



INNOVATIONS IN PLANT AND FOOD SCIENCES IPFS-2025

**PLANT AND FOOD SCIENCES FOR
SUSTAINABLE FUTURE – FROM BENCH TO FIELD**



8-9 NOVEMBER 2025
GINGA HALL,
MORIOKA, IWATE, JAPAN

Organized by:

**The United School of Agricultural Sciences, Iwate University
&
Faculty of Agriculture, Iwate University**



IPFS is a consortium of Seven universities including, The United Graduate School of Agricultural Sciences, Iwate University (Japan), University of Saskatchewan (Canada), Fujian Agriculture and Forestry University (China), University of Dhaka (Bangladesh), Jilin University (China), and Dalhousie University (Canada). The symposium is aimed at facilitating exchange and collaborative research among the faculty members, researchers, and students at these universities.



INNOVATIONS IN PLANT AND FOOD SCIENCES IPFS-2025

**PLANT AND FOOD SCIENCES FOR
SUSTAINABLE FUTURE – FROM BENCH TO FIELD**

Date: Saturday, November 8 through Sunday, November 9, 2025

Venue: Ginga Hall, Iwate University, Ueda Campus+, Morioka, Iwate Japan

<https://ugas.agr.iwate-u.ac.jp/en/schedule/international-symposium-innovations-in-plant-and-food-sciences-ipfs-2025/>

Reception: Morioka Grand Hotel, Morioka, Iwate, Japan

<https://www.m-grand.jp/>

Co-sponsor: Iwate University

<https://www.iwate-u.ac.jp/english/index.html>

Program Committee of the IPFS-2025 Symposium

Chairperson: Dr. Kikukatsu Ito, UGAS, Iwate University

Co-Chairperson: Dr. Abidur Rahman, UGAS, Iwate University

Members:

Dr. Koji Harashina, UGAS, Iwate University

Dr. Yuzi Suzuki, UGAS, Iwate University

Dr. Yasuyuki Kawaharada, UGAS, Iwate University

Dr. Arifa Rahman, UGAS, Iwate University

Registration Committee: Misaki Ito, UGAS, Iwate University

Logistics & Reception: Hiroyuki Ishi, UGAS, Iwate University

International Members:

Dr. Karen Tanino, University of Saskatchewan, Canada

Dr. Yin-Gang HU, Northwest Agriculture and Forestry University, China

Dr. Yiling Miao- Jilin University, China

Dr. Shuang Wu- Fujian Agriculture and Forestry University, China

Dr. Balakrishnan Prithviraj- Dalhousie University, Canada

Registration of Participants

Registration time:

Nov 8, 2025: 8:30 am- 4:00 pm

Nov 9, 2025: 9:00 am- 12:00 pm

Registration fee for domestic faculties and professionals : 3,000 ¥

Registration fee for students : free

Registration fee for overseas participants: covered by IPFS-2025

※ Registration fee will include symposium materials, two lunches and drinks. The fee will be collected in cash during registration hours on November, 8-9, 2025.

Reception:

November 8, 2025: 6:30 pm- 9:00 pm, The Morioka Grand Hotel, Morioka (There will be a shuttle service from the symposium venue to hotel. The shuttle will depart from Building #1 of faculty of Science and Engineering at 18:10)

Reception fee for faculties and professionals: 10,000 ¥

Reception fee for students: 5,000 ¥

Reception fee for overseas participants- covered by IPFS

※ The fee will be collected in cash during registration hours on Nov 8, 2025.

Lunch

Lunch time:

Nov 8, 2025: 12:00 pm-12:30 pm

Nov 9, 2025: 12:00 pm-12:30 pm

Lunch will be served on the second floor of Ichiyu Kaikan, close to Ginga from 12:00 pm. We will prepare lunch boxes and drinks for all participants. Please refrain from bringing the lunch inside the Ginga Hall.

Drink Service during the Symposium

There are coffee and tea breaks between each session. We will serve free drinks and small snacks at the lobby of Ginga Hall. However, you are requested not to bring the drinks inside the Ginga Hall.

Guide Map



Access to the Ginga hall, Iwate University from Morioka train station

By bus

Morioka Station East Exit 11 bus stop (Iwateken Kotsu, Buss No. 307) → Ueda Yonchome (12-15 min), 270 yen (¥)/ person
a 4-min walk from Ueda Yonchome bus stop to the Ginga hall.

