AMERICAN PHYTOPATHOLOGICAL SOCIETY 77th NORTH CENTRAL DIVISION MEETING

PROGRAM

June 9 – 11, 2025
South Dakota State University
Brookings, South Dakota

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AMERICAN PHYTOPATHOLOGICAL SOCIETY

77th NORTH CENTRAL DIVISION MEETING PROGRAM

Colleagues,

Welcome to the 77th annual meeting of the American Phytopathological Society North Central Division. This year meeting marks the 5th time that the divisional meeting has been hosted in South Dakota. We feel honored to host this meeting and bring our colleagues together in Brookings! Through the generous support of many sponsors, South Dakota State University, SDSU Extension, and Brookings Tourism, we hope that this time together will facilitate collaborations and connections that continue to inform your professional careers. To the students, we encourage you to take full advantage of this smaller meeting venue to connect and build your professional network.

Our meeting will be hosted primarily at McCrory Gardens on SDSU Campus, with noted exceptions of Welcome Reception at Good Roots and the poster session at Raven Building. At Good Roots, we will have a cash bar with drink tickets (included in your registration) and a full BBQ dinner including beef, pork, chicken, and vegetarian options. We will provide light breakfast on each morning. The Award Banquet will have a cash bar and drink tickets will also be available for the social time and throughout the evening. Banquet night menus will feature a beef and pork carving station, along with vegetarian options for those who requested, with dessert featuring a selection of cupcakes. Photographs will be taken during this meeting. As a meeting registrant and attendee, you agree to allow the NC-APS to use your photo in APS publications and on the NC-APS website and social media pages. As a courtesy to presenters, please ***do not take photos*** of posters or presentations slides without presenter approval.

Welcome to Brookings!

Maddi Shires
NC APS Division President

Monday, June 9, 2025

9:00 – 4:00 PM **South Dakota Ag Tour**
Meet at McCrory Gardens @ 8:45

Tour Details: Due to high demand, we will have two tour groups. Morning activities that the full group will participate in include touring a U-Pick, High Tunnels, and Local Foods Education Center. After lunch at Good Roots, we will split into pre-determined groups with the first 25 registered (Group 1) heading to South Dakota Soybean and Houdek and the second group (Group 2) heading to Schade. Group 1 will tour both facilities and then tour Schade, finishing the tour around 4pm. Group 2 will head back to Brookings after Schade, finishing the tour around 2:30pm.

Posters can be placed on display between 8 and 6 in the Raven Building (Address: 1030 Campus Drive).

3:00 PM – 5:00 PM Registration table open
McCrory Gardens Atrium
(will move to Good Roots after 5)

5:30 PM- 9:00PM **Welcome Reception and Dinner**
Good Roots (3712 Medary Ave).

Good Roots is located NORTH of town. Be looking for a sign and a large red barn on the right side of the road when headed north on Medary. Parking is available on site. Bar services (ticketed and cash) will start at 5:30 with dinner starting at 6:30. Seating will be outside (weather dependent).

7:30 PM **Graduate Student Social**
Upstairs of Good Roots

On Campus Parking Registration:
https://www.offstreet.io/events/OUVJV0AZ

Tuesday, June 10, 2025

7:30 – 8:30 AM	Pastries and Drinks (provided) *McCrory Garden Atrium*
7:30 – 9:00 AM	Registration table open *McCrory Garden Atrium*
8:00 – 8:20 AM	**Welcome** **Dr. Joseph Cassady**, Dean of the College of Agriculture, Food, and Environmental Sciences **Dr. John Blanton**, Associate Dean of CAFES/Director of Agricultural Experiment Station **Dr. Brent Turnipseed**, Interm Department Head of AHPS **Madalyn Shires**, NC-APS President
8:20 – 9:32 AM	**1st Session: Disease Survey, Screening, and Pathogen Detection (* non-competitive speakers)**
8:20 – 8:32 AM	**Reaction of a clubroot resistant *Brassica napus* Plant Introduction (PI) set to a putative new clubroot pathotype**- Neeraja Narra, Venkata Chapara, Luis del Rio Mendoza, *North Dakota State University*
8:32 – 8:44 AM	**Pathogenicity Testing of Possible Crown Rot Pathogens in Corn**- Christopher Termunde, Chikoti Mukuma, Tamra Jackson-Ziems, *University of Nebraska – Lincoln*

