

## **Sustainable Agriculture, Creation of Family Orchards as an Alternative to Generate Food Security in Mexican Rural Communities**

2017 Re-inventing Japan Project (Short-term)  
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I am currently a senior student of the degree in agronomic engineering specialist in plant breeding, at the Autonomous University Chapingo and for some years I have been participating in a constant and active way in many academic activities and extra class in benefit of my personal, academic and professional.

Passing through courses, workshops, conferences, lectures, talks, study trips, etc .. Because of that, I sought the opportunity to participate and generate an experience of cultural exchange and knowledge in another country different from mine in order to interact with members of other universities, to be able to see, analyze and understand the different aspects that intervene in the sustainable production system,

this in order to prepare me in a comprehensive manner and be able to generate a positive impact in my country, I am aware that Mexico is a country with extraordinary potential and a unique biological and cultural diversity, however, it is necessary to support the sector located in the zones rural areas of my country (mainly) do not have food and economic support; that is why I have been motivated to participate in the ISS as a way to be part of an international exchange of ideas, and to be able to contribute knowledge through my experiences that can be useful for other societies.

I firmly believe that I can learn and have acquired elements that will help me carry out my ideas to the field of life, initiating, motivating and inspiring with my own example hand in hand with education and respect.

Due to a series of regrettable events in my country (Mexico) on September 7 and 19 of this year, I arrived on September 24 at night in the city of Taichung, Taiwan.

For the night of the same day I settled in my room; Later I met with my session partners, to be able to make some details of our work and make improvements to the previous general discussions that had taken place during my absence.

As of September 25, I was present at the NCHU Library International Conference Hall and I attended sessions 1 and 2, corresponding to the fields of education and food security, respectively.

At the end of the presentations I was in presentation of posters outside the conference room.

At night, I met with my session partners to discuss final details about the results and conclusion in our writing and in our group presentation.

On September 26, I started and continued session 2 (food security) in the conference room, where I relied my presentation and talked about Sustainable Agriculture and the Creation of Family Gardens as an Alternative to Generate Food Security in Mexican Communities.

Then I was present during the presentations of sessions 3 and 4, where agriculture and development were discussed, respectively.

To continue with the event, session 5 was held, which was the general discussion phase, members of the different sessions represented the work teams. The general discussions and the theme for the next 18th ISS were made.

Finally, the opening ceremony was held.

The presentations were of great importance because when I was present, I shared a specific topic and, like me, others presented important issues that when put together we can all have an impact on some of the pillars of sustainable agriculture.

The learning that I took from the 17th ISS, was done through three very important stages, the first was my preparation prior to the event, the second was performing the analysis and discussion with my colleagues in the session and the third to be present in the presentations of my colleagues.

September 27, I took off to Taichung, Taiwan to Tokyo, Japan, where we were received from Azael May.

On September 28, the coordinator Azael, introduced himself and welcomed us to the university. Then he took us (5 students and me) to take a tour of the University of Agriculture in Tokyo, visited departments, and in one of them we received a talk about the history of landscaping, then we visited the department of Bioscience and Professor Yoichi Sakata He explained the activities that take place inside his laboratory. Later we received an intensive class of basic phrases in Japanese, by the coordinator Naomi Yamada, with whom we did various activities to reinforce the knowledge.

On September 29, we had three classes: the first about the adverse factors for production on a Japanese island, the second class was given by Prof Yoichi Sakata, with the theme Signal Transduction in plants -Phytohormones- and the last one kind of social interaction.

From September 30 to October 2, I trained in "Evaluating Agricultural Development Projects for SDGs" taught by the Institute of Environmental Rehabilitation and Conservation (ERECON), as part of the Re-inventing Japan Program.

The first day the coordinator took us to Odaiba, where the GLOBALFESTA JAPAN 2017 was held, in which we met with representatives of ERECON, who helped us to make a tour of the different areas of the festival. In the afternoon, we met again at the ERECON stand to talk about the projects that were found to be most relevant and interesting.

For the next day, we were asked to look for and choose a topic of interest within those presented at the festival, I observed many projects, the vast majority had something in common, improve the quality of life of people, from the support to the education in children, even support feeding adults.

The next day (October 1) we were for the second day at the Festival, now with the objective of finding information, comparing and carrying out a project to be exposed the next day. At the end of the day we also met and discussed what was seen at the festival. At the end of the activities we made a recreational tour.

On October 2, we went with our coordinator Azael May to the offices of ERECON, where we finished developing our theme to present and for half a day we had finished presenting and discussing the topics discussed between ERECON representatives and students. Being learning during these two days with ERECON through a great festival, makes me think about the way to propose a project, since it is very important to analyze the impact that it will have and the costs of the project, to be able to define the feasibility of the projects and know if it should or should not be carried out.

