

Mexico-Japan Exchange Program for the Strategic Global Partnership

Information for applicants

1. Course Title

Genetic Resources Training Course

2. Name of Mexican Organization:

National Forestry, Crops and Livestock Research Institute (INIFAP), National Center for Genetic Resources (CNRG)

3. Course dates:

From September 18th to October 03th 2017

4. Brief Profile of the Organization and the Department

INIFAP is an institution of excellence in science and technology, with leadership and with national and international recognition for its capability to respond to demands in knowledge and technological innovations in the agricultural, livestock and forestry sector. CNRG (National Genetic Resources Center) as a part of INIFAP has the responsibility to safeguard the genetic resources important for food, agriculture and environment. CNRG has modern facilities and last generation equipment for adequate evaluation, characterization, processing and long term preservation of Agricultural, Forestry, Livestock, Aquatic and Microbial genetic resources.

5. Field of the Training Program:

Evaluation, Documentation, characterization, process and preservation of phyto-genetic, zoogenetic and microbial genetic resources.

6. Course Objective:

To acquire basic knowledge and specific concepts for evaluation, documentation, characterization, process and preservation of phyto-genetic, zoogenetic and microbial genetic resources.

7. Tentative Course Program

Lectures and lab activities on orthodox seeds at CIRPAC (Central Pacific Regional Research Center)

Lectures and lab activities on "in vitro" culture of plant tissues at CIRPAC

Lectures and lab activities on DNA and Genomics, CIRPAC

Lectures and activities on zoogenetic resources, CIRPAC

Lectures and activities on microbial genetic resources, CIRPAC

INIFAP seed production program at the Centro Altos de Jalisco Research Station, CIRPAC

INIFAP forage species genetic resources program at Vaquerías Research Station; CIRPAC

Lectures and practices on germplasm preservation methods (*in situ*, *ex situ*) mainly in fruit trees and coconut palm at Tecomán Research station, CIRPAC

INIFAP genetic resources program, at Santiago Ixcuintla Research Station, CIRPAC (preservation methods (*in situ*, *ex situ*) mainly in fruit trees germplasm and forage species genetic resources program.

INIFAP zoogenetic resources program at Verdineño Research Station, CIRPAC

Visit to different local markets

8. Tentative Schedule of the Training Program

Arrival to Mexico City, September 18th

MEXICO CITY, September 19th

Welcoming Ceremony at Ministry of Foreign Affairs

Depart from Mexico City to Tepatlán, Jalisco

September 20th

Welcome and visit to National Genetic Resources Center (CNRG)

José Fernando De la Torre Sánchez, Ph.D.

Director of the CNRG

Visit to labs and preservation areas of the CNRG, INIFAP

Visit to the Orthodox Seed Lab

- Seeds acceptance check
- Seeds Cleaning
- Germination test
- Long time seed preservation

Juan Manuel Pichardo González, Ph.D.

Researcher. INIFAP

Lunch

Visit to the Orthodox Seed Lab (Cont.)

Martin Quintana Camargo, Ph.D.

Carlos Cruz Cárdenas, Ph.D.

Researchers. INIFAP

September 21th

Visit to the *In Vitro* and Cryopreservation lab

- Presentation: “*In vitro* cultivation and cryopreservation”
- Plant tissue culture practice

Esmeralda Cruz Gutiérrez, Ph.D.

Gabriela Sandoval Cansino, Ph.D.

Researchers. INIFAP

Lunch

Visit to the DNA and Genomics Lab

- Presentation “GMO detection using TaqMan Assay”

- GMO detection strategy at the CNRG (*Felipe Guzman Rodríguez, Ph.D.*)
- Maize molecular characterization (GBS strategy)
- Bioinformatics and Genomics (*Daniel Martínez Peña, M Sc.*)

Moisés Cortes Cruz, Ph.D.
Researcher. INIFAP

September 22th

Visit to the Microbial Genetic Resources Lab

- Presentation “Microbial genetic resources”
- Isolation and selection of bacteria that adversely affect crop pathogens
- Preservation techniques for microorganisms

Ramon I. Arteaga Garibay, Ph.D.
Researcher. INIFAP

Lunch

Visit to the Livestock and Fishery Lab

- Semen evaluation
- *In vitro* production of embryos

Researcher:
José Fernando De la Torre Sánchez, Ph.D.
Director of the CNRG
Horacio Alvarez Gallardo, MSc.
Researcher. INIFAP

September 23th

Visit to the Vaquerías Research Station

- Forage species germplasm program

Dr. Miguel Luna Luna
Researcher. INIFAP

September 24th

Visit to the Livestock in the ranch facility

September 25th

Welcome to the Centro Altos de Jalisco Research Station

Ramón Hernández Virgen, M. Sc.
Head of the Centro Altos de Jalisco Research Station

Visit to the Centro Altos de Jalisco Research Station field and facilities

- Genetic improvement program for maize

Ramón Hernández Virgen

September 26th

Welcome to the Tecomán Research Station

Isaac Vizcaíno Vargas , M. Sc.

Head of the Centro Altos de Jalisco Research Station

Visit to the Tecomán Research Station field and facilities

- *In situ* and *ex situ* fruits conservation
- *In situ* and *ex situ* coconut palm conservation

Researchers of Tecomán Research Station

September 27th

Tecomán Research Station field and facilities

- Practice *in situ* and *ex situ* of fruits conservation
- Practice *in situ* and *ex situ* coconut palm conservation

Researchers of Tecomán Research Station

September 28th

Tecomán Research Station field and facilities

- Crops for biofuels *ex situ* conservation

Researchers of Tecomán Research Station

September 29th

Welcome to the Santiago Ixcuintla Research Station

Filiberto Herrare Cedano, Ph.D.

Head of the Centro Altos de Jalisco Research Station

Visit to the Santiago Ixcuintla Research Station field and facilities

- *In situ* and *ex situ* of fruits conservation

Researchers of Santiago Ixcuintla Research Station

September 30th

Santiago Ixcuintla Research Station field and facilities

- *In situ* and *ex situ* of forage species

Researchers of Santiago Ixcuintla Research Station

October 1st

Travel in Colima State

October 2nd

Visit to the Verdineño Research Station

- *Ex situ* of zoogenetic resources preservation
- *In situ* and forage seed conservation

Researchers of Verdineño and Santiago Ixcuintla Research Station

October 3th

Farewell at Ministry of Foreign Affairs

Return to Japan

9. Trainees profile (academic, professional, linguistic, others)

Academic Background	University graduates (Bachelor's degree is mandatory)
Work Experience	Not required, desirable some experience in agronomic or livestock areas
Years of Experience	N/A
Language Proficiency	English Scores: TOEIC: 700 pts TOEFL PBT: 500 TOEFL IBT: 90 IELTS: 6
Others	None

10. Dress code

Casual, light jacket as some cool temperatures could occur