8:44 – 8:56 AM	**Wheat streak mosaic virus was highly prevalent in a 2024 Michigan winter wheat virus survey**- Martin I. Chilvers, Keeley Satterfield, Janette Jacobs, *Michigan State University*
8:56 – 9:08 AM	**A Survey of Plant-Parasitic Nematodes Associated with Soybean Production in Missouri**- Jefferson Barizon, Alexandria Haafke, Meghan Biggs, Mandy Bish, *University of Missouri*
9:08 – 9:20 AM	**Bacterial Leaf Streak and *Pantoea spp.* in Northern Great Plains Corn**- Ciera Kotaska, Sophia Enter, Darcy Geerson, Tasneem Fathima, Claire Galvin, Nabina Karki, Tamra Jackson-Ziems, Rodrigo B. Onofre, Madalyn Shires, *South Dakota State University*
9:20 – 9:32 AM	**Evaluating the Effectiveness of Peking Soybean for Soybean Cyst Nematode Management in Missouri**- Feyisayo Akande, Alexandria Haafke, Jefferson Barizon, Mandy Bish, *University of Missouri*

9:32 – 9:56 AM	**2nd Session: Disease Resistance Mapping**
9:32 – 9:44 AM	**Genetic Dissection of Bacterial Leaf Streak Resistance in Wheat Reveals Pathogen Complexity and Genomic Targets for Breeding**- Muhammad Ahmad, Jose L. Gonzalez. Hernandez, Guihua Bai, Jeffrey D. Boehm Jr., Shyam Solanki, Karl D. Glover, Gazala Ameen, *South Dakota State University*
9:44 – 9:56 AM	*__Screening USDA soybean accessions for resistance to *Rhizoctonia solani* AG 2-2 IIIB__- Denis Colombo, Matias Dominguez, Taofeek Mukaila, Athul Manoj, Febina Mathew, *North Dakota State University*
9:56 – 10:04 AM	**Discovering Resistance to Bacterial leaf streak disease in Global Durum Wheat panel**- Tapish Pawar, Muhammad Ahmad, Chunki Lau, Shyam Solanki, Karl D. Glover, Jeffrey D. Boehm Jr., Filippo Bassi, Gazala Ameen, *South Dakota State University*
10:05 – 10:30 AM	**Break (Light Snacks and Drinks)** ***Sponsored by South Dakota Corn Council***

10:30 – 11:18 AM	**3rd Session: Plant-Pathogen Interaction**
10:30 – 10:42 AM	**Spatial Transcriptions: A Powerful Tool to Explore Gene Expression Across Tissue Regions During Plant-Pathogen Interaction**- Nikhil Lnu, Karl D. Glover, Nidhi Rawat, Jose L. Gonzalez. Hernandez, Pawel Borowicz, Gazala Ameen, Shyam Solanki, *South Dakota State University*
10:42 – 10:54 AM	***AtNHR2A and AtNHR2B: two players of plant secretory pathways functioning in stress responses against non-adapted pathogens**- Thiago Maia, Biwesh Ojha, Sophie Alvarez, Michael Naldrett, Clemencia Rojas, *University of Nebraska-Lincoln*
10:54 – 11:06 AM	**Functional characterization of genes involved in rcs5 mediated spot blotch resistance in Barley**- Muhammad Asif. Nawaz, Meenu Singh. Sengar, Brian Steffenson, Bob Brueggeman,Shyam Solanki, Gazala Ameen, *South Dakota State University*
11:06 – 11:18 AM	**Connecting Stomatal Regulation and Immune Function: Characterizing the Ancestral Progenitor of the Barley NLR Rpg5's Alien Inserted Domain**- Israel Akinlabi, Shyam Solanki, Gazala Ameen, Bob Brueggeman, *South Dakota State University*

