BEE INSPIRED

Khadi and Village Industries Commission
Ministry of Micro, Small and Medium Enterprises, GoI

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From the Minister’s Desk....

Dear Friends,

I thank all my beekeepers for adopting and pursuing Honey Mission in the country.

The onset of monsoon brings in rain and lush greenery with blooming flowers. This acts as a platform for honey production.

I request all beekeepers to come a step ahead and lend their cooperation in involving other beekeepers in the journey of Sweet Revolution. I am confident, your support and collaboration will set a new benchmark for the success of the Mission.

The news bulletin in the Cover Story highlights successful efforts of KVIC and IBDC partnership; proving that the work done in the partnership is more successful.

We are also sharing the success stories witnessed in Uttar Pradesh under the ambit of Honey Mission.

I have pledged to ensure scalability, sustainability and success of Honey Mission, and would urge you all to join me in the second year of Honey Mission – The Journey of Sweet Revolution.

Enjoy the edition and happy reading!

Mr. Nitin Gadkari
Hon’ble Minister, MSME
Government of India
Empowering the Villages Economically, Socially and Ecologically

Upliftment of Villages
Aimed at eradicating poverty, hunger and unemployment of the poor and marginal farmers, MSME Minister, Shri Nitin Gadkari implemented the following strategies towards fulfillment of the vision.

- Scaled up KVIC’s Honey Mission distribution target to Two lakh bee hives for 2019-2020
- Target for each State Office to adopt One village and ensure Sanitation, Beekeeping, Clean Environment, Water Conservation and afforestation.
- KVIC adopted the village Qutubgarh (Honeygarh of India) aiming to provide sanitation, beekeeping, water harvesting and generate livelihood.
- Planted 325 Moringa saplings in the village aiming to benefit the farmers, bees and environment.
- Ashoka, Gulmohar and Amaltas were also planted in the village.

“India does not have dearth of water, but we are lagging in management of water. I request you all to learn that art. Force the running water to walk, walking water to slow down and permit the stopped water to go into the earth”

Mr. Nitin Gadkari, Honorable MSME Minister,

Till a decade back the beekeepers of Israel migrated beehives across the country to maximize bee feeding areas and produce more hive products. This led to challenges like theft, high transport cost, high cost of production and long periods away from home. However, the scenario has changed now and the beekeepers are closer to their homes, happier, producing more honey than before and are able to better guard their bees.

The Israel Honey Board supported and distributed funds into beekeeping research involving various aspects like bee biology, botanical studies, nectar and pollen supply, honey production process and immune system of honeybees.

Collaboration
The Israel Honey Board coordinated and worked with Ministry of Agriculture, Forest, Defense and other different Organizations to make Israel greener and promote beekeeping activities to attract bees and keep them healthy at the same time.

Diversity
Distributed different trees and shrubs to avoid one of the causes of Colony collapse disorder (i.e. Monotonous diet).

Free Saplings
Each year Eighty thousand to One lakh seedlings of trees are distributed for free (especially of Eucalyptus trees).

Dual Benefits
Distributed trees beneficial to the stakeholders (Bees, Beneficiaries and Environment) which generates income for beneficiaries and food source for bees.

How did this happen?
Let’s see Israel’s Innovative strategies to achieve this

“...We don’t do research on bees but we are always looking for which plants and trees the bees like, and we work with researchers seeking solutions for bees, because plants and bees are directly connected”

Aviv Eizenband
Head of Forestry and Professional Development At KKL-JNF’s Forest Service.
Mustard honey is a special variety of mono-floral honey made from the flower of Brassica family. Fast crystallization time and a sweet-peppery flavor makes it unique from other honey. The honey has a very light beige-yellow pigment, however once crystalized it changes to white/Off-white color.

Oilseed production in India, **Mustard stands second** in area of cultivation and quantum of production. **33.08 percent area** of the total cultivated area of world is in India (**7.49 million hectares**). **16 percent** of world total production is by India (**6.70 million tons**). **Uttar Pradesh** leads the mustard production by growing **60 percent** of the total mustard production of India. **Rajasthan, Madhya Pradesh, Haryana, Punjab, Assam, Bihar, Gujarat and West Bengal** are other large scale producers of Mustard.

Source Courtesy: https://www.thehindubusinessline.com/economy/agribusiness/mustard-crop-seen-up-19-on-higher-yield/article26378454.ece
https://www.mapsofindia.com/indiaagriculture/oil-seeds/rapeseed-growing-states.html
BEECONOMY: ‘Value of Pollinators in Food Security and Economy’

Over 4,000 different species of bees contribute to pollination

84 percent of commercially grown crops are insect pollinated

Between ₹23500 and ₹57700 CRORES worth of annual global food production relies on the direct contribution of pollinators.

