

Training Course Proposal 1

Title: Honeybee Disease and Pest Management and Development of Breeding Technology

① Course Outline

- Target Participants: Selected candidates from 14 countries including KoRAA and AFACI member countries
- Number of Trainees: One person
- Training Duration: October 2022 to August 2023 (10 months)
- Training Institution: National Institute of Agricultural Sciences
- Ongoing Research Studies:
 - A Study on the Development of Superior Breeds of Honeybees
 - Development of Eco-Friendly Honeybee Disease and Pest Control Technology
 - Development of Digital Beekeeping Technologies

② Course Direction

- Training goal
 - Enhance the technical knowledge and skills of participants on eco-friendly honeybee disease and pest management techniques and development of breeding technologies.
- Expected Outputs:
 - 1 case study/research paper and 1 academic presentation applying the techniques for controlling eco-friendly honeybee diseases

③ Trainee Qualifications

- General requirements:
 - Public sector employees with recommendation from the Chief (Head) of their organization
 - Possesses a Master degree (or Ph.D.) with at least 5 years of research experience
 - Proficient in English and computer applications
- Specific requirements:
 - Expertise and research experience in the areas of Entomology, Molecular Biology, Organic Chemistry
 - A keen interest in the field of beekeeping
 - Proficient in MS office and application of statistical analysis software (SAS, R, SPSS etc.)

Training Course Proposal 2

Title: Analysis of the Changes in Rice Quantity and Quality in Response to Artificial Shade

① Course Outline

- Target Participants: Selected candidates from 14 countries including KoRAA and AFACI member countries
- Number of Trainees: One person
- Training Duration: October 2022 to August 2023 (10 months)
- Training Institution: National Institute of Crop Science
- Ongoing Research Studies
 - Development of Appropriate Cultivation Technology for Rice through application of Solar Energy Farming Systems

② Course Direction

- Training goal
 - Enhance the technical knowledge and skills of participants on the methods of analyzing rice quantity and quality within a controlled environment (artificial shade)
- Expected Outputs:
 - One case study/research paper analyzing rice growth and developmental changes in terms of quantity, class, nutrient content, etc. in an artificially-shaded environment

③ Trainee Qualification

- General requirements:
 - Public sector employees with recommendation from the Chief (Head) of their organization
 - Possesses a Master degree (or Ph.D.) with at least 5 years of research experience
 - Proficient in English and computer applications
- Specific requirements:
 - Expertise in any of the following fields: rice production, plant breeding and related fields
 - Research experience in rice cultivation and growing survey, plant nutrient analysis, rice protein analysis, etc.
 - Proficient in MS office and application of statistical analysis software (SAS, R, SPSS etc.)

Training Course Proposal 3

Title: Agriculture Microbial Resource Management Technology

① Course Outline

- Target: Selected candidates from 14 countries including KoRAA and AFACI member countries
- Number of Trainees: One person
- Training Duration: October 2022 to August 2023 (10 months)
- Training Institution: National Institute of Agricultural Sciences
- Ongoing Research Studies
 - Microbial Resource Management of Korean Agricultural Culture Collection (KACC)
 - Collection and preservation of fungi
 - Molecular Biological and Morphological Classification of Fungi

② Course Direction

- Training Goal: Acquire technical skills and knowledge on microbial resource management
- Expected Outputs:
 - One case study/research paper applying the long-term preservation methods learned such as freeze-drying preservation, cryogenic preservation, mineral oil preservation, etc. and the classification of fungal resources and identification methods

③ Trainee Qualification

- General requirements:
 - Public sector employees with recommendation from the Chief (Head) of their organization
 - Possesses a Master degree (or Ph.D.) with at least 5 years of research experience
 - Proficient in English and computer applications
- Specific requirements:
 - Expertise and research experience in the fields of Mycology, Agricultural Biology, Microbiology
 - Laboratory researchers interested in microbial resource management

Training Course Proposal 4

Title: Disease Diagnosis and Integrated Pest Management of pear, persimmon, blueberry

