Solution:

Scientific beekeeping for honey production, crop yield improvement, and native honeybee conservation

Submitter: (ICRISAT)

Solution Overview

What is it, and what problem does it solve? Brief 2–3 sentence description.

The use of cavity-nesting bees placed in man-made bee boxes can yield honey while also helping to conserve bee populations. Studies have proven that all over the world, pollinators are declining due to climate change, habitat loss and inordinate use of pesticides. Conserving honeybees will also help improve crop yields (10–20%) through enhanced pollination and seed setting.

Key Features & Benefits

Main components and why it is useful? Bullet points summarizing methods, tools, and value added.

The beekeeping model consists of key components such as a bee-box, stand, and a bee colony with at least four frames, including a mated queen, sufficient brood, and food. This setup supports the production of raw honey, sale of bee colonies, increased crop yields through pollination, improved income, and better nutrition. The process begins by selecting an ideal site with rich floral resources, followed by identifying individuals interested in beekeeping. After providing necessary training, bee boxes are installed, and essential tools like veils, gloves, knives, and honey extractors are supplied. Monthly hand-holding support is offered for one year post-installation to ensure proper care. With good maintenance, the setup can yield around 2 kg of honey and two daughter colonies within a year, offering a promising source of income.

Where It Works and Where It Can Work:

Existing and potential target regions, agroecologies, or farming systems. Include examples if available.

Existing and potential target regions include rural areas that have a mix of agricultural crops, horticultural plants and forest trees. The rationale is all throughout the year the bees should find their food in the form of nectar and pollen when floral resources are diversified. Eg include many districts in Odisha state such as Koraput, Kalahandi, Rayagada, Gajapati, Angul and Puri.

Evidence & Impact

What results has it shown? Stats, pilot outcomes, or testimonials.

Pure raw honey is a very precious commodity that commands good price in the market. People are wary of buying honey from unknown sources and very eager to buy honey that is extracted in front of them or from known sources. In our project site, people were able to eat nutritious honey, sell the excess honey at remunerative price of Rs 400 per kg of honey. Instead of selling the daughter colonies they chose to expand their existing beeboxes and improve the honey yield even further.

Scalability & Adoption Support

Why it can be scaled and what's needed to adopt it?

Low-cost, adaptable, partner-ready, etc.

This can be scaled up as per our experience with the help of good quality bee-boxes, good quality bee colony that is acclimatized to the local conditions, diverse floral resources that bloom at different times of the year, interested beekeepers, proper training and handholding support at least for one year. When all these things align together properly, success in beekeeping is guaranteed. In fact, beekeeping is one activity that requires a nominal starting material of Rs 7000 and continues to provide income for years to come.

Partners & Contact

Info Who's involved and how to connect? List of key contact and partners + email / phone.

Kapil Raje; kapil.raje@icrisat.org ; 7702292552