11:18 – 11:54 AM	**4th Session Genetics and genomics of pathogen Virulence**
11:18 – 11:30 AM	**Comparative genome analysis of *Fusarium luffae* causing soybean wilt to characterize effectors associated with evolved pathogenicity**- Sachin Sharma, Gazala Ameen, Jose L. Gonzalez. Hernandez, Shyam Solanki, *South Dakota State University*
11:30 – 11:42 AM	**Reproduction potential of root-lesion nematode, *Pratylenchus scribneri* under different population densities, with selected corn cultivars**- Rekha Neupane, Guiping Yan, Andrew Friskop, Claire Keene, *North Dakota State University*
11:42 – 11:54 AM	**Response of sunflower to culture filtrates from *Diaporthe gulyae* and *D. helianth*i causing Phomopsis stem canker**- Karthika Mohan, Daniel Back, William Underwood, Melvin Bolton, Robert Harveson, Samuel Markell, Megan McCaghey, Febina Mathew, *North Dakota State University*
12:00 – 1:30 PM	**Lunch/ Student Professional Development Lunch** ***McCrory Great Room (by ticket only)*** ***Sponsored by BASF and FMC***

1:30 – 3:00 PM	**5th Session: Disease Management via chemical and biological and microbiome**
1:30 – 1:42 PM	**Comparison of UAV and Airplane for Fungicide Application in Missouri Corn Production**- Jesse Yount, Mandy Bish, Rusty Lee, Wayne Flanary, Mattheus Noguera, Kevin Bradley, *University of Missouri*
1:42 – 1:54 PM	**Fluopyram Sensitivity in *Fusarium virguliforme* Isolates Associated with Soybean (Glycine max L.) Sudden Death Syndrome**- Nitha Rafi, Ryan Hamilton, Hossein Moradi Rekabdarkolaee, Dilorom Rasuleva, Suzette Baldwin, Alyssa Betts, Martin I. Chilvers, Ahmad Fakhoury, Heather Marie Kelly, Dean Malvick, Daren S. Mueller, Taofeek Mukaila, Damon Smith, Richard Webster, Febina Mathew, *North Dakota State University*
1:54 – 2:06 PM	***Beneficial and pathogenic fungi associated with high soybean cyst nematode infestation and their response to plant sugars**- Timothy S. Frey, Melanie Medina Lopez, Niah Cohen, Olivia Humbert, Angelica Rebollar Garcia, Horacio Lopez-Nicora, Soledad Benitez Ponce, *The Ohio State University*

2:06 – 2:18 PM	**Refining the rhizosphere microbial consortia for enhanced biocontrol of corn pathogens**- Pranaya Kaki, Devanshi Khokahni, *University of Minnesota*
2:18 – 2:30 PM	**Towards Efficient Harnessing of the Soil Microbial Managers for Nutrient Uptake and Disease Resistance in Cereal Crops**- Riya Jain, Nikhil Lnu, Sachin Sharma, Brian Kontz, Arsalan Quresh, Sukhvir Kaur, Ravi Mural, Jose L. Gonzalez. Hernandez, Volker Brozel, Gazala Ameen, Christopher Graham, Shyam Solanki, *South Dakota State University*
2:30 – 2:42 PM	**Evaluating a Saponin Biological Seed Treatment on Soybean Disease and Yield in Michigan and the Challenges in Biological Seed Treatment Efficacy**- Ryan Hamilton, Eric Anderson, Hyunkyu Sang, Dechun Wang, Martin I. Chilvers, *Michigan State University*
2:42 – 2:54 PM	**Biocontrol potential of a bacterial strain against *Fusarium spp.* in pulses**- Suruchi Aryal, Danielle Tarver, Malaika K. Ebert, *North Dakota State University*
2:54 – 3:06 PM	**Evaluating Oregano Essential Oil Seed Treatments for Managing Root Rot Pathogens of Dry Peas in Montana**- Rowan Edwards, Carmen

