



2025 BIC & NAPIA Biennial Meeting

November 3–6, 2025

Embassy Suites by Hilton Lincoln
1040 P Street, Lincoln, Nebraska





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Welcome

Welcome to Lincoln, Nebraska, and the 2025 International BIC & NAPIA Biennial Meeting.

Although only grown in the western part of the state, pulse crops, particularly dry edible beans, are important contributors to Nebraska's economy. Nebraska ranks fourth in total dry bean production in the United States, first in great northern production, and second in pinto and light red kidney production. Other pulse crops grown in the state include peas, chickpeas, and cowpeas. The dry bean industry contributes \$158 million to Nebraska's economy annually and employs approximately 665 people.

My colleagues and I are pleased to host this event in Lincoln for the first time since 1991. We encourage you to take advantage of the opportunities this joint meeting provides for networking and learning about the latest advances in dry bean and pulse crop research.

We thank our sponsors for their generous support for this event.

I wish you a pleasant stay in Lincoln.

Carlos Urrea



CARLOS URREA

Dry Bean Breeding Specialist
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AGRONOMY AND HORTICULTURE

Institute of Agriculture and Natural Resources



Conference Hosts



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Keynote Speakers



ANDY BENSON, PHD

Professor, Department of Food Science and Technology, University of Nebraska–Lincoln

Genetic Analysis of Traits in Dry Beans that Affect the Human Gut Microbiome

Andrew Benson earned his Ph.D. in Microbiology at the University of Texas Health Science Center at San Antonio and was a postdoctoral fellow in Molecular Biology at Princeton University before joining the University of Nebraska in 1996. He is currently a professor in the Department of Food Science and Technology at the University of Nebraska. He also serves as the Director of the Nebraska Food for Health Center (NFHC), which has a unique mission to link agriculture and biomedicine through research on the gut microbiome. NFHC accomplishes this mission through collaborative research across a discovery-clinical translation research platform that

links plant genetics and biochemistry with microbiology, food science, nutrition, computational biology, and clinical research. Benson's research group leads the discovery portion of the platform where he collaborates with plant geneticists, nutritionists, mucosal immunologists and gastroenterologists to define components in food crops that affect the human gut microbiome. His research combines quantitative and functional genomics in cereal grains and legumes with high-throughput in vitro digestion/microbiome fermentations of seed, and gnotobiotic mouse models to link naturally occurring genetic variation in the plants with desirable microbiome and host responses.



C. ROBIN BUELL, PHD

Georgia Research Alliance Eminent Scholar Chair in Crop Genomics, Crop & Soil Sciences, University of Georgia

Genes, Genomes, and Pan-Genomes: Enabling Discovery Across Scales in Phaseolus

C. Robin Buell is the Georgia Research Alliance Eminent Scholar Chair in Crop Genomics and Professor of Crop and Soil Sciences at the University of Georgia. She currently serves as Director of The Plant Center at the University of Georgia, leading interdisciplinary efforts to advance plant science through genetics, genomics, synthetic biology, and breeding innovation. In 2025, she was elected to the U.S. National Academy of Sciences for her pioneering contributions to plant genome biology. She has authored

nearly 320 publications, received over \$82 million in funding directly to her lab, and given over 250 presentations to scientific and lay audiences. Buell continues to advance beans genomics through collaborative research, resource development, and mentoring the next generation of students and postdocs.



CHELSEA DIDINGER, PHD

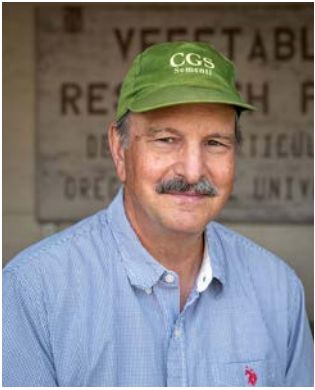
Founder of A Legume a Day, Global Nutritional Specialist, US Dry Bean Council

Beans: The Ultimate Superfood

Chelsea Didinger graduated with her Ph.D. in Nutrition from Colorado State University, with her research focused on pulses. Her translational work assessed how citizen science and an Extension toolkit can influence pulse consumption through impacting motivators and barriers to intake. She is the Founder of A Legume a Day, a pulse educational platform with the goal of inspiring people to eat more pulses, to reap public and environmental benefits. She is also the Global Nutritional Specialist for the US Dry Bean Council and works with several other pulse organizations to engage various stakeholders and monitor market trends.



