The 2nd International Symposium on Innovation of Elite Cereal Crops for Future Agriculture

会议手册



Nov. 13–15th, 2026
Nanjing, China



Second Announcement
The 2nd International Symposium on Innovation of Elite Cereal Crops for Future Agriculture

Cereal crops, including wheat, maize, rice, sorghum, barley, millet and other major cereals, constitute the foundation of global food and feed security and provide essential resources for sustainable agriculture and human development. However, cereal crop production is increasingly challenged by rapid climate change, including rising temperatures, heat and drought stress, cold stress, emerging and re-emerging pathogens and insect pests, as well as soil degradation, and other complex environmental stresses. Meanwhile, the growing global population and increasing demand for high-quality and sustainable agricultural products are creating an urgent need to develop cereal crops with enhanced productivity and nutritional quality, and improved resilience and environmental adaptability.

Addressing these challenges requires the integration of conventional breeding with cutting-edge technologies and multidisciplinary approaches. In recent years, remarkable advances have been achieved in the innovation of elite cereal crops through modern genetics and genomics, germplasm discovery and utilization, integrative multi-omics, genome editing, synthetic biology, crop–microbe interactions, high-throughput phenotyping, artificial intelligence, and other emerging technologies. These advances are providing unprecedented opportunities to understand the genetic and molecular basis of complex agronomic traits and to accelerate the development of next-generation cereal varieties for sustainable agriculture.

Following the success of the first symposium in May 2025, Nanjing Agricultural University is organizing the 2nd International Symposium on Innovation of Elite Cereal Crops for Future Agriculture, which will be held in Nanjing, China, on Nov. 13th-16th, 2026. The symposium will bring together leading scientists, young researchers, breeders, and experts from academia and industry worldwide to exchange the latest discoveries, discuss emerging technologies and challenges, and explore new opportunities for international collaboration in cereal crop research and innovation.

The symposium will feature keynote and invited presentations from internationally recognized scientists, as well as young students. Particular emphasis will be placed on interdisciplinary approaches that bridge fundamental discoveries and practical applications in crop improvement.

We sincerely welcome scientists, researchers, breeders, students, and other professionals from around the world to join us in Nanjing for the 2nd International Symposium on Innovation of Elite Cereal Crops for Future Agriculture and to contribute to the development of resilient, productive, and sustainable cereal crops for future agriculture.

1. Symposium theme

Innovation of Elite Cereal Crops for Future Agriculture

2. Major Topics

(1) Crop Genomics, Genetics and Germplasm Innovation

(2) Molecular Breeding, AI-Driven Crop Science and Intelligent Breeding

(3) Genome Editing and Synthetic Biology

(4) Crop Responses and Adaptation to Environmental Stresses

(5) High-Throughput Phenotyping and Digital Agriculture

(6) Sustainable Cereal Production and Future Agriculture

3. Organizers

Nanjing Agricultural University

Sponsors

China-Kenya Belt and Road Joint Laboratory on Crop Molecular Biology

Jiangsu Collaborative Innovation Center for Modern Crop Production

Jiangsu Genetic Society

State Key Laboratory of Crop Genetics & Germplasm Enhancement and Utilization

College of Agriculture, Nanjing Agricultural University

4. Organizing Committee

Chair: Xiue Wang, Professor, Director of China-Kenya Belt and Road Joint Laboratory on Crop Molecular Biology, Nanjing Agricultural University

Co-Chair: Richard Mulwa, Director of China-Kenya Belt and Road Joint Laboratory on Crop Molecular Biology, Egerton University

Committee:

Aizhong Cao, Dean, College of Agriculture, Nanjing Agricultural University

Richard Mulwa, Director of China-Kenya Belt and Road Joint Laboratory on Crop Molecular Biology, Egerton University

Ganghua Li, Vice Dean, College of Agriculture, Nanjing Agricultural University

Evans L Lagudah, Joint Professor, The University of Sydney

Xiue Wang, Director of China-Kenya Belt and Road Joint Laboratory on Crop Molecular Biology, Nanjing Agricultural University

Mingliang Xu, Professor, China Agricultural University

5. Conference Size

Around 80 participants, including internationally recognized scientists, domestic leading researchers, young scientists, graduate students, and other professionals in related fields.

6. Conference Arrangements

Date: Nov. 13th to 16th, 2026

Venue: Conference Center, Nanjing Agricultural University (Binjiang Campus)

Accommodation: Fengda Hotel, Pukou District, Nanjing, Jiangsu Province, P. R. China, 210000

Conference schedule:

Date	Time	Meeting arrangement
13th Nov., 2026	13:00-22:00	Registration
14th Nov., 2026	08:30-18:00	Opening ceremony, Keynote, and Invited talks
15th Nov., 2026	08:30-12:00	Invited talks, Student presentations, and Closing ceremony
15th Nov., 2026	14:30-17:00	Excursion to Chuzhou Research Base, NAU
16th Nov., 2026	17:00-	Departure

7. Contacts

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Organizers:

China-Kenya Belt and Road Joint Laboratory on Crop Molecular Biology, Nanjing Agricultural University

College of Agriculture, Nanjing Agricultural University

02/11/2026

The 2nd International Symposium on Innovation of Elite Cereal Crops for Future Agriculture

