



CHALLENGES OF APICULTURE IN INDIA - GS III MAINS

Q. Despite enough opportunities, the Indian apiculture sector is filled with a lot of challenges and hurdles. Discuss (10 marks, 150 words)

News: ICAR- DFR celebrates World Bee Day 2024

What's in the news?

- World Bee Day is celebrated every year on May 20 to mark the birth anniversary of Anton Jansa, who has mastered the skill of beekeeping.
- The United Nations established this day in 2017 after understanding the critical role of bees in ensuring food security, biodiversity and sustainable agriculture.

Key takeaways:

- The annual event, World Bee Day, is celebrated to make people aware of the role of bees and other pollinators in maintaining the health of our planet and ensuring food security.
- It also aims to promote biodiversity and sustainable agriculture. Hence, it becomes essential to involve young people in bee conservation efforts to protect vital pollinators.

Current State of Beekeeping in India:

- India is the sixth-largest global exporter of honey.
- Since 2005-06, honey production in India has increased by 240%, and exports have grown by 260%.
- From 2018-19 to 2022-23, domestic production rose by 72% (from 77,000 tonnes to 133,000 tonnes), and exports increased by 86% (from 43,000 tonnes to about 80,000 tonnes).
- Currently, about 80% of India's honey exports go to the United States, with smaller quantities shipped to the UAE, Saudi Arabia, Libya, Morocco, and Canada.
- Beekeeping is primarily practiced in Uttar Pradesh, West Bengal, Punjab, Bihar, and Maharashtra.

Challenges of Apiculture in India:

1. Lack of Awareness and Training:

- Many potential beekeepers lack adequate knowledge about beekeeping practices, including hive management, disease prevention, and honey extraction techniques.

2. Limited Access to apiculture Resources:

- Access to beekeeping equipment, such as hives, protective gear, and bee colonies, is limited in certain regions of India.
- This lack of resources hampers the expansion of beekeeping activities, particularly in rural areas.

3. Climate Variability:



- Erratic weather patterns, such as unseasonal rains or prolonged droughts, have been affecting the honeybees foraging behavior, disrupting flowering patterns, and ultimately impacting honey production.

4. Pests and Diseases:

- Bee colonies are susceptible to various pests and diseases, such as Varroa mites, nosema, and foulbrood.

5. Chemical Use in Agriculture:

- Pesticides and other agricultural chemicals pose a threat to bee populations by contaminating their food sources and weakening their immune systems.

6. Market Challenges:

- Price fluctuations, competition from imported honey, and lack of market infrastructure have been hindering the profitability of beekeeping ventures.

7. Quality Issues:

- There is rampant adulteration of honey with sugar syrup, which negatively affects the reputation of Indian honey both domestically and internationally.

8. Geographic Limitation:

- Beekeeping is confined primarily to certain states (Uttar Pradesh, West Bengal, Punjab, Bihar, and Maharashtra), limiting national production capacity.

Government Initiatives:

1. National Beekeeping and Honey Mission (NBHM):

- It is launched in 2017 under the National Horticulture Mission, NBHM aims to promote scientific beekeeping practices, enhance honey production, and improve the livelihoods of beekeepers.

2. 'Sweet Revolution' as part of Aatmanirbhar Bharat Abhiyaan:

- NBHM aims for the overall promotion and development of scientific beekeeping in the country to achieve the goal of 'Sweet Revolution', which is being implemented through the National Bee Board (NBB).

3. National Bee Board (NBB):

- The National Bee Board, established in 2000 under the Ministry of Agriculture & Farmers Welfare, serves as the apex body for the promotion and development of beekeeping in India.

4. Rashtriya Krishi Vikas Yojana (RKVY):

- RKVY supports various agricultural and allied sector development activities, including beekeeping.



5. ICAR's Research Projects:

- The Indian Council of Agricultural Research conducts an all-India coordinated research project on honeybees and pollinators to boost honey output and overall quality through specific regional strategies.

6. Central Bee Research and Training Institute:

- The Central Bee Research and Training Institute is run by the Khadi and Village Industries Commission (KVIC) and exists to help rural and tribal groups find ways to become economically sustainable in beekeeping.

Way Forward:

1. Proper Training:

- Proper training and awareness programs are essential to equip beekeepers with the necessary skills.

2. Adequate Pest Management:

- Proper pest management and disease management must be readily available to all beekeepers.

3. Sustainable Farming Practices:

- Encouraging sustainable farming practices that minimize chemical use is essential for the health of bee colonies.

4. Preservation of Natural Habitats:

- Preserving natural habitats and promoting agroforestry practices can help mitigate the effects of land use change and provide additional forage for bee colonies.

5. Expand Scope:

- Apiculture needs to be expanded beyond honey and wax.
- Products such as pollen, propolis, royal jelly and bee venom should also be made marketable and can greatly help Indian farmers.

6. Increase Area:

- India has to realize its potential of about 200 million bee colonies as against 3.4 million bee colonies today.
- Increasing the number of bee colonies will not only increase the production of bee-related products but will boost overall agricultural and horticultural productivity.

7. Institutional Support:

- The government needs to extend support to beekeeping in the form of micro credit facilities, veterinary services, development of regional infrastructure for processing and storage etc.



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8. Bibek Debroy Committee Recommendations:

- Recognizing honeybees as inputs to agriculture and considering landless Beekeepers as farmers.
- Plantation of bee friendly flora at appropriate places and engaging women self-help groups in managing such plantations.
- Institutionalizing the National Bee Board and rechristening it as the Honey and Pollinators Board of India.
- Recognition of apiculture as a subject for advanced research under the aegis of Indian Council for Agricultural Research.
- Training and development of beekeepers by state governments.
- Development of national and regional infrastructure for storage, processing and marketing of honey and other bee products.
- Simplifying procedures and specifying clear standards for ease of exporting honey and other bee products.