Keynote Speakers



JAMES "JIM" MYERS, PHD

*Baggett-Frazier Endowed Professor of Vegetable Breeding and Genetics,
Oregon State University*

A Rhapsody for Common Bean in All its Forms

Jim Myers is Professor Emeritus in the Department of Horticulture at Oregon State University. Until recently, he held the Baggett-Frazier Endowed Chair of Vegetable Breeding and Genetics at OSU. He has released 34 cultivars, including 14 dry bean cultivars and four germplasm releases, while at the University of Idaho, and 20 cultivars and one germplasm release at OSU. His OSU releases include one snap bean, six tomatoes, three edible podded peas, two table beets, two mild habanero peppers, one broccoli, and five dry bean cultivars. The OSU5630 bush blue lake snap bean, released in 2005, has been grown on about 80% of the acreage used for processing in

western Oregon. He will probably be best known as the originator of high anthocyanin 'Indigo' tomatoes that are now being grown worldwide.

He has coedited two books, published 89 peer-referred publications, 16 book chapters, 107 peer-reviewed papers and more than 150 invited and contributed papers. He has obtained over \$12 million in competitive grant funds and another \$2.8 million in commodity commission funds. He has advised 12 Ph.D., 16 M.S. and one M. Ag students, and served as a committee member for another 43 students. Myers has facilitated undergraduate student-directed research for 32 students.



PAUL OVERBY

Regenerative Farmer and Co-owner, Lee Farms, Verdi-Plus: Value Added Management Solutions, Wolford, North Dakota

Regenerative Ag on the Northern Prairies

Paul Overby is a leading edge regenerative farmer, along with his wife Diane, from Wolford, North Dakota. They operate 1250 crop acres and have pasture and hay land, CRP, wetland buffer zones, and wildlife habitat on an additional 550 acres. The Overby's have a diverse crop mix of field peas, sunflowers, wheat, flax, oats, millet, canola and soybeans and are experimenting with pea/canola polycropping. They also plant a diverse cover crop mix when possible. Overby began field zone management and no-till in 2005. He partnered with General Mills and ADM on regenerative ag pilot programs. He was also among the first farmers selling soil carbon credits to

Indigo Ag. In 2024 Overby was recognized as the Outstanding Conservation Professional by the National Soil and Water Conservation Society. He received a Responsible Nutrient Management Award at the 2021 National No-Till Conference. Paul and his wife Diane were given the 2023 Conservation Achievement Award by the Rolette Soil Conservation District. Paul has a B.S. in Ag Education from North Dakota State University and is completing a master's degree in Sustainable Management from the University of Wisconsin-Superior.



Agenda



Speaker Abstracts

MONDAY, NOV. 3

1–7 pm Registration

5:30–7:30 pm Opening Reception, P Street Dining

Juan M. Osorno, BIC President Professor, Dry Bean Breeding & Genetics, Department of Plant Sciences, North Dakota State University

Carlos A. Urrea, Professor, Department of Agronomy and Horticulture, University of Nebraska–Lincoln

Michelle Hubbard, NAPIA President, Research Scientist, Pulse Pathology, Swift Current Research and Development Centre, Saskatchewan, Agriculture and Agri-Food Canada, Government of Canada

TUESDAY, NOV. 4

7 am Registration

7–7:30 am BIC Coordinating Committee (Alumni)

7:30–8:30 am Breakfast (Atrium ALL)

BIC/NAPIA CONCURRENT SESSION – GENETIC IMPROVEMENT (REGENTS BC)

Moderator: Scott Bales, Michigan State University

8:30–8:45 am Opening Remarks

Derek McLean, Dean and Director, Agricultural Research Division, University of Nebraska–Lincoln

8:45–9:15 am **Frazier Zaumeyer Distinguished Lectureship: A Rhapsody for Common Bean in All its Forms**

BIC Keynote Speaker: James Myers, Baggett-Frazier Endowed Professor of Vegetable Breeding and Genetics, Oregon State University

9:15–9:30 am **Genetic Improvement of Navy Bean Cultivars Released in Southwestern Ontario between 1940–2011** – K. Peter Pauls, Professor, Department of Plant Agriculture, University of Guelph

9:30–9:45 am **Root Architecture and Seed Size Across Andean and Middle American Bean Accessions** – Miranda Haus, Assistant Professor, Department of Horticulture, Michigan State University

9:45–10 am **The Pan-GS Consortium: Leveraging Collective Breeding Program Data for Durable Genomic Selection Models** – Lovepreet Singh, Postdoc, Michigan State University

10–10:15 am **High-Throughput Screening to Enhance Symbiotic Nitrogen Fixation in Dry Beans** – Deevita Srivastava, Postdoctoral Research Fellow, North Dakota State University