2026.11.13-11.16, Nanjing, China

Program Agenda

Date & Time	Event		Location
Nov. 13th Friday, 13:00-22:00	**Arrival & Registration**		Fengda Hotel
Nov. 14th Saturday	**Opening Ceremony** Chair: Xiue Wang		
8:30-8:40	**Opening remarks**		1st conference room, NJAU Conference Centre
8:40-8:50	**Group photo**		
	Session I Keynote Talks Chair: Xiue Wang		
	Speaker	**Title**	
8:50-9:20	**Evans Lagudah** CSIRO/The University of Sydney, Australia	From gene discovery to deployment: What next for cloned disease resistance genes in wheat?	1st conference room, NJAU
9:20-9:50	**Deli Chen** The University of Melbourne, Australia	Sustainable nitrogen management: Bridging soil science, policy, and practice	
9:50-10:10	**Coffee break**		
	Session II Genomics, Genetics and AI for Crop Improvement Chair: Evans Lagudah		
10:10-10:35	**Peng Zhang** The University of Sydney, Australia	From genetic discovery to sustainable agriculture: Advancing cereal improvement for the future	1st conference room, NJAU
10:35-11:10	**Lin Li** Huazhong Agricultural University, China	Utilizing biological big data and AI technology to decode crop phenotypic variation and enhance future crop breeding	
11:10-11:35	**Orazio Romeo** University of Messina, Italy	The other side of the plant genome: A bioinformatics journey into the world of non-coding RNAs	

Date & Time	Event		Location
12:00-13:00	**Lunch time**		Fengda Hotel
	Session III Crop Resistance Gene Discovery, Mechanisms and Breeding (1) Chair: Qingdong Zeng		
14:00-14:25	**Yajun Wang** CAS-CEMPS, China	Diversified disease resistance genes control non-host resistance of Triticeae plants	1st conference room, NJAU
14:25-14:50	**Guanfeng Wang** Shandong University, China	From Gene Mining to Genome Editing: Building Multiple Disease Resistance in Maize	
14:50-15:15	**Yiming Wang** Nanjing Agricultural University, China	The perception and immune resistance of rice to fungal pathogens	
15:15-15:25	**Luyang Wei** PhD student, Nanjing Agricultural University, China	Cloning and functional characterization of a wheat stripe rust resistance gene *YrRc1* from *Roegneria ciliaris*	
15:25-15:50	**Coffee break**		
	Session IV Crop Response to Environment and Microbiome Chair: Yajun Wang		
15:50-16:15	**Heribert Hirt** King Abdullah University of Science and Technology, Saudi Arabia	Unraveling the mechanisms of plant drought and heat tolerance by beneficial root endophytes	1st conference room, NJAU
16:15-16:40	**Gunther Doehlemann** University of Cologne, Germany	Modulation of the phyllosphere microbiome by smut fungi	
16:40-17:05	**Federico Martinelli** Università degliu studi di Firenze, Italy	How plants remember: deciphering inherited memories of environmental stress	
17:05-17:30	**Meixue Zhou** University of Tasmania, Australia	Salinity tolerance research in Australia: challenges and opportunities ahead	
18:00-20:00	**Evening reception**		Fengda Hotel
Nov. 15th Sunday	**Session V Crop Resistance Gene Discovery, Mechanisms and Breeding (2)** Chair: Peng Zhang		

Date & Time	Event		Location
8:30-8:55	**Mingliang Xu** China Agricultural University, China	Feedback control of ROS signaling generates resistance-gene epistasis in maize	1st conference room, NJAU
8:55-9:20	**Qingdong Zeng** Northwest A&F University, China	Population genetics and avirulence gene cloning of the wheat stripe rust	
9:20-9:45	**Pascal Okwiri** Egerton University, Kenya	Pyramiding genes for durable resistance to stem rust and high yield potential of wheat in Eastern Africa	
9:45-9:55	**Xiaobo Xia** PhD student, Nanjing Agricultural University, China	Myo-inositol metabolism counteracts mycotoxin hijacking and confers broad resistance to fungal diseases in crops	
9:55-10:20	**Coffee break**		
	Session VI Crop Development, Genome Editing and Disease Control **Chair: Gang Li**		
10:20-10:45	**Lifang Wu** Hefei Institutes of Physical Science, Chinese Academy of Sciences, China	Synthetic root exudate- and microbial community-mediated belowground strategies for control of wheat *Fusarium* head blight	1st conference room, NJAU
10:45-11:10	**Li Huang** Montana State University, USA	The population dynamics of the *Ascochyta* blight complex in peas	
11:10-11:35	**Xiujuan Yang** Adelaide University	Unravelling maternal control of ovule and grain development in cereal crops	
11:35-11:45	**Yao Zhang** PhD student, Nanjing Agricultural University, China	Exploring the functions of highly repetitive DNA in wheat through genome editing	
11:45-12:00	**Closing ceremony**		1st conference room, NJAU
12:00-13:30	**Lunch time**		Fengda Hotel
14:30-17:00	Excursion to research base of Nanjing Agricultural University		Chuzhou research base
Nov. 16th Monday	**Departure**		

Participant's list

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