	Murphey, Monica Brelsford, Uta McKelvy, *Montana State University*
3:06 – 3:30 PM	**Break @ Raven Building** ***Sponsored by South Dakota Corn*** **Snacks in the Atrium, Seating and drinks in Room 183**
3:30 – 5:30 PM	**Poster Session at Raven Building: 1030 N Campus Dr, Brookings, SD 57007**
5:30 – 9:00 PM	**Banquet at McCrory Gardens: 631 22nd Ave, Brookings, SD 57007** ***Dinner Sponsored by Bayer, Venue sponsored by SDSU CAFES- Cash/Tickets Bar opens at 5:30, Dinner at 6:30***

Wednesday, June 11, 2025

8:00 – 8:30 AM	Light Breakfast (provided) *McCrory Garden Atrium- Sponsored by South Dakota Soybean*
8:30 – 10:30 AM	Business meeting *McCrory Gardens Great Room*
10:30 – 11:30 AM	Corn Stunt Discussion with Dr. Maira Duffeck and Dr. Ashleigh Farris, Oklahoma State University *McCrory Gardens Great Room*

Poster Presentation Order

Non-Competitive Poster Presentation

1. **Assessing Winter Pennycress (*Thlaspi arvense*) as a Potential Trap Crop for Soybean Cyst Nematode (Heterodera glycines) Management**-Fariba Heydari Soreshjani, Cody Hoerning, Julia X. Zhang, James A. Anderson, Mitch Hunter, Donald Wyse, Senyu Chen, *University of Minnesota*

2. **Comparing mycelia-based infection methodologies for Aphanomyces root rot disease in peas**-Francisco G. Bittara Molina, Carmen Murphy, Malaika K. Ebert, *North Dakota State University*

3. **Cyanobacterium Nostoc species enhanced soybean against soybean cyst nematode**- Chuntao Yin, Nathan Lahr, Ruanbao zhou, *South Dakota State University/USDA-ARS*

4. **Efficacy of fungicides on foliar fungal diseases and their impact on cucumber yield in South Dakota**-Janani Perera Waduwarage Dona, Keigo Imai, Sean Toporek, *South Dakota State University*

5. **Evaluating Biologicals for Tar Spot Management in Corn**-Juan David. Peña Roncancio, Edward Peña, Morgan Goodnight, Sujoung Shim, Darcy Telenko, *Purdue University*

6. **Evaluation of USDA Soybean accessions for Resistance to *Globisporangium ultimum*-**Milsha George, Matias Dominguez, Denis Colombo, Taofeek

Mukaila, Bijula Sureshbabu, Nitha Rafi, Febina Mathew, *North Dakota State University*

7. **Expanding Free Plant Diagnostic Services for Amish and Mennonite Communities in Missouri**- Dhruba Dhakal, Ramón Arancibia, Peng Tian, *University of Missouri*

8. **Exploring resistance to Aphanomyces root rot in sugar beet using Genome-wide association studies**- Samantha Rude, Olivia Todd, Kevin Dorn, Cory Hirsch, Ashok Chanda, *University of Minnesota - Twin Cities*

9. **Fungicide Comparison for Foliar Diseases of Corn in Indiana**-Edward S. Peña, Juan D. Peña, Morgan Goodnight, Sujoung Shim, Darcy Telenko, *Purdue University*

10. **Fungicide Efficacy Tools for Field Crops from the Crop Protection Network**-Adam Sisson, Ed Zaworski, Kiersten Wise, Albert Tenuta, Daren S. Mueller, *Iowa State University*