10:15–10:45 am Coffee Break and Networking



Agenda



Speaker Abstracts

BIC/NAPIA CONCURRENT SESSION

Moderator: Sandra Branham, Clemson University

- 10:45–11 am **Project LIMA!: Development of Resources to Accelerate Lima Bean Breeding for Agronomic and Quality Traits** – Travis Parker, Assistant Professional Researcher, Department of Plant Sciences, University of California, Davis
- 11–11:15 am **Genotypic and Phenotypic Multi-environment Evaluation of the Lima USDA NPGS Collection** – Jaclyn Adaskaveg, Postdoctoral Researcher, Department of Plant Sciences, University of California, Davis
- 11:15–11:30 am **Domestication-related Changes at PvMYB26 in Common Bean Shed Light on the Origins of Agriculture in the Ancient Americas** – Burcu Celebioglu, Postdoctoral Researcher, Department of Plant Sciences, University of California, Davis
- 11:30–11:45 am **Evaluating a Common Bean/Tepary Bean Interspecific Population for Agronomic and Quality Traits** – Sassoum Lo, Postdoctoral Research Fellow, University of California, Davis
- 11:45–12 pm **Phaseolus Exploration and Collection in the Southwestern USA** – Richard Pratt, Professor, Plant and Environmental Sciences, New Mexico State University
- 12–12:15 pm **Genomic and Phenotypic Dissection of Resistance to *Meloidogyne enterolobii* in Cowpea for Breeding Durable Cultivars** – Habib Akinmade, Graduate Student, University of Florida
- 12:15–12:30 pm **Genome-wide Association Studies of Nutritional Traits in Peas (*Pisum sativum* L.) for Biofortification** – Carolina Ballén-Taborda, Postdoctoral Fellow, Plant and Environmental Sciences Department, Clemson University
- 12:30–1:30 pm Lunch (Atrium ALL)

AFTERNOON SPLIT SESSIONS

BIC AFTERNOON SESSION – BIOTIC STRESS (REGENTS A)

Moderator: Lucas Haag Kansas State University

- 1:30–1:45 pm **Sentinel Plots for On-Farm Bean Disease Assessment: A Strategic Tool to Guide Breeding for Smallholder Agriculture** – Gloria Mosquera, Plant Pathologist and Project Leader, Alliance Biodiversity & CIAT
- 1:45–2 pm **Use of Two Genomic Approaches to Identify QTLs for Common Bacterial Blight Resistance in *Phaseolus vulgaris* L. in the Cranberry Type Market Class** – Angelo Gaiti, Graduate Student, Department of Food, Environmental and Nutritional Sciences. University of Milan, Italy
- 2–2:15 pm **High-Throughput Phenotyping of Bruchid Resistance in an Andean Bean Panel - Case *Zabrotes subfasciatus*** – Maria Isabel Gomez-Jimenez, Research Associate, Alliance Bioversity & CIAT
- 2:15–2:30 pm **Quantitative Resistance to Root-Knot Nematodes Identified in Lima Bean** – Shem Msabila, Graduate Student, University of Delaware, Newark, DE



Agenda



Speaker Abstracts

- 2:30–2:45 pm ***Phytophthium vexans* Root Rot Resistance in the Tepary Diversity Panel** – Jasmine Hart, Graduate Student, University of Vermont
- 2:45–3 pm **Optimizing Fungicide Application Timing for Sclerotinia Stem Rot when Conditions Favor Disease as Dry Beans Enter Bloom** – Michael Wunsch, Plant Pathologist, Carrington Research Extension Center, North Dakota State University
- 3–3:30 pm Coffee Break and Networking
- 3:30–5:30 pm Poster Presentation (Regents DEF) **All presenters of odd-numbered posters need to be next to their posters.**
- 6 pm Dinner on your own

NAPIA AFTERNOON SESSION – BIOTIC STRESS (REGENTS A)

Moderator: Jodi Souter, J4 Agri-Science

- 1:30–1:45 pm **Field Performance of Organic Dry Pea (*Pisum sativum* L.) and Associated Genes** – Nathan Windsor, Clemson University
- 1:45–2 pm **Loss of Field Efficacy of SDHI Fungicides Against Ascochyta Blight in Chickpeas and Fungicide Resistance Management Strategies for *Ascochyta rabiei*** – Michael Wunsch, Plant Pathologist, Carrington Research Extension Center, North Dakota State University
- 2–2:15 pm **QoI Fungicide Resistance in the Chickpea Pathogen *Ascochyta rabiei* in the US Pacific Northwest** – Weidong Chen, Research Scientist, Department of Plant Pathology, Washington State University and USDA ARS, Grain Legume Genetics Physiology Research Unit
- 2:15–2:30 pm **Pin and Spiral Nematodes in Chickpea Fields in Saskatchewan** – Michelle Hubbard, NAPIA President, Research Scientist, Pulse Pathology, Swift Current Research and Development Centre, Saskatchewan, Agriculture and Agri-Food Canada, Government of Canada
- 2:30–2:45 pm **Pinpointing Candidate Genes in a Quantitative Trait Locus Associated with Resistance to Bacterial Brown Spot in Adzuki Beans** – Ujomonigho (Omo) Omoregie, Graduate Student, University of Guelph Co-authors: O. Wally and KP Pauls
- 2:45–3 pm **Breeding Biofortified Protein-rich Organic Lentils for Southern USA** – Sonia Salaria, Graduate Student, Clemson University Co-authors: Shiv Kumar Agrawal and Dil Thavarajah
- 3–3:30 pm Coffee Break and Networking
- 3:30–5:30 pm Poster Presentations (Regents DEF) **All presenters of odd-numbered posters need to be next to their posters.**
- 6 pm Dinner on your own



