives. Around 62 honey collectors have benefitted from this, with an average income of INR 8,000 per collector over six months. The SHG has also been a part of the Honeybee Keeping Value Chain Project funded by NABARD and implemented by SST to expand apiculture in Javadhu Hills. The wild honey collectors were given training on scientific wild honey collection by TRIFED that has benefitted over 300 tribals with an income ranging from INR 8,000 to INR 10,000 once in six months, covering two seasons. Such

GOVERNMENT INITIATIVES

Some of the initiatives taken by the National Bee Board (NBB), Department of Agriculture, Cooperation & Farmers Welfare (DAC & FW) towards the promotion of beekeeping in the country include:

- Preparation of National Beekeeping & Honey Mission (NBHM) for overall promotion and development of beekeeping in the country.
- Setting up of Integrated Bee Development Centers (IBDC) in Bihar, Haryana, Delhi, Madhya Pradesh, Uttarakhand, Manipur, Punjab, Uttar Pradesh, Tamil Nadu, Jammu and Kashmir, Karnataka, Andhra Pradesh, Arunachal Pradesh, Tripura, Himachal Pradesh and West Bengal.
- Integrated Development of Scientific Bee Keeping (IDSB) - Remunerative Approach for Agriculture and Allied sector Rejuvenation (RKVY), Mission for Integrated Development of Horticulture (MIDH) and other associated schemes.
- Registration of beekeepers by NBB.
- Involvement of National Dairy Development Board (NDDDB)/ Gujarat Co-operative Milk Marketing Federation (GCMMF)/ milk cooperatives/ federations.
- Setting up of honey testing lab by NDDDB, Anand, Gujarat.
- Efforts for standardisation of honey and other beehive products.

Source: nbb.gov.in

proactive interventions enabled a turnover of INR 3.75 lakh for the beneficiaries in the FY 2020-21.

CROP BOOST

The bee-farming market has been on the rise for the past few years with more and more farmers venturing into this arena. The rising demand for pure, raw honey has encouraged more farmers to establish bee farms. Although honeybee farming in India can be practised as a stand-alone commercial venture, the integration of apiculture with crop farming does wonders to increase the crop yield while enabling the farmers to generate additional income. Saanwara Khod, founder, Farm to Fellas, a company providing farm fresh and 100 per cent natural food products says, "It would not be wrong to state that we depend on

bees for our survival. More than 70 of the 100 major food crops is a result of their [bee] labour and their role as the chief insect pollinators. Small-scale and low-cost bee farming by small farmers, especially in the states of Maharashtra, Gujarat and Madhya Pradesh, has doubled the yield of local crops with no extra effort. According to the Rapid Impact Assessment Study, 2011, bee farming enhanced the yield of tomatoes by 160 per cent and the production of fruits by around 60 per cent." Several government organisations like the National Bee Board and the Central Bee Research Training Institute provide training to farmers in apiculture.

NATIONAL BEE BOARD

The National Bee Board (NBB) was reconstituted in 2006. The main



Umed Singh Rana, a farmer, in front of his mustard field with beehive boxes in Qutubgarh village on the outskirts of New Delhi. Rana and his family started honey farming with rows of 100 beehives on their mustard farm in 2018, following a government programme intended to boost the industry by providing subsidies of up to 80 per cent per beehive box and the goal of doubling farmers' incomes by 2022



Top: Gurcharn Singh (extreme left), chairperson of the Tungwali Honey Bee Producer Co-operative Industrial Society, demonstrates how a hive rack in an apiary works, at Tungwali village in Bathinda, Punjab

Above: A policeman who is also an apiarist with his bees in Mon, Nagaland. The Nagaland Beekeeping and Honey Mission, since its launch as a Mission mode programme in 2007, has been committed to promoting and developing the beekeeping activities and honey enterprise of the state

objective of the board is the overall development of beekeeping by promoting scientific beekeeping in India to increase the productivity of crops through pollination and increase honey production so as to improve the income of the beekeepers/ farmers. The board also works towards the overall development of scientific beekeeping in India by popularising state-of-the-art technologies through the governmental schemes of the National Horticulture Mission

and Horticulture Mission for the Northeastern and Himalayan states in the country.

Noted scientist Albert Einstein had once said, "If the bee disappears from the surface of the Earth, man would have no more than four years left to live." The Indian government, led by PM Modi, however, is leaving no stone unturned to provide aid to bee farmers and encourage apiculture. An increase in the production of honey will not only ensure higher crop yields and added income for farmers but also add to PM Modi's mission of 'Aatmanirbhar Bharat', 'Make in India' and 'Vocal for Local'.



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