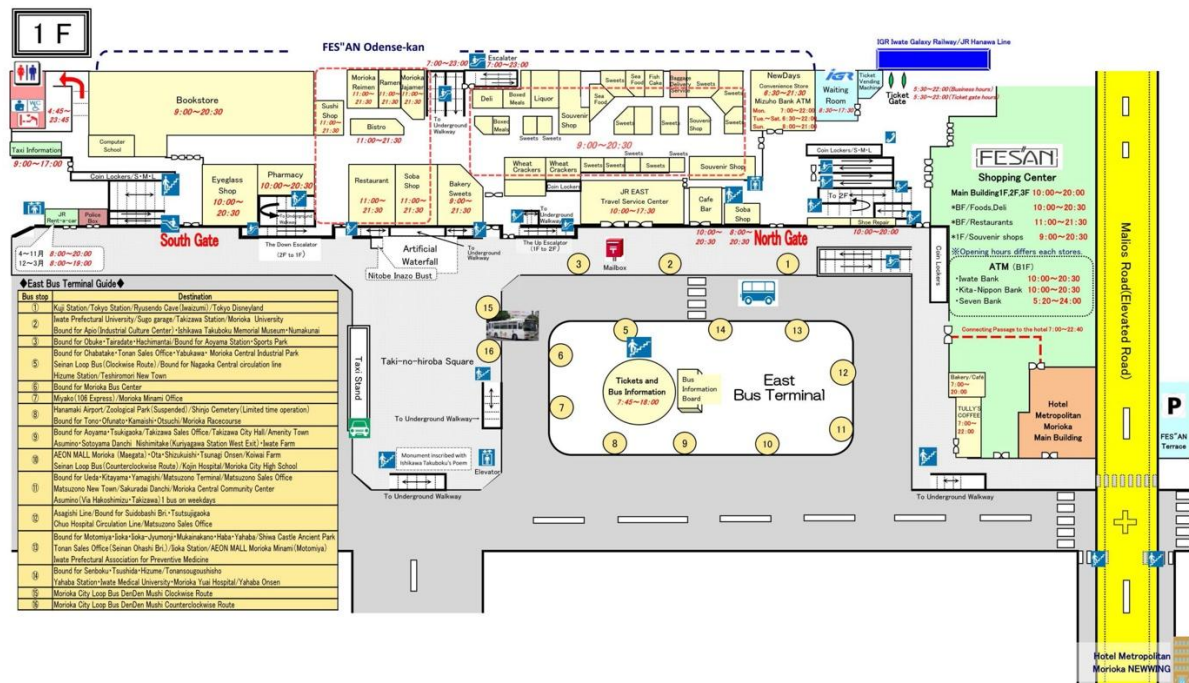
[Bus Schedule]

07:20, 07:35, 07:45, 07:55

08:05, 08:15, 08:25, 08:32, 08:42, 08:52

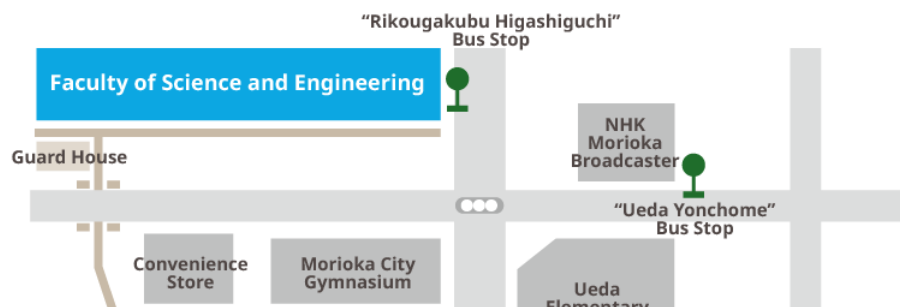
09:02, 09:12, 09:22, 09:37, 09:52

[Morioka Station East Exit 11 bus stop]



Bus station to get off

[Ueda Yonchome]



By taxi

Your hotel to faculty of Science and Engineering, the Ginga hall, Iwate University

Around 10 min, 1,000 to 1,500 yen (¥)/taxi

On foot

Morioka Station to the Ginga hall, Iwate University

Around 40 min. Please check google map helping for you.

Oral Presentation

For keynote speakers, the allocated time of the presentation is 20 minutes which includes question and answer session. We would appreciate if you please plan your talk within 15-16 minutes and keep the rest of the time for question-and-answer session. For other oral presentations in the sessions, the allocated time is 15 minutes including the question-and-answer session. We would appreciate if you please plan your talk within 12 minutes and keep the rest of the time for question and answer session.