Effect of Pollination on Crop

- It increases yield in terms of seed yield and fruit yield in many crops
- It improves quality of fruits and seeds
- Bee pollination increases oil content of seeds in sunflower
- Bee pollination is a must in some self-incompatible crops for seed set

Effect of Pollination

<table>
<thead>
<tr>
<th>Crop</th>
<th>Yield Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mustard</td>
<td>43 %</td>
</tr>
<tr>
<td>Sunflower</td>
<td>32-48 %</td>
</tr>
<tr>
<td>Cotton</td>
<td>17-19 %</td>
</tr>
<tr>
<td>Lucerne</td>
<td>112 %</td>
</tr>
<tr>
<td>Onion</td>
<td>93 %</td>
</tr>
<tr>
<td>Apple</td>
<td>44 %</td>
</tr>
</tbody>
</table>

Market Cap

- The Little Midge: ₹570 CRORES
- Honey Bees: ₹2000 CRORES
- Wild Bees: ₹400 CRORES

Source: https://agritech.tnau.ac.in/arm_enterprises/fc_api_beefloraapollin.html
https://modernag.org/biodiversity/beeconomy-economic-value-pollination/
A Beekeeper’s Story
From Gangetic Plains

Meerut an ancient city in Uttar Pradesh where Honey Mission created awareness of beekeeping and distributed 4500 beehives to 450 beneficiaries. Among them we met a beekeeper who has achieved extraordinary results.

- **Name:** Satyapal Arya
- **Age:** 36 (Male)
- **Location:** Gangoh, Saharanpur, Uttar Pradesh
- **Education:** HSC Pass
- **Training:** 18th June 2005

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**At A Glance**

- **Master Trainer in KVIC’s Honey Mission**
- **Currently owns 788 bee-hives**
- **Since 2011 has sold off beehives worth ₹21 lakh**
- **Since 2007 has sold off honey worth ₹84 lakh**
- **Made assets worth ₹45 lakh from beekeeping**
- **Each year sells off 200-250 colonies (Apis mellifera) with beehives**

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“Thanks to KVIC for driving Honey Mission and creating more awareness about honeybees.”

Mr. Satyapal Arya

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**Way Forward**

Acquiring training in Colony rearing, Pollen and beeswax collection to scale up the business and utilize maximum benefit from Honey Mission.
Introduction

Integrated Beekeeping Development Centre (IBDC), Ramnagar, Kurukshetra, is a collaboration of Haryana government and Israel (CINADCO).

The objective of this project is to provide advanced scientific beekeeping techniques and infrastructure to the beekeepers and farmers to promote Beekeeping as an ideal profession to earn their livelihood.

Integrated Beekeeping Development Centre (IBDC), Kurukshetra, Haryana
- Automated Comb foundation Unit
- Honey processing, Packaging and Bottling Unit
- Laboratories
- Carpentry Unit
- Honey Parlor
- Bee Park and Apiary
- Research on Bumble bee
- Training and training facilities
- Beekeeping Promotion Schemes
IBDC Facilities

**Honey Processing and Bottling Unit**
- Capacity of 750 MT/ year
- Raw Honey Processing cost at INR 5 and Packaging cost at INR 1

**Automatic Comb Foundation Unit**
- Capacity to produce 540 sheets per hour consuming 45-50 kilo wax
- Comb Sheet Price is INR 25 each

**Bee Apiary**
- Hundred nucleus colony of Apis mellifera
- Used for bee breeding and research

**Bee Park**
- Hundred varieties of bee flora for bees sustenance
- Major flora is Jujube, Guava and Mango

**Laboratories**
- IBDC has modern testing facility for honey quality (Testing facility per sample cost INR 1,500)
- Honey bee lab to identify bee diseases and its remedies

**Beehive Manufacturing Unit**
- Capacity to make 20,000 beehive per day
- At the following price for Langstroth BIS 1515, 2013
  - Kail wood- INR 2500/beehive
  - Pinewood- INR 2000/beehive
  - Toon wood- INR 1800/beehive

**Training and Training facilities**
- Provides five day training for a group of 20 at one point
- An auditorium to accommodate 108 people
- Plans to train Five thousand individual by 2022

**Source Courtesy:**
https://findwords.info/term/mashav

**Israel** is renowned for its beekeeping growth. Israel’s Beekeeping Experts regularly visit IBDC and share their knowledge in the sector with their Indian counterpart.

Integrated Beekeeping Development Centre is equipped with all the facilities required for development of beekeeping.
**Uttarakhand** is one of the potential states for beekeeping activity. KVIC and Uttarakhand State Government have taken several initiatives to promote Beekeeping in the state.
State scheme for Beekeeping activity:

- 40 percent subsidy in beekeeping activity
- INR 350 per bee box for pollination services & state sponsored transport
- Free of cost beekeeping training
- To promote Beekeeping State Government declared ‘Sherpur’ in Haridwar and ‘Jeoligaon’ in Nainital Honey Gram
- 90 percent of the population is involved in beekeeping
**BEE Quiz**

With the comic strips

**What did the sushi say to the bee?**

*Answer: Wasssssbite*

**What's the smartest insect around?**

*Answer: The Spelling Bee!

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Why do bees have sticky hair?

*Because they use Honey combs!*

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**‘Bee-ing Like –minded’**

You have news or information you would like to share with us?
Are you looking to purchase/ sell honey, equipment, bees, volunteer, etc.?

*Connect with us on the email: fbi.kvic@gov.in*

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**Source Courtesy:** Teshil.com