Agenda



Speaker Abstracts

WEDNESDAY, NOV. 5

7–8 am NAPIA Board & Germplasm Meeting – NAPIA Alumni

7:30–8:30 am Breakfast (Regents DEF)

BIC/NAPIA CONCURRENT SESSION – GENOMICS AND BREEDING (REGENTS BC)

Moderator: Jenna Hershberger, Clemson University

- 8:30–8:45 am **Genomic Insights into Iron and Zinc Biofortification in Common Bean: Leveraging Crop Wild Relatives, Identifying Genomic Hotspots and Introgression Regions** – Jennifer Wilker, Research Scientist, Alliance of Biodiversity International and CIAT
- 8:45–9 am **A Framework for Genomic Selection in Dry Bean Breeding: From GBS to SNP Chip Development** – Jose Figueroa-Cerna, Department of Plant Sciences, North Dakota State University
- 9–9:15 am **Developing Protein-Rich Dry Beans (*Phaseolus vulgaris* L.) through Genomic prediction** – Carly George, Graduate Student, Department of Plant Sciences, North Dakota State University
- 9:15–9:30 am **Strengths, Weaknesses, and Future Application of k-mer GWAS in *Phaseolus vulgaris*** – Andrew Wiersma, Archer Daniels Midland Company
- 9:30–10:15 am **Frazier Zaumeyer Distinguished Lectureship: Genes, Genomes, and Pan-Genomes: Enabling Discovery Across Scales in *Phaseolus*** – C. Robin Buell, Georgia Research Alliance Eminent Scholar Chair in Crop Genomics, Crop & Soil Sciences, University of Georgia
- 10:15–10:45 am Coffee Break and Networking

Moderator: Christine Diepenbrock, University of California, Davis

- 10:45–11:45 am **NAPIA Keynote: Regenerative Ag on the Northern Prairies**
Paul Overby, Lee Farms and Verdi-Plus: Value Added Management Solutions, North Dakota
- 11:45 am–12 pm **Integrating Transcriptomics and Machine Learning to Uncover Genes Underlying High and Moderate levels of Fusarium Root Rot Resistance in Pea** – Stephen Awodele, Graduate Student, Department of Plant Sciences/Crop Development Centre, University of Saskatchewan
- 12–12:15 pm **Genetic Mapping, Proximal Sensing, and Crop Modeling of Nutritional and Agronomic Traits in a Cowpea MAGIC Population Across Three Californian Environments** – Jonathan Berlinger, Graduate Student, University of California, Davis
- 12:15–12:30 pm **Breeding for Increased Seed Protein Concentration in Chickpea** – George Vandemark, Research Scientist, USDA ARS
- 12:30–1:30 pm Lunch (Atrium-ALL)



Agenda



Speaker Abstracts

AFTERNOON SPLIT SESSIONS BIC AFTERNOON SESSION – BIOTIC STRESS (REGENTS BC)

Moderator: Mohammad Erfatpour, University of Guelph

- 1:30–1:45 pm **High-Throughput Phenotyping and Deep Learning for Pod-Based Yield Prediction and Rust Screening in Dry Beans** – Maria De Oliveira, Graduate Student, Department of Plant Sciences, North Dakota State University
- 1:45–2 pm **Management of Emerging Pod Spotting and Russetting Diseases of Fresh Market Snap Bean in Virginia** – Harleen Kaur, Postdoc, Virginia Tech
- 2–2:15 pm **Evaluation of Multiple Botrytis Species Causing Chocolate Spot on Faba Bean (*Vicia faba*) in the Mid-Atlantic and Fungicide Management Options** – Marian Grskovich, Graduate Student, Virginia Polytechnic Institute and State University
- 2:15–2:30 pm **Genome-wide Association Study to Identify Genomic Regions Associated with Resistance to Soybean Cyst Nematode HG type 2.5.7 in Dry Beans** – Dalvir Singh, Graduate Student, North Dakota State University
- 2:30–2:45 pm **Validation of Molecular Markers for Aphanomyces Root Rot Resistance in Common Bean (*Phaseolus vulgaris* L.)** – Rebecca O. Arias, Graduate Student, University of Wisconsin-Madison
- 2:45–3 pm **Marker-Assisted Backcrossing to Introduce the Non-Darkening Trait into Cranberry Bean (*Phaseolus vulgaris*) Varieties** – Sajida Noor, Graduate Student, Department of Plant Agriculture, University of Guelph, Guelph, Canada
- 3–3:30 pm Coffee Break and Networking
- 3:30–5:30 pm Poster Presentation (Regents DEF) **All presenters of even-numbered posters need to be next to their posters.**
- 7–9 pm Awards Banquet (Regents BC)
- Music by Evan LeBouef Quintet
- Join us to celebrate the BIC/NAPIA community science. Leadership, technical achievement, and graduate/undergraduate student oral and poster competition. Thanks to our sponsors for their generosity.
- Presentation Awards: Carlos Urrea, BIC Award Committee Chair, and Michelle Hubbard, NAPIA President
- Closing Remarks, Juan Osorno (BIC President)