For the young scientist's session, the allocated time is 10 minutes including the question-and-answer session. Please plan your talk within 8 minutes and keep the rest of the time for question-and-answer session. Two best oral presentations will be awarded.

Poster Presentation

The main goal of the poster session is to gain a maximum benefit from the scientific work presented and to create a lively interaction between poster authors, judges (experts in the field) and interested symposium participants.

Poster session

Poster session will be held on Saturday, Nov 8, 2025 (12:30-14:25) and Sunday, Nov 9, 2025 (12:30 – 14:00).

Core time for poster presentation:

Nov 8, 2025 (12:30-14:25)- odd numbered posters

Nov 9, 2025 (12:30-14:25)- even numbered posters

The presenter should be present in front of the poster during this time. Since best three posters will be awarded, the judges will walk around the posters and ask questions to

the presenters. Please prepare yourself for a 5 min presentation and 3-5 min question-and-answer session.

Poster Size and Preparation

Please prepare your poster with A0 size paper (841 x 1189 mm). Symposium committee will provide the presenter with the poster number before the symposium. Poster boards will have numbers on it and the presenters are requested to mount their posters accordingly. Push pins for mounting the posters will be provided.

To prepare the poster, use a clear typeface. The poster should be readable from a distance of 2-3 meters. This means that all lettering should be at least 8 mm high. Graphs and diagrams should be drawn with a minimum line width of 1 mm. Please use proper color contrast.

Mounting and removing the poster

Please mount the poster by 11:00 am of Nov, 8, 2025. Please remove your poster by 15:00 pm of November 9, 2025. If posters are not removed within the time for dismantling, your poster will be removed and disposed of.

Venue for poster session

Poster session will be held on the 2nd floor of Ginga Hall.

Free Wireless LAN service

Free wireless LAN connection will be available in Ginga Hall

The ID and check the password will be provided at the reception desk during the symposium.

Program

Day 1- Saturday- November 8, 2025

8:30-16:00- Registration

9:30-9:35- Opening Remarks- Dr. Kikukatsu Ito- Dean, The United Graduate School of Agricultural Sciences, Iwate University and Chair of the IPFS-2025 Organizing Committee.

Session 1: Developmental regulations in plants

Session Chairs: Dr. Kikukatsu Ito and Dr. Abidur Rahman

9:40-10:00- S-1-1K- Dr. Bunyamin Tar'an- **(Keynote Speaker)** (USask)- Accelerated genetic improvement of flax

10:01-10:16- S-1-2O- Dr. Yuji Suzuki- (UGAS, Iwate University)- Effects of genetic manipulation of the Calvin–Benson cycle on photosynthesis in rice

10:17-10:32- S-1-3O- Dr. Yiling Miao- (Jilin University)-Genome-wide analysis of rice panicle development

10:33-10:48- S-1-4O- Dr. Linzhou Huang- (NWFU)-Starch metabolism contributes to the plasticity of rice plant architecture through modulating shoot gravitropism

10:50-11:25- Break

11:26-11:41- S-1-5O- Dr. Bin Li- (Jilin University)-The role of tomato SNARE proteins in regulating growth and development and response to low temperature stress

11:42-11:57- S-1-6O- Dr. Yasuyuki Kawaharada- (UGAS, Iwate University)- Molecular regulation of symbiotic nodulation through interactions between the legume and *Rhizobium*

12:00-12:30- Lunch Break

12:30-14:25- Poster presentations (Odd number)

Session 2: Biotic and abiotic stress responses in plants

Session Chairs: Dr. Arifa Rahman and Dr. Yuji Suzuki

14:30-14:50- S-2-1K- Dr. Yin-Gang Hu- **(Keynote Speaker)** (NWFU)- Improving drought resistance in bread wheat

14:51-15:06- S-2-2O- Dr. Bill Biligetu- (USask)- Improving salt stress resistance in alfalfa: integrating genomic insights with Breeding Strategies

15:07-15:22- S-2-3O- Dr. Qian Chen- (FAFU)- Viruses hijack salivary proteins of insect vectors to achieve transmission and pathogenesis in plant hosts

15:25-15:55- Break

15:56-16:11- S-2-4O- Dr. Chengguo Jia- (Jilin University)- SINAC12, a key regulator of salt stress tolerance and leaf senescence in tomato

16:12-16:27- S-2-5O- Dr. Karen Tanino- (USask)- The continuing journey into exploring the role of barriers in plant survival

