



8th UC Graduate Forum

Maejo University (MJU), Chiang Mai, Thailand
18 – 19 May 2023

Concept Note

Future of Agriculture Sustainability: Organic Intelligent Agriculture #FOA2023

Maejo University (MJU), in collaboration with the Southeast Asian University Consortium for Graduate Education in Agriculture and Natural Resources (UC), is organizing the 8th UC Graduate Forum with the theme, "*Prospect of Agriculture Sustainability: Agroforestry, Precision Agriculture, Smart farming, and Innovative Agri Products*" on 18-19 May 2023.

Rationale

The world is currently facing significant challenges that threaten the sustainability of food and agriculture systems, as well as the livelihoods of countless family farmers. These challenges include natural resource depletion, the detrimental impacts of environmental degradation (such as desertification, drought, land degradation, water scarcity, and biodiversity loss), an ever-increasing global population, and the ongoing effects of climate change.

These global concerns pose a serious threat to achieving the right to enough food and the fundamental right to be free from hunger. Despite ongoing efforts, hunger remains a persistent challenge for humanity, with an estimated 815 million people currently suffering from chronic malnutrition. To meet the projected demand from a population of nearly 10 billion people in 2050, agricultural production will need to increase by nearly 50% compared to that of 2012. However, most of this increase must come from family farmers who handle around 75% of global farmland and produce 80% of the world's food, yet often struggle with poverty and food insecurity themselves.

Agriculture and food production is at the foundation of the 2030 Sustainable Development Agenda, from reducing poverty and hunger to responding to climate change and conserving natural resources. In this framework, innovation will be the primary factor in transforming farming practices, lifting farmers and ranchers out of poverty, and assisting the globe in achieving food security, sustainable agriculture, and the SDGs.



Future of agricultural sustainability

A new strategy is a means by which individuals or organizations introduce new or existing products, processes, or organizational structures within a specific framework to improve performance, competitiveness, resilience, and sustainable development, ultimately contributing to food security and nutrition, economic growth, and sustainable management of natural resources.

Agriculture innovations encompass all aspects of the production process, including agricultural, forestry, fisheries, and livestock production, as well as resource and system performance, organization, and market access. Some examples of innovation include developing new crop varieties, combining traditional techniques with modern scientific knowledge, implementing advanced pest control and post-harvest practices, and finding innovative ways to connect with consumers and increase profitability.

Entrepreneurship is not just technology but also social, economic, institutional/organizational, and traditions essential to improving the livelihoods of family farmers. To foster innovation, it is vital for the government, in partnership with civil society organizations, farmer groups, and large corporations, to create an enabling environment that connects these diverse stakeholders, strengthens their capabilities, and provides opportunities. Research and extension are likewise critical components in creating this environment.

The 8th UC Graduate Forum's conceptual model centers on promoting economic success, improved living conditions, a better quality of life, and advancement of individuals from developing nations through the enhancement of agronomic systems that take into account the impacts of climate change and the integration of new sensor and IoT technology to manage farms. The forum also aims to provide opportunities for participants to explore ways to improve agricultural production in the face of climate change, by utilizing smart farming techniques. The forum aims to empower both children and adults with the necessary skills and knowledge, not only to manage day-to-day tasks but also to adapt to the changing environment, particularly in addressing environmental concerns.

Main Theme:

Future of Agriculture Sustainability; Organic Intelligent Agriculture

Sub-theme I: ***Smart Agriculture Technologies: Precision Agriculture, Vertical Farming, and Innovative Agri-Products***

Sub-theme II: ***Sustainable Agricultural Management: Biotechnology, Agroforestry, Agro-Tourism, Community Based Tourism***

Sub-theme III: ***Organic Intelligent Agriculture: A Way towards Ancient Farming Practices***

Sub-theme IV: ***Digital Agro-Economy: BCG Model, Digital Economics and Farm Management***



Call:

1. Each UC member university is invited to endorse up to **four (4) graduate students** who will present in any of the sub-themes. Preferably, there should be one graduate student from a UC member university per sub-theme. Since the accommodation will be two in a room (sharing), the universities may also opt to send a combination of two (2) males and two (2) females or all males or all females so the organizer may group them per gender for their comfort. The UC Coordinator will submit the names of the nominees and contact information (email address), title of paper, and sub-theme where the nominee will present to ucgf_mju2023@mju.ac.th not later than **28 March 2023**.
2. Endorsed graduate students should:
 - a. Have a passport that is valid for another six months before the departure date.
 - b. Be fully vaccinated with at least one booster shot received; Full vaccination refers to receiving the 2nd dose series or single dose vaccine for more than 14 days prior to departure from country of origin. Participants must secure the official Vaccination Certificate of their home country.
3. The abstract and presentation of the students should be in English.
4. **Deadline** of abstract submission to ucgf_mju2023@mju.ac.th is on **13 April 2023**.

UC Support:

1. The UC will reimburse the cost of airfare (economy; most direct route) and travel insurance of the endorsed participants to the Graduate Forum (4 students per university).
 - a. Endorsed graduate students should email their flight itinerary and official receipts to gsid@searca.org until 20 April 2023.
 - b. Original used boarding pass and receipts will be collected during the on-site registration.
 - c. Reimbursement may be transferred via bank or in-person at the conference. Inform gsid@searca.org regarding the participants' preference.
 - d. Recommended arrival date is 17 May 2023 and departure date is 19 May 2023 (evening) or 20 May 2023. Program schedule will be provided soon.
2. Accommodation, meals, and airport transfers during the conference will be covered by the UC but arrangements will be made by Maejo University.