

## **2019 Comprehensive International Education Program CIEP Final Report**

“Luiz de Queiroz” College of Agriculture, University of São Paulo (ESALQ-USP)  
2<sup>nd</sup>.year Mayara Pardi Ikeda

This report is related to all the activities during the Comprehensive International Education Program (CIEP).

### **September 6<sup>th</sup>**

Arrive at Narita International Airport, flight AM 58 and transfer to Tokyo University of Agriculture by TAXI offered by Tokyo University of Agriculture.

### **September 7<sup>th</sup>**

#### **Visit National Museum of Japanese History**

In this visit, we had an overview of Japanese history and correlate it with the development of agriculture in the country.

The exhibition was divided into 5 galleries, each reporting a period of history in chronological order from 36,000 years ago to the present day. It was very enriching to observe the adaptations of the Japanese population to different methods of food production. From the earliest instruments used to manage the land to modern tractors.

#### **Lecture 1: CIEP and how to work in Group**

The class aimed to present the subject to the students, as well as set up the working groups, deciding their respective leaders.

### **September 8<sup>th</sup>**

#### **Koshiho Farm**

We participated in field activities to learn about the main cultivation methods of traditional Japanese agriculture. We planted vegetables such as turnip and beets. Weed control was also carried out on peanut, shiso and millet crops.

In the afternoon, we visited a nashi plantation. We learned about the different varieties (Kosui, Hosui and Akizuki), as well as the seeding and harvesting time for each variety.

The farmer also talked about all the necessary precautions for the typhoon expected for the next day. This explanation was important to prepare our CIEP Final Presentation which title was “Rice Management, Risk Management”.

### **September 9<sup>th</sup>**

On this day, a visit was conducted through the Central Pear Sorting Facility. We could observe all the production from 150 different producers that were selected, classified and packed.

In the beginning, we saw the boxes assembly line where one box is set up in less than 5 seconds. This assembly line was connected to the size classification line.

In the production line, a size classification system separates and packs the fruits in 5 different boxes depending on their sizes:

- 9 Nashis (Biggest fruits size)
- 10 Nashis
- 12 Nashis
- 14 Nashis
- 16 Nashis (Smallest fruits size)

Finally, another machine the boxes closes and divides the boxes in 5 different platforms depending on the fruit sizes.

In the afternoon, we visited Plant Factories where we learned about the most innovative technologies in the food production system, including:

- Stacked plant production (space optimization)
- Temperature and Humidity Control
- CO<sub>2</sub> and O<sub>2</sub> Control
- Lightwave Control

## **September 10<sup>th</sup>**

### **Visit NODAI's Atsugi Campus**

There were a presentation about Atsugi Campus and a lecture about Soils in Japan. Later, we visited NODAI's Isehara Farm and many different crops were presented:

- Cassava - *Manihot esculenta*
- Pepper - *Capsicum baccatum*
- Apple - *Malus domestica*
- Plum - *Prunus domestica*

In the afternoon, the visit was to the Kanagawa Farm where greenhouses and some technological equipment were presented:

- Red colored net (bugs are not able to see the red color)
- Sticky traps for biologic control
- Temperature and Humidity Control System
- CO<sub>2</sub> and O<sub>2</sub> Control System
- Data Analysis – Software (“IT”) used to monitor the greenhouse's condition and rate of plants growth

## **September 11<sup>th</sup>**

We had a lecture about “Climate and Soil” by Professor Suzuki, who talked about soils Physics, more specifically, about his experiment conducted in Ethiopia.

Next, we had a lecture about Food Value Chain by Professor Itagaki, who explained about all the steps of Agricultural Economic Chain.

On the afternoon, we started the Group Work with some orientation for projects development, including:

- Problem detection
- Search for data

## **September 12<sup>th</sup>**

### **Lecture 6: Environment and Agriculture in Asia**

### **Lecture 7: Sweeteners and Taste Modifiers (Professor Hattori)**

In the afternoon, the Group Work continued by deepening the following aspects:

- Problem Analysis by Answering 4 questions:
  - Where are we now?
  - Where do we want to be?
  - How do we get there?
  - How to stay there?
- “Problem tree” elaboration
- “Solution tree” elaboration
- Power Point preparation

All these steps were really helpful to develop our ideas about the risk management in rice crops in Japan. Since the Japanese agriculture is based on small rice lands, the group went through some solution ideas to make it a more profitable and sustainable system:

- Change Crop Insurance Payback Rates: The most suitable areas for rice production (with lower incidence of natural disasters) would guarantee a greater insurance payback.
- Frost-Tolerance Breeding Program: This solution concerns about the development of more cold-resistant varieties to the Northern farms in Japan, where we can find a lower natural disasters incidence.
- Knowledge Extension: This suggestion is linked to a periodic disclosure on natural disaster predictions linked to the main methods for the rice crops protection.

## September 13<sup>th</sup>

The presentation was concluded that day, with subsequent presentation of each group. The activity was really useful for learning steps of project design. As well as to interact with some aspects of Asian agriculture, focusing on Japanese agriculture. Seeing all the groups presentation was also very valuable to learn from a bigger picture about the Japanese agricultural context.