11. **Genetic heterogeneity and pathogenicity gene profiling of soil and tuber-derived *Streptomyces spp.* Isolates-** Sonal Srivastava, Kriti Tyagi, Manish Ranjan, Grace Petzold, Ashish Ranjan, *University of Minnesota*

12. **High-Throughput Detection of *Fusarium graminearum* Chemotypes Using a Multiplex High-Resolution Melting assay**-Lovepreet Singh, Milton Drott, Robert Proctor, Hye-Seon Kim, Susan McCormick, J.Mitch Elmore, U*niversity of Minnesota.*

13. **Influence of Capsicum species and cultivars on Alternaria internal rot incidence**-Keigo Imai, Janani Perera Waduwarage Dona, Sean Toporek, *South Dakota State University*

14. **Managing DMI cross resistance in *Cercospora beticola* using tank-mixing and fungicide rotation programs**-Ashok Chanda, James Deleon, Austin Lien, *University of Minnesota*

15. **Pivot irrigation affects corn canopy microclimate and diseases in 2024 eastern Nebraska fields**-Talon M. Mues, Saleh Taghvaeian, Dylan Mangel, Lincoln; Tamra Jackson-Ziems, *University of Nebraska – Lincoln*

16. **Tailgate Diagnostics: Extension Demonstrations of Affordable Microscopes for Expanded Crop Disease Diagnostics**- Claudia L. Barrios, Kyle C. Broderick, Dylan Mangel, Tamra Jackson-Ziems, Amy D. Timmerman, Madilyn K. Shires, Rodrigo B. Onofre, Talon M. Mues, *University of Nebraska-Lincoln*

Student Competition Poster Presentation

17. **A Systematic Analysis of Genome to Phenome Associations in Soybean Frogeye Leaf Spot Pathogen for Fungicide Resistance and Evolving Virulence**-Kyle Reese, Sachin Sharma, Shyam Solanki, *South Dakota State University*
18. **Assessment of aerial drones for applying foliar fungicides to soybean in Indiana**-Monica Sayuri Mizuno, Darcy Telenko, *Purdue University*

19. **Characterizing and monitoring soybean cyst nematode (*Heterodera glycines*) populations in North Dakota**- Addison Plaisance, Dalvir Singh, Dinesh Poudel, Guiping Yan, *North Dakota State University*

20. **Characterizing Fungal Pathogens Associated with Sweetpotato Postharvest Diseases**-Ujjwal Kamboj, Waana Kaluwasha, *Lincoln University of Missouri*

21. **Comparing the impact of soybean disease management levels on yield components using field evaluation**-Cooper Hicks, Bhanu Dangi, Dylan Mangel, *University of Nebraska – Lincoln*

22. **Decoding WAK-Dependent Immune Signaling in Barley *Bipolaris sorokiniana* Pathosystem-** Meenu Singh Sengar, Brian Steffenson, Bob Brueggeman, Shyam Solanki, Gazala Ameen, *South Dakota State University*

23. **Developing an environment-based risk-assessment model for Sclerotinia stem rot in Nebraska soybean fields**- Roshani Baral, Bhanu Dangi, Rebecca Higgins, Dylan Mangel, *University of Nebraska – Lincoln*

24. **Developing a real-time quantitative PCR assay for direct detection and quantification of the root-lesion nematode, *Pratylenchus penetrans*, from potato roots**- Dinesh Poudel, Guiping Yan, *North Dakota State University*
25. **Developing and Evaluating Real Time Recombinase Polymerase Amplification Assay for Detecting *Heterodera glycines***- Nabina Karki, Madalyn Shires, Connie Tande, *South Dakota State University*

26. **Do Fungicide and Insecticide Applications at the R3 Growth Stage Protect Soybean Yield in Missouri?**- Jeova Da Silva, Lennis Rodrigues, Lucas Severo, Alexandria Haafke, Mandy Bish, Ivair Valmorbida, *University of Missouri*

