NEBRASKA PLANT SCIENCE Symposium 2025

Driving Innovation: New Frontiers in Plant Science

NPSS
Nebraska Plant Science Symposium

Tuesday, March 4, 2025
8:00 AM - 5:00 PM

University of Nebraska-Lincoln
Nebraska Innovation Campus
Conference Center
2021 Transformation Drive
Lincoln, NE 68508

CORTEVA™ agriscience

A Corteva™ Agriscience Plant Sciences Symposia Series Event

SYMPOSIA SERIES

REACHING THE NEXT GENERATION
OF SCIENTISTS SINCE 2008.

PROGRAM

8:00 am — **Registration**

8:30 am — **Welcome**
Martha Mamo, Ph.D., Department Head
Department of Agronomy and Horticulture,
University of Nebraska-Lincoln
Auditoriun

8:40 am — **Introduction to the Plant Sciences Symposia Series**
Jason Rauscher, Ph.D. Academic Relation Manager
Corteva Agriscience ™
Auditorium

8:50 am — **Agriculture Biotechnology - A Tool For Functional Genomics And Complementing Plant Breeding Programs**
Tom Clemente, Ph.D., Eugene W. Price Distinguished Professor of Biotechnology
Center for Plant Science Innovation, Department of Agronomy and Horticulture,
University of Nebraska-Lincoln
Auditorium

9:35 am — **Using The Epigenome To Regulate Plant Response To Environmental Stress**
Thelma Madzima, Ph.D., 1855 Associate Professor
Department of Plant Biology
Michigan State University
Auditorium

10:20 am — **Coffee Break/Networking Activity**
Banquet Hall

10: 35 am — **Superinfection Eclusion Through a New Light**
Eric Parperides
Auditorium

PROGRAM

10:50 am — **Implications of Cover Crop Management Decisions on Amaranthus Species Density and Biomass in Temperature Cropping Systems: A Meta-Anaysis**
Ankit Yadav
Auditorium

11:05 am — **Temporal UAV Surveys For Robust and Accurate Maize Flowering Time Prediction**
Zhongjie Ji, Ph.D
Auditorium

11:20 am — **Molecular Characterization of PRK1, The Ancestral Progenitor of Rpg5 NLR's Integrated Immune Sensory Domain**
Israel Akinlabi
Auditorium

11:35 am — **Flash Talks**
Auditorium

12:30 pm — **Lunch**
Banquet Hall

1:15 pm — **Plant Breeding Innovations Through Technology, Analysis, and Design**
Jianming Yu, Ph.D., Professor, Pioneer Distinguished Chair in Maize Breeding, Director of Raymond F. Baker Center for Plant Breeding, Department of Agronomy
Iowa State University
Auditorium

2:00 pm — **The Art of The Science**
Jessie Alt, Ph.D., Global Wheat Lead
Corteva Agriscience™
Auditorium

PROGRAM

2:45 pm **Student Speaker Awards & Closing Remarks**
David Hyten, Ph.D. and Jensina Davis, Chair
University of Nebraska-Lincoln
Auditorium

3:00 pm **Poster Presentations & Social Networking – Session A**
Banquet Hall

Workshops - Session A (Breakout Room A & B)

3:45 pm **Poster Presentations & Social Networking – Session A**
Banquet Hall

Workshops - Session A (Breakout Room A & B)

4:50 pm **Poster Presentation Awards**
Banquet Hall

5:30 pm **Post-Symposium Social**
Code Beer Company
200 S Antelope Valley Pkwy, Lincoln, NE

WORKSHOPS

Interviewing for Industry Breakout Room A
Corteva Agriscience™
Room A1 – A3

Tips for Writing Successful Grant Proposals Breakout Room B
Tisha Gilreath Mullen, M.A., and Amanda Bohlin
Office of Proposal Development
University of Nebraska-Lincoln
Room B1 – B3

PLENARY SPEAKERS

THOMAS CLEMENTE

Eugene W. Price Distinguished Professor of Biotechnology, Center for Plant Science Innovation, Department of Agronomy and Horticulture.

Tom Clemente received a bachelor's degree in biology with a minor in chemistry from Indiana University of Pennsylvania in 1985. He earned an master's degree in plant pathology from Oklahoma State University in 1989 and a Ph.D. in plant pathology from North Carolina State University in 1993. Following his doctorate program, he did postdoctoral training at Monsanto Company from 1993 to 1996.