Agenda



Speaker Abstracts

NAPIA AFTERNOON SESSION (REGENTS A)

Moderator: Marie Celestin, Montana State University

- 1:30-1:45 pm **From Field to Insight: Managing Breeding Data with BIMS** – Sook Jung, Associate Professor, Washington State University
- 1:45-2 pm **First Steps Toward Adapting Lentil for Organic Production in the Southeastern U.S.** – Mark Dempsey, Graduate Student, Clemson University
- 2-2:15 pm **Genome-Wide Association Mapping of Resistant Starch for Improved Nutritional Traits in Lentils** – Hatice Sari, Postdoc, Washington State University, Postdoc
- 2:15-2:30 pm **Genome-Wide Association Analysis of Root Architectural Traits in Hydroponically Grown Interspecific Chickpea Population** – Tamanna Jahan, Postdoc, University of Saskatchewan
- 2:30-2:45 pm **Evaluation of Chickpea Germplasm for Potential Tolerance to Different Modes of Actions of Herbicides** – Bella Amyotte, Graduate Student, University of Saskatchewan
- 2:45-3 pm **Evaluation of Spring and Winter Pea Varieties in Western Nebraska** – **Dipak Santra, Professor**, Department of Agronomy and Horticulture, University of Nebraska-Lincoln
- 3-3:15 pm **Improving Drought and Cold Tolerance in Winter Pea** – Lyndon Porter, Research Scientist, USDA ARS
- 3:15-3:30 pm Coffee Break and Networking
- 3:30-5:30 pm Poster Presentations (Regents DEF) **All presenters of even-numbered posters need to be next to their posters.**
- 7-9 pm Awards Banquet (Regents BC)

THURSDAY, NOV. 6

- 7-8 am Breakfast (Alumni)

NAPIA SESSION (REGENTS A)

- 8 am-1 pm **Root Rot Workshop:** Root Rot in Pulse Crops: New Research, Real Solutions, and Collaborative Strategies Pulse Crop Working Group
- 8 am Welcome and Introductions
Pulse Crops Working Group
Dr. Audrey Kalil, Horizon Resources Cooperative
Dr. Uta McKelvy, Montana State University
- 8:10 am **Session I: Pathogen Biology and Surveillance**
- 8:10 am **Keeping Tabs on Aphanomyces euteiches: Survey Patterns Over 10 Years** (virtual)
Syama Chatterton, Research Scientist, Agriculture and Agri-Food Canada
- 8:25 am **Insights into the Diversity of the Bean Root Rot Complex** – Irene Blanco-Casallas, Graduate Student, Michigan State University
Travel Award Winner
- 8:40 am **Progress on Root Imaging for Rhizoctonia Root Rot Detection** – Cameron Proctor, Assistant Professor, University of Windsor