27. **Effect of Humidity on the Efficacy of Foliar Fungicides for Managing Frogeye Leaf Spot in Soybean**-Victor Olubunmi Ayodele, Nabin K. Dangal, José F. González-Acuna, Daren S. Mueller, *Iowa State University*

28. **Effects of Compost Blend and Poultry Manure on Reproduction of *Pratylenchus penetrans* and Performance of Potato**- Addison Plaisance, Bonventure Mumia, Guiping Yan, Marisol Quintanilla, *North Dakota State University*

29. **Efficacy of Selected Fungicides for Management of Phytophthora blight (*Phytophthora capsici*) of Cucurbits**- Sahil Redhu, Mohammad Babadoost, *University of Illinois Urbana Champaign*

30. **Evaluating fungicide application programs to manage Cercospora leaf spot (CLS) of sugar beet**- Anu Ranabhat, Eric Branch, Andrew Fuchs, *North Dakota State University*

31. **Evaluating the role of *Xanthomonas translucens pv. translucens* type III effectors in their virulence on barley**- Sefunmi Alaofin, Gongjun Shi, Timothy Friesen, Zhaohui Liu, *North Dakota State University*

32. **Evaluating the sensitivity of *Phaeocytostroma ambiguum* to fungicides used in commercial seed treatments on corn-** Daniel Kiprop Kimtai, Clarice Schmidt, John Shriver, Alison robertson, *Iowa State University*

33. **Evaluation of aggressiveness of Septoria glycines isolates using detached leaf methods on soybean cultivars**-Parbati Joshi, Nabin K. Dangal, Edgar H. Nieto-Lopez, Daren S. Mueller, *Iowa State University*

34. **Evaluation of Sulfur Fertilizers on Sudden Death Syndrome of Soybean**- Emily Anne Duncan, Shaun Casteel, Darcy Telenko, *Purdue University*

35. **Exploring *Triticum sphaerococcum* germplasm for resistance to wheat stem and leaf rusts**- Gayatri Sharma, Upinder Gill, *North Dakota State University*

36. **Fumonisin Contamination in Corn from Nebraska: A multiyear Snapshot**- Ram Kumar Shrestha, Tamra Jackson-Ziems, Jayne Stratton, Heather Hallen-Adams, Andreia Bianchini, *University of Nebraska-Lincoln*

37. **Fungicide Comparison for Tar Spot on Short Corn**- Emilia Myers, Darcy Telenko, *Purdue University*

38. **Fungicide Efficacy for Managing Sclerotinia Stem Rot on Soybean Genotypes with Varying Susceptibilities**- Rachel Konshok, Hope Renfroe-Becton, Richard Webster, *North Dakota State University*

39. **Fusarium Head Blight (FHB) disease severity in Spring Barley cultivars adapted for South Dakota-**

Tapish Pawar, Tasneem Fathima, Joseph Tilstra, Sunish K. Sehgal, Christopher Graham, Jose L. Gonzalez. Hernandez, Shaukat Ali, Shyam Solanki, Gazala Ameen, *South Dakota State University*

40. **Host–Pathogen Dynamics in Soybean Under Organic Management: Genomic Insights into Organic Acid–Mediated Suppression of White Mold**- Sachin Sharma, Kyle Reese, Gazala Ameen, Shyam Solanki, *South Dakota State University*

41. **Identification and Validation of QTL Conferring Race-nonspecific Resistance to Wheat Tan Spot**- Md. Mukul Islam, Jamie Sherman, Jason P. Cook, Zhaohui Liu, *North Dakota State University*

42. **Identification of Fungal Pathogens in Heirloom Tomato Production**-Monika Pokharel, Waana Kaluwasha, *Lincoln University of Missouri*

43. **Identification of QTLs Associated with Resistance and Susceptibility to Spot Blotch in Two RIL Mapping Population of Barley**- Abraham Hangamaisho, Thomas Baldwin, Belayneh Yimer, *North Dakota State University*