## 2019 Re-inventing Japan Project (Short-Term)

### RJP Final Report

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The Short-Term Reinventing Japan Program happened in ERECON, an international non-profit organization located in Mashida - Tokyo. We learned about ERECON's acting in different countries such as Thailand, Cambodia, Philippines and Nepal since it became a NGO in 2000.

The activities comprised some trainings about Pellet Compost and Liquid Fertilizer as well. After the slides presentation we had the chance to a practical experience, producing them with our own hands. While some students made the compost mix, other students assembled the machines parts to mold the pellets. It was a nice experience to learn a new way of making composts, since this technique allows the compost stay for a longer time in the soil, prolonging its benefits. Then we could visit Tokoji temple and see its architecture and history as well.

In the afternoon we walked a trail in Satoyama village. We went through the rice, Kuri and green tea crops, where we observed different cultivated plants and also the community dynamics that seemed very united and cooperative.

Both of those experiences were really enriching to know a bit more about Japanese agricultural context and made me more interested about its behavior.



## **2019 International Students Summit**

### **ISS Final Report**

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The International Students Summit happened on September, 16 to 21 gathering 20 different countries to discuss about aspects on Sustainable Agriculture from an international view point. The event was comprised of classes, field trips, presentations and discussions about the subject.

#### **September 16**

Field visit to Kosuge village region, where students could understand the progress of this rural community, as well as the main challenges it faced. Since this is an area with declining rural population (714 people), the main challenge presented was to understand its dynamics and to reconsider the traditional way of producing food.

This was a valuable exchange to understand the traditional Japanese agriculture before beginning the Group discussions.

#### **September 17**

In the morning, we could attend to advisors' lectures:

##### **Session 1:**

- **Sustainable Pest Management Practice in Conventional Agriculture Production**  
(Dr. Ming-Yi Chou, National Chung Hsing University - NCHU)
- **Proteomic Analysis of *A. dentata* leaves submitted to *H. bipunctalis* attack**  
(Dr. Reginaldo Alves Festucci Buselli, Federal Rural University of Amazon)
- **Current State of Livestock Sector in Mongolia and Community-Based Resource Management**  
(Dr. Tserennadmid Sukhtulga, Mongolian University of Life Sciences - MULS)
- **The Energy-Water Nexus**  
(Dr. Les Lavkulich, The University of British Columbia - UBC)

##### **Session 2:**

- **The Development of a Minimum Income Standard for Remote Rural Scotland**  
(Dr. Amanda Jayne Bryan, University of the Highlands and Islands - UHI)
- **Teaching/Research/Extension Development and International Cooperation**  
(Dr. Partap Singh, Chaudhary Charan Singh Haryana Agricultural University - CCSHAU)

- **The Agroexporting Boom – Blueberry Case**

(Dr. Liliana Maria Aragon Caballero, Universidad Nacional Agraria La Molina)

- **Protecting Producers' Associations and Farmers' Cooperatives in Value Chains from Climate Change Hazards: The Use of BCP**

(Dr. Salvador P. Catelo, University of the Philippines Los Banos - UPLB)

Next, the Group Discussions were carried out during the afternoon, dividing all the participants by Sessions:

- Agriculture.....Group A, Group C, Group E
- Environment.....Group B, Group G
- Food.....Group D
- Education.....Group F

This division allowed a more focused discussion on the problems faced by each presentation. Then we sought to unite common problems, challenges and possible solutions for the entire session.

### **September 18<sup>th</sup> and 19<sup>th</sup>**

Thereafter, discussions continued on a broader scale, bringing together a representative from each session to re-discuss the common problems, challenges, and solutions. This work method was valuable in ensuring a more effective reasoning line, thinking from local to global issues.

Each student's presentations took place in parallel on September 18 and 19 in two different rooms, with representatives from a single session. Students not currently presenting were able to choose which session to attend. Personally, it was an enriching experience to improve my public speaking ability and to look after new ideas for sustainability from many countries as well.

### **September 20<sup>th</sup>**

All the students participated in the next year's theme discussion. This was an opportunity to listen and expose different points of view about the next theme. Based on a provisory theme proposed by a smaller group, everyone was encouraged to share their ideas on the subject.

### **September 21<sup>th</sup>**

The students rehearsed the presentations completed by each group at Yokoi Hall. In the afternoon the Overall Session happened, successfully concluding the event. This meeting was valuable to see all the groups conclusions and to think about the general conclusions and the next year's theme. In this moment, I really felt the greatness of this event and the impact of our thoughts gathered in a common direction to achieve a bigger goal: "Linking Actions, Research and Education in Agricultural Value Chains to Achieve Environmental, Social and Economic Sustainability".

I would like to thank, immensely, for the opportunity Tokyo University of Agriculture has given me during these three programs. It was an amazing and unforgettable experience for both personal and professional life. I hope to be able to retrieve all of this in the future by working for more sustainable agriculture in the Brazil-Japan interface.

ありがとうございました。

