



PROJECT IMPLEMENTATION PLAN

Ref. No. 20-AG-17-GE-DLN-A-AP01-PP2000009

PIP Issue Date	9 April 2020
Project Code	20-AG-17-GE-DLN-A-AP01
Title	Self-learning e-Course on Apiculture Management
Reference	Project Notification 20-AG-17-GE-DLN-A dated 6 February 2020
Timing and Duration	18 August 2020–17 August 2021 (12 months)
Venue	e-learning
Implementing Organization(s)	APO Secretariat
Number of Participants	Minimum 400 participants
Self-registration	<p>Self-registration opens from 10:00 AM Japan Standard Time on 18 August 2020 on the eAPO web portal: http://eAPO-tokyo.org</p> <p>Note: Participants can register directly from this portal on the APO website. Those who are already registered can access the course by using the assigned username and password. If you have forgotten your username and password, please refer to the help page on the home page of the portal.</p>

1. Objectives

This course aims to develop honey production among rural farming families in the tropical evergreen regions in Asia. The specific objectives are to:

- a. Help alleviate poverty in the region through sustainable income generation from honey production;
- b. Counter the loss of biodiversity through conservation efforts; and
- c. Establish an understanding of the flora that contributes to the production of honey as an economic agriproduct and therefore encourage conservation and propagation.

2. Background

In tropical Asian communities, men traditionally engaged in honey hunting and gathering. Today, beekeeping and honey production are becoming a family home gardening pursuit involving women and children as well. The hive honeybee *Apis cerana* is indigenous to Asia, 80% of the flora in tropical Asia is pollinated by honeybees, and *A. cerana* is the only economically manageable species.

People living in humid tropical evergreen regions in Asia viewed their biodiversity as an inexhaustible resources for continuing utilization and sustainability. However, this view has been changing. Urbanization and increased rural poverty have contributed to a rapid loss of biodiversity, affecting the livelihoods of rural communities. Therefore to mitigate or altogether reverse this vicious cycle, methods must be devised to generate income sustainably through the conservation of biodiversity. In this context, "beekeeping for honey production" is a champion which has many added advantages.

Reports indicate that more than 75% of honey worldwide is contaminated with agrochemicals. The most notorious contaminant is neonicotinoids, which are more commonly found in honey produced in agroindustrial areas than in honey from rural settings adjoining forests. Rural beekeepers could exploit this advantage with assistance from timely government policy interventions to encourage the production of clean honey in home gardens. Policymakers should be aware of the potential benefits of apiculture to rural farmers, beekeepers, and consumers. Rural beekeepers could potentially become change agents in tropical evergreen forest areas by developing model local honey production resource centers for others to emulate.

The basic goal of this course is to encourage the sustainable utilization of the natural biodiversity in the forests of tropical Asia and demonstrate how indigenous hive honeybees could become a key component of conservation-based, income-generating activities. The course will be designed to show both honey producers at the grassroots level and national policymakers the value of beekeeping in ecological and economic terms.

3. Scope and Methodology

Scope

The tentative course structure and contents are as follows:

Module 1: Starting beekeeping: Honeybee colonies, movable comb hives, and equipment:

- 1.1 Where do honeybees build their nests naturally?
- 1.2 Movable comb hives
- 1.3 Locating honeybee colonies to start beekeeping
- 1.4 Transferring a natural colony of honeybees to movable comb hives

Module 2: Growing stage

- 2.1 Enhancing growth
- 2.2 Supplementary feeding
- 2.3 Population management, comb transfer, and preparation of honey supers

Module 3: Reproductive stage

- 3.1 Identification of different growth stages
- 3.2 Drone stage
- 3.3 Queen stage
- 3.4 Division of colonies to produce more new colonies for re-queening and for sales of starter colonies
- 3.5 Bringing the honey producing colony to the main honey flow with a new queen and optimum foraging population
- 3.6 Population management and maintaining an optimum population in the honey producing colony

Quiz 1 (for self-assessment based on questions from modules 1–3)

Module 4: Honey harvesting season

- 4.1 Examination of honey frames and honey extraction techniques
- 4.2 Honey quality

Module 5: Dearth period

- 5.1 Population management and adjustment of hive (or nest) volume
- 5.2 Comb preservation and or bees' wax extraction
- 5.3 Supplementary feeding
- 5.4 Prevention of absconding
- 5.5 Prevention of pest and disease attacks

Quiz 2 (for self-assessment based on questions from modules 4 and 5)

Module 6: Economics

- 6.1. Expenditure and investment
- 6.2 Time required for hive maintenance
- 6.3 Production
- 6.4. Income and entrepreneurship development
- 6.5 Break-even point and profitability
- 6.6 Extension and expansion of beekeeping

Module 7: Best practices and success stories of apiculture management

- 7.1. Case study 1
- 7.2 Case study 2

Quiz 3 (for self-assessment based on questions from modules 6 and 7)

Module 8: Final examination

Methodology

Self-learning e-modules, additional study materials for participants, intermittent quizzes for self-assessment, assignments, and a final examination to qualify for the APO e-certificate.

4. Qualifications of Candidates

The target participants are government officers, agricultural producers, agribusiness entrepreneurs, agricultural extension workers, academics, and other individuals with particular interest in beekeeping and apiculture management practices.

5. Eligibility for e-Certificate

A minimum score of 70% on the final examination is required to qualify for the APO e-certificate.



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