16:28-16:43- S-2-6O- Sophie Anne Duchesne (USask)- Analyzing heat resilience in interspecific chickpea: a genetic and phenotypic approach for breeding

16:43-16:59- Break

Session 3: Young Scientists Session-1

Session Chairs: Dr. Yasuyuki Kawaharda, Dr. Karen Tanino

17:00-17:10- YS-1-1O- Dr. Federica Higa- (USask)- Reduction of off-flavours in flaxseed proteins using adsorbent resins during protein extraction

17:11-17:21- YS-1-2O- Kalhari Manawasinghe- (USask)- Exploring the impact of canopy architecture on drought and heat stress resilience in spring wheat (*Triticum aestivum*)

17:22-17:32- YS-1-3O- Dezheng Liu- (NWAUFU)- Mining genomic regions associated with stomatal traits and their candidate genes in bread wheat through genome-wide association study (GWAS)

17:33-17:43- YS-1-4O- Botian Zheng- (Jilin University)- Transcriptomic analysis reveals a regulatory network and significance of VcWOXs during adventitious root formation in blueberry

17:44-17:54- YS-1-5O- Yihan Men- (NWAUFU)- N6-methyladenosine RNA modification regulates transcriptional and metabolic responses in wheat to drought stress

Banquet- 18:30 at The Morioka Grand Hotel (There will be a shuttle service from the symposium venue to hotel. The shuttle will depart from Building #1 of faculty of Science and Engineering at 18:10)

Day 2 – Sunday, November 9, 2025

9:00-12:00- Registration

Session 4: Food Science and Nutrition

Session Chairs: Dr. Ahmad Al-Mallahi and Dr. Shu Taira

9:30-9:50- S-4-1K- Dr. Akira Nishimura- **(Keynote Speaker)** (UGAS, Iwate University)-
Inhibitory mechanisms of proline utilization in yeast: A step toward proline-free wine

9:51-10:06- S-4-2O- Dr. Takuji Tanaka- (USask)- Value addition on the agriculture products
towards sustainable food and feed supply

10:07-10:22- S-4-3O- Dr. Shu Taira- (UGAS, Iwate University)- Theanine derived from tea
leaves modulates monoamine metabolism: a single-hair analysis

10:23-10:50- Break

10:51-11:06- S-4-4O- Dr. Ahmad Al-Mallahi- (Dalhousie University)- Creation of potato leaf
samples under indoor conditions and using bio stimulant for nutrient sensing development
based on machine learning

11:07-11:22- S-4-5O- Dr. Pattama Wiriyasermkul - (UGAS, Iwate University)- Deciphering
human transport systems for micronutrients and bioactives from foods

11:23-11:38- S-4-6O- Dr. Chunhong Yuan- (UGAS, Iwate University)- Advances in precision
quality control technologies for seafood: insights from shellfish studies

11:40-12:30- Lunch Break

12:30-14:25- Poster presentations (Even number)

Session 5: Young Scientists Session-2

Session Chairs: Dr. Takuji Tanaka and Dr. Pattama Wiriyasermkul

14:30-14:40- YS-2-1O- Shangyi Xu- (USask)- Chemical structure and functionality of
polysaccharide from *Dictyophora indusiata*

14:41-14:51- YS-2-2O- Hao Chen- (Jilin University)- Deubiquitinase ZmUBP5 is essential for
maize kernel development

14:52-15:02- YS-2-3O- Yosuke Akiba- (Iwate University)- Elucidating the molecular
mechanism of auxinic herbicides, dicamba and picloram in *Arabidopsis thaliana*

15:03-15:13- YS-2-4O- Qifan Guo- (NWAUFU)- Genetic and molecular basis of ABA response in wheat seedlings shared with mature-stage drought tolerance revealed by integrated GWAS and transcriptomics

15:15-15:30- Break

15:31-15:41- YS-2-5O- Li Zhe- (NWAUFU) Genome-wide association study of novel genetic loci for cadmium accumulation and germplasm screening for low-cadmium accumulation in common wheat (*Triticum aestivum* L.)