Agenda



Speaker Abstracts

8:55 am	Session I Speaker Q & A
9:05 am	Session II: Management Strategies and Grower Constraints
9:05 am	Integrated Management of Aphanomyces and Fusarium Root Rot – Michael Wunsch, Plant Pathologist, Carrington Research Extension Center, North Dakota State University
9:20 am	Evaluating a Conceptual Seed Treatment Premix from Syngenta – Edson Ncube, Research Scientist, Williston Research Extension Center, North Dakota State University
9:35 am	Gypsum and Wollastonite as Tools to Manage Root Rot in Pea – Michelle Hubbard, Research Scientist, Agriculture and Agri-Food Canada
9:50 am	Practical Constraints in Root Rot Management for Pulse Growers – Audrey Kalil, Agronomist & Outreach Coordinator, Horizon Resources Cooperative Jeannie Rude, Agronomist, Pro-Coop (Virtual)
10:05 am	Session II Speaker Q & A
10:15 am	Break
10:35 am	Session III: Breeding and Genetic Resistance
10:35 am	Reaction of Common Bean Cultivars to Fusarium Root Rot – Isabella Arruda, Postdoc, Rural Development Institute of Paraná State
10:50 am	Characterization of the Lentil Diversity Panel for Resistance to Fusarium Root Rot – Taylor de Jong, Graduate Student, University of Saskatchewan Travel Award Winner
11:05 am	Mapping QTLs for Aphanomyces and Fusarium Resistance in Lens orientalis – Kelsey Boucher, Graduate Student, University of Saskatchewan
11:20 am	Screening of Pulse Varieties for Resistance to Rhizoctonia Root Rot – Marie Celestin, Postdoc, Eastern Agricultural Research Center, Montana State University
11:35 am	From Mendel to Modern Pea: Genetic Insights into Fusarium Root Rot Resistance – Stephen Awodele, Graduate Student, Plant Sciences/Crop Development Center, University of Saskatchewan Travel Award Winner
11:50 am	Session III: Speaker Q & A
12 pm	Breakout Group Discussions Topics: Diagnostics, Surveillance, and Risk Forecasting Pathogen Biology and Ecology Field Management and Agronomy Breeding and Genetics Grower Outreach and Extension
12:35pm	Group Reports
12:45 pm	Concluding Remarks and Next Steps
1 pm	Lunch



Agenda



Speaker Abstracts

BIC SESSION (REGENTS BC) – NUTRITION, QUALITY, AND BREEDING

Moderator: Donna Harris, University of Wyoming

- 8–8:30 am **Keynote Speaker: Genetic Analysis of Traits in Dry Beans that affect the Human Gut Microbiome** – Andy Benson, Professor, University of Nebraska–Lincoln
- 8:30–9 am Keynote Speaker: **Beans: The Ultimate Superfood** – Chelsea Didinger, A Legume a Day
- 9–9:15 am **Iron Nutrition from Great Northern Beans** – Raymond Glahn, Research Scientist, USDA ARS
- 9:15–9:30 am **A Two-Gene Strategy to Improve the Iron Bioavailability Across Multiple Market Classes of Dry Beans (*Phaseolus vulgaris* L.)** – Jason Wiesinger, Research Associate, Robert W. Holley Center for Agriculture and Health, Ithaca, New York
- 9:30–9:45 am **The POPBEANS Project: Developing Protein-Rich Wholesome Popping Beans to Enhance Agricultural Production, Nutrition and Sustainability** – David Gang, Associate Professor and Fellow, Institute of Biological Chemistry, Director of the Tissue Imaging and Proteomics Laboratory, Washington State University
- 9:45–10 am **Breeding Popping Beans for Temperate US Production** – James Myers, Department of Horticulture, Oregon State University
- 10–10:15 am **Developing New Bruchid-Resistant Varieties Along With the Development and Validation of Molecular Markers** – Kelvin Kamfwa, Professor, University of Zambia
- 10:15–10:45 am Coffee Break and Networking

Moderator: Michael Wunsch, North Dakota State University

- 10:45–11 am **Identification of Loci and Germplasm for Breeding for Adaptation to High Temperatures in Cowpea** – Luis Getino, Postdoc, Universidad de Leon
- 11–11:15 am **A Web-Based Application for Automated Stand Counting in Dry Bean Using UAV RGB Imagery and YOLOv11 Segmentation** – Aliasghar Bazrafkan, Postdoctoral Research Associate, Michigan State University
- 11:15–11:45 am BIC Business Meeting and Conference Closing
- 11:45 am
- 12:45 pm Phaseolus Crop Germplasm Committee Meeting, PCGC Members
- 1–2 pm Lunch
- 2–5 pm Field Tour, University of Nebraska Food Innovation and Nebraska Food for Health Centers, Cody Kaarstad, University of Nebraska–Lincoln

OTHER BUSINESS AND OPEN MEETINGS

- 2–4 pm W5150 Hatch-Multistate Project Annual Meeting
- 4–5 pm Bean Genetics Committee, Bean Genetics Committee Members
- 5 pm Dinner on your own