Clemente currently serves as the Director of the University of Nebraska-Lincoln's Plant Transformation Core Research Facility, where he holds an appointment within the Department of Agronomy and Horticulture. He has over 30 years of experience in plant transformation technologies. His program has established an agriculture biotechnology pipeline at Nebraska, which enables researchers to evaluate transgenic events from the bench to the field with procedures emphasizing identity preservation and stewardship of the biologicals. This infrastructure was instrumental during the development of the dicamba tolerance technology, currently marketed as Roundup Ready® Xtend crop system. His program is currently actively engaged in several transdisciplinary, multi-institutional team-based projects, targeting feedstock development for sustainable aquaculture feeds, designing genetic approaches to protect yield from both biotic and abiotic stresses along with enhancing phenotypic outcomes of C4 grass feedstocks for the bioeconomy.

THELMA F. MADZIMA

1855 Associate Professor, Department of Plant Biology, Michigan State University

Thelma Madzima received her Bachelor's degree in plant science/biotechnology in 2004 from Fort Valley State University and her Ph.D. in 2009 in plant molecular and cellular biology from the University of Florida. Upon completion of her graduate training, she joined the laboratory of Dr. Karen McGinnis at Florida State University as a postdoctoral scholar, where her interest in the mechanisms of epigenetic regulation began.

The overarching goal of her research program is to understand how epigenetic mechanisms facilitate growth, development, and response to abiotic stress stimuli in crop plants. Her research interests stem from her upbringing in Zimbabwe, where she witnessed firsthand the devastating impacts of drought on agricultural productivity and human livelihood.

PLENARY SPEAKERS

Madzima is dedicated to broadening the participation of individuals from groups underrepresented in STEM and is involved in several minority recruitment and retention activities within the scientific community. In recognition of her service efforts, she was awarded the 2021 University of Washington Bothell School of STEM Inclusive Service Award, the 2022 Maize Genetics Cooperation Leadership Award, the 2022 American Society of Plant Biologists (ASPB) Excellence in Diversity and Inclusion Award, and the 2022 ASPB Excellence in Education Award.

JIANMING YU

Professor, Pioneer Distinguished Chair in Maize Breeding, and Director of Raymond F. Baker Center for Plant Breeding, Department of Agronomy, Iowa State University.

Yu earned his bachelor's degree from Northwest A&F University in 1994, master's degree from Kansas State University in 2000, and Ph.D. from the University of Minnesota in 2003. He completed a one-year postdoc position at the University of Minnesota and another two-year term at Cornell University. He worked at Kansas State University from 2006 to 2012 and has been at Iowa State University since 2013.

Yu's research investigates the genetic architecture of quantitative and qualitative traits with evolutionary and agricultural importance; the interplay of genes, environment, and development underlying phenotypic variation; and the strategies to enhance crop improvement by design optimization and prediction. Among other honors, Yu was elected to Fellow of the Crop Science Society of America and a Fellow of the American Association for the Advancement of Science in 2018. Yu is passionate about learning, teaching, and exercising.

JESSIE ALT, Ph.D.

Global Wheat Lead, Corteva Agriscience™

She has strong background in both varietal and hybrid crop breeding. Jessie is experienced at working with field teams, farmers, and agronomists to identify product line gaps. She is passionate about enabling farmer success through improved plant genetics. Beyond research, she believes in building for the future by engaging children in agriculture and science.

Jessie has significant experience in plant breeding including product development and traits. She has a Ph.D. and M..S in plant genetics from Iowa State University along with a bachelor's degree in agronomy from South Dakota State University.

PLENARY SPEAKERS

Jessie began her professional career in 2005 as a soybean breeder with Schillinger Seed responsible for development and characterization of RM I, II, and III soybeans. In 2007, she joined Pioneer in Algona, IA where she transitioned the soybean testing effort to a full soybean breeding program focused on RM I and II varieties.While at Algona, Jessie took on the lead of the Insect Team for Soybean Product Development focusing on identification and introgression of native traits for insect tolerance. In 2010, Jessie moved to Dallas Center, IA and took the lead of the existing RM II and III soybean breeding program. In 2018, she took on the role of Global Wheat Lead for Corteva Agriscience.

WORKSHOP SPEAKERS

TISHA GILREATH MULLEN is the Director of Proposal Development at the University of Nebraska-Lincoln (UNL), where she leads a four-member team within the Office of Research and Innovation charged with helping faculty enhance the competitiveness of their grant proposals. Beyond UNL, Tisha served as a Co-PI on a grant from the National Science Foundation (NSF) aimed at enhancing research capacity and grant-getting capacity among non-research intensive universities and colleges in the Northern Great Plains. She was recognized in 2024 by the National Organization of Research Development Professionals (NORDP) with a Mentoring Award for her contributions in helping grow talent in the field of research development, and she was part of the team recognized with the NORDP 2023 Innovation Award for UNL's innovative NSF CAREER Club program, which enhances faculty success in obtaining NSF CAREER grants. Tisha co-authored the article "Leveraging the ARIS BI Toolkit to Equip Faculty for Career—and CAREER—Success," published in the Journal of Community Engagement and Scholarship.

