A Proposal for the Young Scientist Project

Title

Development of Honeybee Genetic Resource and Standardized Rearing Management Techniques

1. Course Outline

- O Personnel: KAFACI member countries
- O Period of Training: March 2025 November 2025 (8 months)
- O Implementing Department: Apiculture Division, National Institute of Agricultural Sciences

O Research Studies Currently Being Implemented

- Development of superior honeybee strains (Apis mellifera, Apis cerana)
- Preservation of honeybee genetic resources (e.g., artificial insemination techniques)
- Development of Varroa-resistant honeybee strains

2. Plan Course Direction

- O (Training Objectives) Develop customized technologies for honeybee genetic resource management. Focus on Varroa mite-resistant colony management for member countries.
 - * <u>Key Outcomes</u>: Acquire two techniques (artificial insemination and isolated breeding station techniques), submit one research paper, deliver two academic presentations, and publish one manual.
- (Promoting Research and Learning Activities) Publish research in academic journals, deliver presentations at conferences, and develop comprehensive technology dissemination manuals.
- O (Improving Problem-Solving Abilities) Acquire methodologies to address on-site challenges in domestic settings, and develop skills tailored to local conditions.
- O (Fostering Creative Professionals) Form an expert apiculture group in Africa to collaboratively address international challenges.
- O (Building Future-Oriented Competencies) Conserve and propagate honeybee genetic resources, develop superior strains, and establish standardized management techniques for their rearing.
 - * <u>Key Techniques</u>: Artificial insemination, isolated breeding station techniques, and trait analysis for disease resistance.

3. Qualifications of Participants in Young Scientist Project

O (General Requirements) Requirements for all Young Scientists

- Must be a government official from a KAFACI member country, recommended by the head of their affiliated organization.

- Must hold a master's degree or higher in a relevant field with at least five years of related experience.
- Proficiency in English and strong computer skills are required.

O (Details) Additional Requirements

- Expertise and research experience in a relevant field* with a master's degree or higher.

* Relevant Fields: Agricultural Biology, Entomology, Molecular Biology

- Must have basic knowledge of honeybee management and an interest in honeybee breeding.
- Must not have bee sting allergies and be suitable for outdoor field research.
- Must be proficient in MS Office and statistical analysis software (R, SAS, SPSS).