

Mexico-Japan Exchange Program for the Strategic Global Partnership

Information for applicants

1. Course Title

GENETIC RESOURCES TRAINING

2. Name of Mexican Organization:

NATIONAL FORESTRY, CROPS AND LIVESTOCK RESEARCH INSTITUTE - CNRG

3. Brief Profile of the Organization and the Department that will receive the Japanese trainees.

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.

4. Course dates:

Arrival to Mexico: August 30 th , 2016 Departure to Japan: September 14 th , 2016
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5. Field of the Training Program:

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

6. Course Objective:

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

7. Tentative Course Program

Visit to the National Seed Inspection and Certification Service (SNICS)
Lectures and lab activities at the Orthodox seeds laboratory at CNRG
Lectures and lab activities at the "*in vitro*" culture of plant tissues laboratory, CNRG
Lectures and lab activities at the DNA and Genomics laboratory, CNRG

Lectures and activities at the zoogenetic resources laboratory, CNRG
Lectures and activities at the microbial genetic resources laboratory, CNRG
INIFAP genetic resources program, at Rosario Izapa Research Station
Practice on field germplasm collection at Rosario Izapa Research Station
Lecture on germplasm preservation methods (“in situ”, “ex situ”)
Germplasm characterization Lectures and practices at Rosario Izapa Research Station
“in situ” preservation, participative improvement and community germplasm banks in local crops at Oaxaca State
Visit to Oaxaca produce market

8. Tentative Schedule of the Training Program

MEXICO CITY, AUGUST 30TH 2016

<u>AUGUST 30TH</u>	Arrival to Mexico City
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AUGUST 31TH

8:30	Moving to the Ministry of Foreign Affairs
9:00	Welcome session at the Ministry of Foreign Affairs
14.00	Moving to the hotel

SEPTEMBER 1ST

8:00	Moving to the National Seed Inspection and Certification Service (SNICS)
10:00	Genetic resources legal aspects Intellectual property Seed production <i>Manuel R. Villa Issa, Ph. D.</i> <i>National Seed Inspection and Certification Service (SNICS)</i>
15:30	Moving from SNICS to airport
18:00	Depart from Mexico, City for Tepatitlan, Jalisco

SEPTEMBER 2ND

8:30	Moving from Tepatitlán to the National Genetic Resources Center (CNRG)
9:00-11:00	Welcome and visit to the National Genetic Resources Center Facilities, INIFAP <i>J. Fernando de la Torre Sánchez, Ph.D.</i> <i>Director of the CNRG</i>
11:00 – 12:00	Visit to labs and preservation areas of the CNRG, INIFAP Visit to the Orthodox Seed Lab • Seeds acceptance check

	<ul style="list-style-type: none"> • Seeds cleaning • Germination test • Seeds preparation for long time preservation <p><i>Juan Manuel Pichardo, Ph. D.</i> <i>Researcher</i></p>
12:00 -13:00	Lunch
13:00 – 16:00	<p>Visit to the Orthodox Seed Lab (Cont.)</p> <p><i>Juan Manuel Pichardo, Ph. D.</i> <i>Researcher</i></p>

SEPTEMBER 3TH

8:30	Moving from Tepatitlán to CNRG
9:00-12:00	<p>Visit to the Microbial Genetic Resources Lab</p> <ul style="list-style-type: none"> • Presentation “Microbial genetic resources” • Isolation and selection of bacteria that adversely affect crop pathogens • Preservation techniques for microorganisms <p><i>Ramon I. Artega Garibay, Ph.D.</i> <i>Researcher</i></p>
<u>SEPTEMBER 4TH</u>	
9:00-16:00	<i>Visit to the Livestock in the ranch facility</i>

SEPTEMBER 5TH

8:30	Moving from Tepatitlán to CNRG
9:00-12:00	<p>Visit to the DNA and Genomics Lab</p> <ul style="list-style-type: none"> • Presentation “GMO detection using TaqMan Assay” • GMO detection strategy at the CNRG (Felipe Guzmán Rodríguez, Ph.D.) • Maize molecular characterization (GBS strategy) • Bioinformatics and Genomics (Daniel Martínez Peña, M Sc.) <p><i>Moises Cortes Cruz, Ph.D.</i> <i>Researcher</i></p>
12:00-13:00	Lunch
13:00-16:00	<p>Visit to the In vitro and Cryopreservation lab (cont.)</p> <ul style="list-style-type: none"> • Presentation: “In vitro cultivation and cryopreservation” • Plant tissue culture practice <p><i>Esmeralda Cruz Gutierrez, Ph.D.</i> <i>Researcher</i></p>