44. **Interspecific interactions and virulence variation among Fusarium species infecting pulses**- Anmol Dhaliwal, Rovel E. Austria, Dmitri Fonseka, Malaika K. Ebert, *North Dakota State University*
45. **Investigating Field Infection in Corn Crown Rot Across Key Growth Stages**-Chikoti Mukuma, Christopher John. Termunde, Tamra Jackson-Ziems, *University of Nebraska – Lincoln*

46. **Mapping and characterization of Wheat Stem Rust Resistance Quantitative Trait Loci**- Sittal Thapa, Jason Fiedler, Upinder Gill, *North Dakota State University*

47. **Mining for new sources of stem rust resistance in the global spring wheat panel**- Md Al Mamun, WooJoo Jung, Giseli Valentini, Harsimardeep S. Gill, Sunish K. Sehgal, Upinder Gill, *North Dakota State University*

48. **Novel *Streptomyces* strains combat phytopathogens and boost plant growth promotion in soybean**- Mia Copeland, Ashish Ranjan, *University of Minnesota*

49. **Optimization of *Agrobacterium*-mediated Transformation in Dodder**-Gopi Chataut, Supral Adhikari, Soyon Park,*University of Missouri-Columbia*

50. **Quantitative Assessment of *Fusarium graminearum* Infection Dynamics in Resistant and Susceptible Barley Genotypes Across Disease Rating Scales**- Abbeah Mae Navasca, Cecelia Castleberry, Brooke Benz, Thomas Baldwin, *North Dakota State University*

51. **Rapid detection of Sdh gene mutations in *Alternaria solani* using the Nanopore amplicon sequencing**- Sunil Shrestha, Jatinder Singh, Upinder Gill, Julie Pasche, *North Dakota State University*
52. **Screening of soybean lines for resistance to soybean cyst nematode, *Heterodera glycines***- Addison Plaisance, Kapil Simkhada, Dinesh Paudel, Guiping Yan, *North Dakota State University*

53. **Synthetic community approach for investigating microbiome assembly and interactions in barley phyllosphere**- Joan Acaso, Brooke Benz, Eglantina Lopez-Echartea, Thomas Baldwin, Barney Geddes, *North Dakota State University*

54. **The NDSU Plant Diagnostic Lab: A Key Resource for Soybean Disease Diagnosis and Management**- Rachel Yeum, Richard Webster, Suzette Baldwin, Febina Mathew, *North Dakota State University*

55. **Tissue Colonization Flexibility of *Xanthomonas translucens pv. translucens* Confers Competitive Advantage Against Other Bacterial Leaf Streak Pathogen of Barley-** Diel Donne Velasco, Glenrose B. Belen, Joan Acaso, Jeffrey Schachterle, Zhaohui Liu, Barney Geddes, Thomas Baldwin, *North Dakota State University*

56. **Towards cloning the dominant gene Rbs7 conferring resistance to a new pathotype of barley spot blotch pathogen *Bipolaris sorokiniana***-Olawumi Amusan, Yueqiang Leng, Md Golam Robbani, Abby d'Eustachio, Shengming Yang, Zhaohui Liu, Shaobin Zhong, *North Dakota State University*

57. **Towards Elucidating the Seed-to-Seed Pathway of *Xanthomonas translucens* on Barley and Wheat**- Glenrose B. Belen, Diel Donne Velasco, Joan Acaso, Zhaohui Liu, Barney Geddes, Thomas Baldwin, *North Dakota State University*

58. **Uncovering Arabidopsis Root Defense: Transcriptomics and Mutant Screening Against Broomrape, *Phelipanche aegyptiaca***- Supral

Adhikari, Sukhmanpreet Kaur, James Westwood, Soyon Park, *University of Missouri-Columbia*

59. **Using female index to track Soybean Cyst Nematode virulence over time in Nebraska**- Olivia Dooley, Pratibha Karki, Kyle C. Broderick, Dylan Mangel, *University of Nebraska – Lincoln*

Conference Notes:

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