

Final report

AC21 special project fund (SPF) 2020: International Joint Workshop on bioagricultural technology for natural and environmental disasters.

Introduction

This joint workshop on “bioagricultural technology for natural and environmental disasters.” was held with the participation of two AC21 members (Nagoya University, Japan, and North Carolina State University), and a non-AC21 member (Gifu University). The workshop was organized on site by Nagoya University on November 9-10.

The workshop was planned to be held in fall 2020 but because of the corona pandemic it has been postponed two years to be held on-site as a major objective was to get together early career researchers to initiate new collaborations.

The objective of this workshop was to gather researchers to share recent results in the field of crop science, plant stress and pathology, soil science, microbiome, crafting, and data science. In addition, another objective was for researchers to meet in person and possibly develop new collaborative research. The workshop was held on November 9 in the morning and November 10 the whole day and organized by Nagoya University.

November 9 afternoon, a visit to traditional Japanese fermented food producer in Ena, Gifu (next to Nagoya) was organized.

The participants from North Carolina were sponsored for their travelling expenses of three researchers from North Carolina State University, local transportation, meals and activities. In addition, the AI2EAR program (International Collaboration to Accelerate Integration of Engineering, Plant Sciences, and Agricultural Research using Artificial Intelligence) support the travel of two young researchers from North Carolina State University.



Summary of activities:

A total of 15 presentations were planned. Presentations were done by 5 presenters from NC state, 1 presenter from Gifu university, and 9 from Nagoya University. We also gave the opportunity to 4 early career researchers to present their recent results. Audience was between 20-30 presenters, faculty staffs, graduate students per presentation. Presentation were 25 minutes plus 5 minutes discussion. The program, presentations list and abstract book is attached as appendix.





On November 9th, a visit of traditional fermented food production companies in Japan was organized. A miso brewery (Maruko Jozo, Ena), a Japanese sake (Iwamura brewery, Ena), and an old traditional farm were visited. Participant could see how traditional fermented food are still produced in Japan.



Outcome of the workshop:

1. Young researchers, from graduate student to associate professor level, could present and share their latest results.
2. Participant could get together and discuss the problems related to crop science, plant pathology, soil science, and agricultural engineering.
3. Two new research collaborations, one on plant stress resistance and the second on crop science, between North Carolina State University and Nagoya university researchers have been set-up and started thanks to the workshop. One of the research collaborations is now supported by a research fund and an application for research support has been submitted for the second collaboration.

Conclusions:

The present workshop has been very effective and reached its major goals that were to get young researchers from AC21 members to know each other, present and discuss their research and latest results. Most importantly, the present AC21 workshop has proven to be to be very efficient as two new research collaborations have been established between young researcher from AC21 members. These new research collaborations held by young researchers will help to strengthen the relationship between AC21 universities in the long term and promote the exchanges of students and researchers.