AMANDA BOHLIN serves as a Proposal Development Coordinator at the University of Nebraska-Lincoln's Office of Proposal Development, where she plays a pivotal role in assisting faculty with securing research funding. She was part of the team recognized with the 2023 Innovation Award by the National Organization of Research Development Professionals for UNL's innovative NSF CAREER Club program, which enhances faculty success in obtaining NSF CAREER grants. Amanda co-authored the article "Leveraging the ARIS BI Toolkit to Equip Faculty for Career—and CAREER—Success," published in the Journal of Community Engagement and Scholarship, reflecting her commitment to advancing research development practices.

WORKSHOP SPEAKERS

JASON RAUSCHER

Academic Relations Manager, Corteva Agriscience™

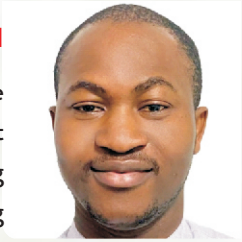
Rauscher received his Ph.D. in Plant Evolutionary Genetics from Washington University in St. Louis, and postdoctoral training at Cornell University. He is a passionate science and education advocate leveraging over 20 years of experience in academia, research, secondary education and industry to foster mutually beneficial interactions between academia and the private sector in the agricultural and biological sciences. Rauscher is currently responsible for managing the Plant Sciences Symposia Series, which supports a network of graduate student organized symposia at over 30 universities and research centers around the world each year. Responsibilities also include management of the New Frontiers in Applied Science conference series, and support for the Corteva internship program for undergraduate and graduate interns working within R&D.

STUDENT & POSTDOC SPEAKERS

ERIC PARPERIDES

Eric is a 4th year PhD student in the plant pathology department at UNL. He studies plant virology and small RNA silencing under Dr. Hernan Garcia-Ruiz at the Nebraska Center for Virology. Previously, Eric obtained a bachelor's degree in biological sciences from the University of Illinois-Edwardsville in 2019 and a master's degree in biological sciences from the same institution in 2021.

ISRAEL AKINLABI



Israel earned a Bachelor's degree in Agronomy from the University of Ibadan, Nigeria, and a Master's degree in Plant Biotechnology from the University of Silesia, Poland. Following his master's, he undertook a pre-doctoral fellowship at Leipzig University, Germany, where he further developed his expertise in plant genomics. With a keen interest in functional genomics and plant-pathogen interactions, he is currently pursuing a Ph.D. at the Department of Agronomy, Horticulture, and Plant Science, South Dakota State University, under the supervision of Dr. Shyam Solanki. His research focuses on investigating the interdependent evolution of plant immune receptors and their corresponding pathogen effectors, aiming to deepen our understanding of plant defense mechanisms in cereal crops.

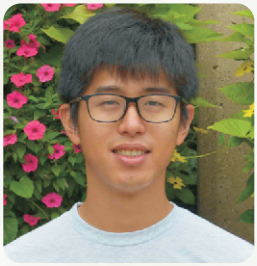
ANKIT YADAV

Ankit Yadav, originally from Haryana, India, earned his bachelor's degree in Agricultural Sciences from Haryana Agricultural University. He joined Auburn University's Weed Science program in Spring 2023, graduating in Fall 2024. During his time at Auburn, Ankit focused on documenting herbicide resistance in

STUDENT & POSTDOC SPEAKERS

Italian ryegrass across Alabama and developing sustainable weed management strategies for peanut production. Ankit recently began his PhD in Dr. Amit Jhala's Weed Science program at the University of Nebraska-Lincoln, where his research centers on conventional weed management trials in corn and soybean cropping systems.

ZHONGJIE JI



Zhongjie Ji is a postdoctoral researcher at the University of Nebraska-Lincoln, supported by the Heuermann Postdoctoral Fellowship. He is working on several phenotyping and genetics projects, ranging from indoor to field phenotyping in maize. He earned his PhD in Plant Breeding, Genetics, and Biotechnology from Michigan State University, along with a certificate in Computational Plant Sciences. Zhongjie also holds an MS in Agronomy from Purdue University and a BS in Agronomy from Shandong Agricultural University.

FLASH TALK SPEAKERS

Subhash Thapa
Nikhil LNU
Sapana Ghimire
Libia F. Gómez-Trejo
Kumar Shrestha
Enzo Unzain Moreno
Hillson Ghimire
Rajnee Hasan
Sanket Shinde
Recep Yavuz

Appreciation

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