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SUPPORTER





- B-1 Selection of Lima Bean (*Phaseolus lunatus*) Genotypes for Tolerance to Drought Stress**
Carlos German Muñoz-Perea, Universidad Nacional de Colombia
Co-authors: Carlos German Muñoz Perea, Yolanda Potosi, María Isabel Chacón Sanchez
- B-2 Heat Stress in Beans: Reproductive Resilience and Sink Strength as Keys to Yield Stability**
Jose Polania, Research Scientist, Alliance Bioversity & CIAT
Co-authors: Jorge Aragon, Cristian Tirado, Hector F. Buendia, Jose Polania, Jennifer Wilker
- B-3 Genome-wide Selection for Drought Tolerance in Mesoamerican Bean Genotypes**
Vania Moda-Cirino, Research Scientist, Rural Development Institute of Paraná State – IAPAR-EMATER – IDR-Paraná
Co-authors: SANTOS, Elizeu David; ARRUDA, Isabella Mendonça; SANTOS NETO, José dos; ALVES, Daniel Soares; IÁCONO, Jéssica Delfini de Paula; GEPTS, Paul; MODA-CIRINO, Vania
- B-4 Evaluating Cowpea Heat Tolerance**
John Harling, Graduate Student, University of Florida
Co-authors: E. F. Rios, O. Boukar, T. Close, M. Muñoz-Amatriaín, K. Boote, C. Messina, J. Dubeux
- B-5 Four New Lima Bean RIL Populations for Exploring Agronomic and Seed Appearance Traits**
Emmalea Ernest, Extension Fruit and Vegetable Specialist, Cooperative Extension, University of Delaware
Co-authors: Emmalea Ernest, Francis Reith, Ekaterina Hampton, Christine Diepenbrock, Antonia Palkovic, Jaclyn Adaskeveg, Varma Penmetsa, Andrew Farmer, Stephanie English, Paul Gepts
- B-6 Identifying Candidate Alleles and Landraces for Adaptation of Domesticated Common Bean (*P. vulgaris*) to Heat and Drought Using an Environmental Genome-Wide Association Study (envGWAS) Approach**
Miguel Correa Abondano, Research Associate, Alliance Bioversity-CIAT
Co-authors: Ospina, Jessica; Franco, Jorge; Sonder, Kai; Wenzl, Peter; Carvajal-Yepes, Monica
- B-7 Agronomic Performance, Nutritional Quality and Cooking Traits of Common Bean Genotypes Grown Under Terminal Drought Conditions in South-Central Chile**
Kianyon Tay, Research Scientist, Instituto de Investigaciones Agropecuarias (INIA) and Universidad de Concepción
Co-authors: Nelson Zapata, Carlos A. Urrea, Miguel Garriga, Abdelhalim Elazab, María Dolores López-Belchí
- B-8 Assessing the Role of Pollen Release and Stigma Exsertion in Lima Bean Yield**
Ekaterina Hampton, Graduate Student, University of Delaware
Co-authors: Emmalea Ernest, Ashish Reddy, Yin Bao
- B-9 Presence of a New Bean Anthracnose Race in Northern Spain**
Elisabeth Portilla Benavides, Graduate Student, Regional Service for Agrofood Research and Development (SERIDA)
Co-authors: A. Campa, M. Suárez-Fernández, J.J. Ferreira
- B-10 Population Dynamics of *Megalurothrips usitatus* in Common Bean in Guatemala**
Jose Figueroa-Cerna, Research Scientist, North Dakota State University
Co-authors: Inelda Z. Tuj; Astrid J. Racancoj; Angela N. Miranda



- B-11 Identifying Genomic and Phenotypic Variation amongst Diverse *Sclerotinia sclerotiorum* Isolates: A Steppingstone towards Improved White Mold Tolerance Screening**
Marysia Zaleski-Cox, Graduate Student, Michigan State University
Co-authors: Tanya Copley, Mark Derbyshire, Lone Buchwaldt, Syama Chatterton, Valerio Hoyos-Villegas
- B-12 Assessing Powdery Mildew Infection in the Tepary Diversity Panel in Puerto Rico**
Ihann Rosado, Graduate Student, University of Puerto Rico. Department of Agro-Environmental Sciences, Mayagüez Campus
Co-authors: Consuelo Estevez de Jensen and Timothy G. Porch
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Co-authors: Jaqueline B. Silva, Maria Celeste Gonçalves-Vidigal, Mariana Vaz-Bisneta, Giselly F. Lacanallo, Andressa G. V. Rosenberg
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Burcu Celebioglu, Postdoc, University of California, Davis
Co-authors: Jayanta Roy, Andrew Farmer, Stephanie English, Xingyao Yu, Xiaosa Xu, Phillip E. McClean, Paul Gepts, Travis A. Parker
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Lovepreet Singh, Postdoc, Michigan State University
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- B-20 Genetic Variability and Relationships of Yield and Yield Related Traits of Common Bean (*Phaseolus vulgaris* L.) Genotypes Locally Grown and in Burundi**
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Co-authors: Susan Nchimbi-Msolla, Paul M. Kusolwa, Teshale Assefa and Clare Mugisha Mukankusi
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Elisabeth Portilla Benavides, Graduate Student, Regional Service for Agrofood Research and Development (SERIDA)
Co-authors: C. García-Fernández, A. Campa, JJ Ferreira
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Emily Fratz, Graduate Student, Cornell University
Co-authors: Jamie Crawford, Virginia Moore
- B-24 Understanding Heat Tolerance in *Phaseolus vulgaris* Through Comparative Genomics**
Leah Tomey, Graduate Student, University of Georgia
Co-authors: John P. Hamilton, Kathrine Mailloux, Joshua C. Wood, Brieanne Vaillancourt, Tim Porch, C. Robin Buell
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Sassoum Lo, Research Scientist, University of California, Davis
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Mohammad Erfatpour, Research Associate, University of Guelph
Co-authors: Gregory Perry, Maryam Vazin, Karl Peter Pauls
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Co-authors: Ilyas Ahmad, Donna K. Harris
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Hector Buendia, Research Scientist, CIAT
Co-authors: Teshale Mamo, Steve Beebe, Jennifer Wilker