15:42-15:52- YS-2-6O- Xinjie Yu- (USask)- Tapping the flax gene pool: from domestication traits to hybridization barriers

15:53-16:03- YS-2-7O- Yan Yu-(NWAUFU)- Correlation study between canopy temperature (CT) and wheat yield and quality based on infrared imaging camera

16:04-16:14- YS-2-8O- Subarna Sharma- (UGAS, Iwate University)- Robust and affordable root phenotyping approaches for early-stage wheat growth

16:15-16:25- YS-2-9O- Hao Ren- (NWAUFU)- Novel QTLs/genes affecting single stem elasticity, stem strength, and three lodging indices in bread wheat (*Triticum aestivum* L.) identified by genome-wide association

16:30-16:44-Break

Closing session

16:45-16:55- Award ceremony

16:55-17:00- Closing Remarks- Dr. Karen Tanino (USask)

USask- University of Saskatchewan

FAFU- Fujian Agriculture and Forestry University

NWAUFU- Northwest Agriculture and Forestry University

UGAS- The United Graduate School of Agricultural Sciences

Dalhousie University

Iwate University

Poster session

Day 1- Saturday- November 8, 2025

12:30-14:25- Poster presentations (Odd number)

1. **Reo Sato**- The United Graduate School of Agricultural Sciences-Iwate University- Which fertilization component enhances cold tolerance in highly cold tolerant rice varieties “Tohoku PL1-3”, “Ouu PL4,5”?- Estimation of fertilization process using anther morphology-
3. **Md Arafat Hossain** - The United Graduate School of Agricultural Sciences, Iwate University- Nighttime-heating exposure at above ground and below ground; which is more influential on rice yield?
5. **Xiangfeng Wang** - The United Graduate School of Agricultural Sciences and Yamagata University- Regulation of efferocytosis as a key mechanism in the anti-atherosclerotic effects of resveratrol
7. **Yusuke Sawamura**- Dept. of Plant Bio Sciences, Iwate university- Indole-3-butyric Acid (IBA) functions as an independent hormone to regulate the lateral root developmental process in *Arabidopsis thaliana*
9. **Ririko Sato** - Dept. of Plant Bio Sciences, Iwate university- Identification of novel cadmium uptake transporters in *Arabidopsis thaliana*
11. **Satomi Arakida** - Graduate School of Arts and Sciences, Iwate University- Effect of soil inoculation on rice productivity under different soil and water conditions
13. **Takumi Tezuka**- Iwate University- Analysis of the dorsal-ventral axis formation in rice embryos as a model for monocots
15. **Rui Tian** - The Graduate School of Agricultural Sciences, Fukushima University- Temporal variation of GABA levels in tomatoes during ripening in Mori town, Hokkaido
17. **Ayano Miyabayashi**- The Graduate School of Agricultural Sciences, Fukushima University- Administration of Vitamins (A 1 , B 1 , B 6) prevent a Parkinson’s Disease Symptom

19. Maya Matsunami- Iwate University-Effect of two-depth split application of liquid fertilizers on rice root system architecture

21. Soichiro Yamada- Localization Analysis of Toxic Components in Higher Plants Using Imaging Mass Spectrometry (IMS)- Fukushima University

Day 2- Sunday- November 9, 2025

12:30-14:25- Poster presentations (Even number)

2. Issa Ousmane Mamadou - The United Graduate School of Agricultural Sciences, Iwate University- Genotypic variation in phenotypic plasticity of 23 rice accessions: Both root and shoot responses to low planting density

4. Shun Iketani- Iwate university- Potential roles of lipid transport family protein in the cold stress response of *Arabidopsis thaliana*

6. Mahbubah Jannat - The United Graduate School of Agricultural Sciences, Iwate University- *Bradyrhizobium ottawaense* type III secretionsystem mediated compatible and incompatible nodulation in *Vigna* species

8. Tomo Kitabayashi- Dept. of Plant Bio Sciences, Iwate university- Elucidating the response mechanism of tomato roots to cold stress response

10. Rinto Enya- Faculty of Agriculture, Iwate university- Control of seed dormancy using iron-powder coating in rice

12. Yukino Kominami- Graduate School of Arts and Sciences, Iwate University- Yield potential of a BNI elite wheat line under cool climate

14. Manaka Kumagai - Iwate University- Development of high-value-added products from sanriku Sea Cucumbers based on their biochemical characteristics

16. Yuya Kuwaba- The Graduate School of Agricultural Sciences, Fukushima University- Stress Biomarkers in Mouse Fur under Low Gravity Conditions on the International Space Station (ISS)

18. Akane Higuchi- Graduate School of Arts and Sciences, Iwate University- Analysis of the efficacy of phenethyl isothiocyanate on recovery from skeletal muscle atrophy induced by disuse

20. Kotone Yoneda- The Graduate School of Agricultural Sciences, Fukushima University- Visualization of Stress Levels from a Single Strand of Hair Using IMS