During the week of the Re-Inventing Japan Program, I generally met the Tokyo Agriculture University, facilities, students and teachers, I received classes in which I learned basic concepts of Plant Physiology and reinforced knowledge related to the functions of hormones vegetables, in addition I learned some basic phrases in Japanese. With the GLOBALFESTA JAPAN 2017 held in Odaiba, I learned about the different actions that governments, institutions, organizations and social groups are carrying out in support of food sovereignty, through specific support programs, such as food support and education for children in poverty, food support for unprotected women and families, and in particular, the people of the countries most affected by wars and areas of conflict are being supported. A festival like this, where we can find an extraordinary cultural diversity helps the organisms to spread the actions that are being carried out and promotes the empathy and solidarity of the people who are not yet involved. The festival was a great opportunity to interact with a large number of people, from students, teachers and entire families. Within the festival were found several areas and in most of them I was able to communicate thanks to the English language that most people dominated.

On October 3, we met a temple that was built and rebuilt in honor of a King. Then we met a wonderful park with incredible gardens and landscapes to reflect on. At the end, we met the museum of the university, this time it was dedicated to chickens. In the afternoon, the closing ceremony was held, where students from the university, students of the RJP, students of academic exchange, coordinators and professors of the university were present.

The next day (October 4), we started back to our different destinations, in my case: Mexico.

Having had the opportunity to be present and participate in these two programs for almost two weeks, helped me to understand a culture different from that of my country, now, on my return I shared with my colleagues and teachers and family my pleasant experience, the order, discipline and respect is extraordinary, as a result you can observe a highly efficient and beautiful population. Taiwan and Japan are two large nations with solid foundations that are strongly driving sustainability, from their agricultural fields, to the most advanced technology in the most populated cities. However, they have lived a series of events that have prepared them to be stronger, more authentic, more intelligent. And today what integrates Japan and Taiwan is its people.

After participating in these programs (17th ISS and RJP), I was able to visualize other points of view on how to contribute to food security, is not only food, but also education in families and technological development.

I made very valuable friendships with whom I shared views and ideas about agriculture and its position in the future.

I reaffirmed the importance of agriculture as a process of agricultural production.

I learned through the presentations of other students and teachers the utility of recycling waste of food and how to use these "wastes".

I knew agriculture from other countries, as from Asian countries mainly and the relationship they have with some specific crops that are part of the food base, such as rice, for example.

I learned that there are mobile applications to facilitate some agronomic practices and that can enhance the development of crops, and these applications can be created by students, which makes it an incredible opportunity for the participation of young people in the field of agricultural technology development.

I knew relevant aspects of agriculture in Sri Lanka and Thailand.

I also recognized the role that college students play and could play with community practices in favor of agricultural sustainability.

I learned other ways to get food and fuel natural resources like water, through the aquaculture production system, for example.

I learned about the processes of organic certification with small producers, with the participation of the University of Putra Malaysia.

I also learned how universities contribute to the problem of agricultural promotion and development in populations.

On the other hand, the creation and use of bio-fertilizers is an extraordinary option to potentiate organic yields of our crops, it also prevents the appearance of pests and reduces the attack of diseases.

The program was of great importance because in my academic program we emphasized the importance of conventional and intensive agricultural systems, and in this event, a very important theme was emphasized: sustainable agriculture, which is increasingly important due to the knowledge it envisages and the results he gives.

At present, sustainable agriculture is no longer an option, and these two programs have been a reinforcement of knowledge for my academic training, I am sure they can be part of my pillars for my future academic and professional practices.

I am about to graduate, I am passionate about the field and I am sure that I will be able to carry out my tasks taking into account acquiring knowledge such as the creation and application of bio-fertilizers, the application of biological products as the best option to combat pests and diseases, all this pro to improve the production of healthy foods in my community and to promote a sustainable agriculture through the example in the Mexican rural communities.

Unfortunately I did not arrive from the beginning of the program of the 17th ISS due to force majeure, however I would like to comment that it is important to emphasize the realization of field trips, to have a more real approach with the farmers, to obtain valuable information first hand and

therefore at the end of the field days, to obtain a field report (in pairs, teams or individually) of what farmers need in the field, in order to promote objectives with greater social impact and to obtain beneficiaries when proposing high-impact global ideas in the farmer's fields. In addition, foreign students could hold talks or discussion tables with local students to have closer interaction with a clear target.

Thank you very much International Student Summit, Tokyo University of Agriculture and National Chung Hsing University.