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Hector Buendia, Research Scientist, CIAT
Co-authors: Elizabeth Portilla; Bodo Raatz; Christian Cadena; Jennifer Wilker
- B-31 Expanding Genetic Diversity in Common Bean Through EMS Mutagenesis: A Novel Platform for Variant Discovery and Candidate Genes Validation**
Angelo Gaiti, Graduate Student, University of Milan
Co-authors: Chiara Russo, Eleonora Cominelli, Giulio Testone, Paolo Cozzi, Dario Paolo, Massimo Galbiati, Alessia Losa, Tea Sala, Elena Avite, Paolo Andreatta, Carlo Pozzi, Francesca Sparvoli
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Aashvi Patel, Graduate Student, University of Guelph
Co-authors: Sajal Ahlawat, Mohsen Yoosefzadeh Najafabadi
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Nusrat Khan, Postdoc, North Dakota State University
Co-authors: Sara D. Long, Jose C. Figueroa-Cerna, Juan M. Osorno
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Isabella Arruda, Postdoc, Rural Development Institute of Paraná State – IAPAR-EMATER (IDR-Paraná)
Co-authors: Elizeu David dos Santos; José dos Santos Neto; Vania Moda-Cirino
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Grace Sidberry, Graduate Student, Michigan State University
Co-authors: C. Robin Buell, K. A. Cichy, Miranda J. Haus
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Frank Reith, Research Associate, University of Delaware
Co-authors: Emmalea Ernest, Rahul Raman, Maria Balota
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Burcu Celebioglu, Postdoc, University of California, Davis
Co-authors: John P Hart, Timothy Porch, Phillip Griffiths, Travis A. Parker, James R Myers
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Sachintha Attanayake, Graduate Student, University of Saskatchewan
Co-authors: K. E. Bett, I. J. Oreznik, I. G. C. diCenzo, and A. Vargas
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Raymond Glahn, Research Scientist, USDA
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Jaclyn Adaskaveg, Postdoc, University of California, Davis
Co-authors: Jason Wiesinger, Yukina Murata, Antonia Palkovic, Raymond Glahn, Paul Gepts, Karen Cichy, Jean-Xavier Guinard, Christine Diepenbrock
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Sangita Subedi, Graduate Student, Department of Plant and Environmental Sciences, Clemson University
Co-author: Jenna Hershberger
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Lovepreet Singh, Postdoc, Michigan State University
Co-authors: Om Sai Madhav Lella, Evan Wright, Valerio Hoyos-Villegas
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Maryam Vazin, University of Guelph
Co-author: K. Peter Pauls





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Co-authors: Jim J. Heitholt, Donna K. Harris
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Co-authors: Alma Chinchilla, Caitlin C. Gross, Uta McKelvy, Frankie K. Crutcher
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Carmen Murphy, Montana State University
Co-authors: Brelsford M, Gunnink Troth E, McKelvy U
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Monica Brelsford, Montana State University
Co-authors: Uta McKelvy, Carmen Murphy, Malaika Ebert, Francisco Bittara Molina
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Co-authors: Thavarajah D
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Mark Dempsey, Clemson University
Co-authors: Bridges, W., Thavarajah, D.
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Carolina Ballén-Taborda, Clemson University
Co-authors: Tristan Lawrence, Emerson Shipe, Shiv Kumar, George Vandemark, Dil Thavarajah
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Co-authors: Gregory Inzinna, Micheal Mazourek
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Co-authors: George Vandemark, Dil Thavarajah
- N-53 Flavor Chemistry and Genetics of Organic Pea (*Pisum sativum* L.)**
Nathan Windsor, Clemson University
Co-authors: Chamodi Senarathne, Carolina Ballen Taborda, Diego Rubiales, Dil Thavarajah
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Sayantini Paul, University of Nebraska–Lincoln
Co-authors: Dipak Santra, Kaustav Majumder



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Tristan Lawrence, Clemson University

Co-authors: Amod Madurapperumage, Adam Niemczura, Pushparajah Thavarajah, Leung Tang, Dil Thavarajah

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Francis Reith, University of Delaware

Co-authors: Emmalea Ernest, Rahul Raman, Maria Balota

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