SEPTEMBER 6TH

8:30	Moving from Tepatitlán to the National Center of Genetic Resources (CNRG)
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9:00-12:00	Visit to the Livestock and Fishery Lab <ul style="list-style-type: none"> • Semen evaluation • In vitro production of embryos <i>Researcher:</i> <i>J. Fernando de la Torre Sánchez, Ph.D.</i> <i>Director of the CNRG</i>
12:00-13:00	Lunch
13:00	Departure to Tapachula, Chiapas

SEPTEMBER 7TH

9:00-9:15	Welcome and visit to the Rosario Izapa Research Station Facilities, INIFAP <i>Víctor H. Díaz Fuentes, Eng.</i> <i>Head of the Rosario Izapa Research Station</i>
9:15-10:15	INIFAP genetic resources research program <i>Researcher:</i> <i>Carlos Hugo Avendaño Arrazate, Ph.D.</i>
10:15-12:15	Field germplasm collection <i>Researcher:</i> <i>Carlos Hugo Avendaño Arrazate, Ph.D.</i>
12:15-12:30	Break
12:30-14:30	Preservation methods: <i>in situ</i> and <i>ex situ</i> (germplasm bank collection, cold rooms, field collections, <i>in vitro</i>) <i>Researcher:</i> <i>Carlos Hugo Avendaño Arrazate, Ph.D.</i>
14:30-16:00	Lunch
16:00-18:00	Germplasm characterization: morphology, biochemistry and molecular <i>Researcher:</i> <i>Carlos Hugo Avendaño Arrazate, Ph.D.</i>

SEPTEMBER 8TH

9:00-11:00	Practical training: morphological germplasm characterization <i>Researcher:</i> <i>Carlos Hugo Avendaño Arrazate, Ph.D.</i>
11:15-15:00	Break
	Field trip to visit the Rosario Izapa Research Station germplasm bank collection <i>Researcher:</i>

	<i>Carlos Hugo Avendaño Arrazate, Ph. D.</i> <i>Alfredo Sandoval Esquivas, Ph. D.</i>
15:30	Travel to Oaxaca, Oaxaca

SEPTEMBER 9TH

8:30 – 9:00	Moving to Valles Centrales Research Station Facilities.
9:00 – 9:10	Welcome <i>Porfirio López López, M. Sc.</i> <i>Head of the Valles Centrales Research Station</i>
9:10-9:40	Pepper crop from the southern pacific of Mexico <i>Porfirio López López, M. Sc.</i> <i>Researcher:</i>
9:40-10:20	In situ preservation methods in corn and squash crops <i>Flavio Aragón Cuevas, M. Sc.</i> <i>Researcher:</i>
10:20-12:20	Visit to Oaxaca's native plants germplasm bank <i>Researcher:</i> <i>Flavio Aragón Cuevas, M. Sc.</i>
12:30-13:00	Agavetum visit <i>Horacio Espinoza Paz, M. Sc.</i>
13:00 - 14:30	Lunch <i>Santa Martha Restaurant</i>
14:30 – 19:00	Visit to the community seed bank at Santa María Peñoles, Etla, Oaxaca. <i>Researcher:</i> <i>Flavio Aragón Cuevas, M. Sc.</i>

SEPTEMBER 10TH

08:30 – 10:00	Visit to Oaxaca's city Market
10:00 - 11:00	Visit to Santo Domingo's Museum. <i>Flavio Aragón Cuevas, M. Sc</i> <i>Researcher.</i>
11:00 - 13:00	Visit to Oaxaca's Etnobotanical Garden. <i>Flavio Aragón Cuevas, M. Sc</i> <i>Researcher.</i>
13:00 - 14:30	Lunch.

14:30 - 17:30	Visit to corn, been, and squash Germoplasm holders at Santiago Suchilquitongo, Etlá. <i>Flavio Aragón Cuevas, M. Sc</i> <i>Researcher.</i>
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SEPTEMBER 11TH

Open Day

SEPTEMBER 12

08:30 – 12:00	Visit to corn, been, and squash germoplasm holders at San Marcos Tlapazola, Tlac. <i>Flavio Aragón Cuevas, M. Sc</i> <i>Researcher.</i>
12:00 - 13:00	Mezcal making process. <i>Don Agave Restaurant. Teotitlan del Valle.</i> <i>Flavio Aragón Cuevas, M. Sc</i> <i>Researcher.</i>
13:00 - 14:00	Lunch. <i>Don Agave Restaurant</i>
<u>SEPTEMBER 13TH</u>	
9:00 – 12:00	Visit to the arbol del Tule
14:00 – 15:00	Travel to the Oaxaca's Airport
15:00 – 16:00	Baggage checking
17:00	Departure to México City

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

Academic Background	Bachelor's degree at least
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