① Course Outline

- Target: Selected candidates from 14 countries including KoRAA and AFACI member countries
- Training period: October 2022 to August 2023 (10 months)
- Training Institution: National Institute of Horticultural and Herbal Science
- Ongoing Research Studies:
 - Development of a decision support system for disease and pest control of pear, persimmon, blueberry
 - Clinical diagnosis and monitoring of disease and pest for pear, persimmon, blueberry
 - Evaluation of biodiversity in orchards and management of harmful wildlife

② Course Direction

- Training goal: Enhance technical knowledge and skill in disease and pest diagnosis and monitoring technologies

- Expected Outputs:
 - 1 case study/research paper and 1 data publication on the characterization of pests in the local settings based on collected field data

③ Trainee Qualification

- General requirements:
 - Public sector employees with recommendation from the Chief (Head) of their organization
 - Possesses a Master degree (or Ph.D.) with at least 5 years of research experience
 - Proficient in English and computer applications

- Specific requirements:
 - Expertise and research experience in the fields of Biology, Plant Pathology, Entomology, pomology
 - Researchers interested in the field of pest diagnosis and comprehensive management
 - Proficiency in MS-Office applications and statistical analysis software such as R, SAS and SPSS

Training Course Proposal 5

Title: Evaluation on Agricultural Drought and Application of Forecasting Techniques

① Course Outline

- Target: Selected candidates from 14 countries including KoRAA and AFACI member countries
- Training period: October 2022 to August 2023 (10 months)
- Training Institution: National Institute of Agricultural Sciences
- Ongoing Research Studies:
 - Development of Field Drought Analysis and Evaluation of Water Volatility based on Soil Effective Moisture
 - Development of Soil-Water-Energy-Food Nexus Technology for Evaluating the Impact of Agricultural Drought

② Course Direction

- Training goals: Enhance technical knowledge and skill in applying agricultural drought assessment customized to member countries
- Expected Outputs:
 - One case study/research paper applying the techniques for evaluating agricultural drought models analyzing data statistics and big data

③ Trainee Qualification

- General requirements:
 - Public sector employees with recommendation from the Chief (Head) of their organization
 - Possesses a Master degree (or Ph.D.) with at least 5 years of research experience
 - Proficient in English and computer applications
- Specific requirements:
 - Expertise and research experience in the fields of Soil Science, Agricultural Engineering, Irrigation Drainage, Environmentology
 - Proficiency in Space Statistical Analysis and Statistical Software (R)

Training Course Proposal 6

Title: Biological Resource Utilization Technology for Sustainable Organic Pest Management

① Course Outline

- Target: Selected candidates from 14 countries including KoRAA and AFACI member countries
- Training period: October 2022 to August 2023 (10 months)
- Training Institution: National Institute of Agricultural Sciences
- Ongoing Research Studies
 - Development of organic tomato production technology utilizing microbiome ('21~'23)
 - Establishment of cultivation technology by developing eco-friendly digital management technology for major pests of organic wheat and barley ('22~'25 years)
 - Development and Field Demonstration of Root Horm Disease Control Technology such as Turnips and Radishes Using Organic Agricultural Materials of Carbon Materials ('22-26)
 - Development of domestic and foreign plant resource utilization technology and mechanism research for the development of organic agricultural materials for pest control ('22-26)

② Course Direction

- Training goal: Enhance technical knowledge and skill in the application of eco-friendly pest control technology using natural plant and microbial resources for sustainable organic agricultural production
- Expected Outputs:
 - 1 research paper
 - 2 academic presentations
 - 1 field application plan

③ Trainee Qualification

- General requirements:
 - Public sector employees with recommendation from the Chief (Head) of their organization
 - Possesses a Master degree (or Ph.D.) with at least 5 years of research experience
 - Proficient in English and computer applications
- Specific requirements:
 - Participation in research or guided projects related to crop cultivation and plant pests
 - Expertise and research experience in the fields of Horticulture, Agricultural Biology, and Biology