



53rd Annual

**NORTH CENTRAL EXTENSION-INDUSTRY
SOIL FERTILITY CONFERENCE**

**15-16 November
2023**

Planning Committee

Chair: Ed Lentz, The Ohio State University

Paul Carter, Corteva – Retired

Jason Clark, South Dakota State University

Matt Clover, Corteva

Dorivar Ruiz Diaz, Kansas State University

David Franzen, North Dakota State University

Andrew Hoiberg, Calcium Products Inc.

Daniel Kaiser, University of Minnesota

Corey Lacey, Alta/USI

Cristie Preston, Simplot

Bill Urbanowicz, Spectrum Analytic Inc.

Conference Organizer: PAQ Interactive, Inc.

ONLINE PROCEEDINGS: northcentralfertility.com



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WEDNESDAY, NOVEMBER 15

- 1:00 pm Welcome
- 1:05 pm **Overview of Biostimulant Classification and Industry Perspective**
Cristie Preston - J.R. Simplot
- 1:35 pm **Potentials and Constraints for Successful Bioinoculants**
Chuck Rice - Kansas State University
- 2:05 pm Poster Break
- 3:00 pm **Summary of Regional Studies in Corn on Selected Commercial Asymbiotic N-fixing Organisms and Suggestions for Companies Developing Similar Products**
David Franzen - North Dakota State University
- 3:30 pm **Biostimulants Panel**
- 4:00 pm **Assessing Sulfur Response, Utilization Efficiency, and Diagnostic Tools for Corn in Kansas**
Dorivar Ruiz Diaz - Kansas State University
- 4:20 pm **Is There an Optimal Source of Sulfur for Corn?**
Daniel Kaiser - University of Minnesota
- 4:40 pm Poster Break and Cash Bar
- 5:45 pm Banquet and Awards

THURSDAY, NOVEMBER 16

- 8:00 am **Ag Economy and Policy Outlook for 2024**
Chad Hart - Iowa State University
- 8:40 am **Optimizing Nitrogen Management for Sustainable Production of Furrow-Irrigated Corn in Nebraska Panhandle**
Deepak Ghimire - University of Nebraska-Lincoln
- 9:00 am **Evaluation of Instinct II and Radiate on Soft Red Winter Wheat in Northwest Ohio**
Ed Lentz - Ohio State University Extension
- 9:20 am Poster Break
- 10:20 am **Fertilizer Industry Update – Markets, Trends, and New Directions**
Alan Blaylock - Nutrien Inc
- 11:00 am **Re-evaluating Phosphorus and Potassium Management for Corn, Soybean, and Wheat in Ontario**
Colin Elgie - Ontario Ministry of Agriculture, Food, and Rural Affairs
- 11:20 am **Carryover Effects of Sulfur Fertilization from One Cropping Season to the Next**
James Camberato - Purdue University
- 11:40 am **Comparing Yield Goal and Maximum Return to N Based Methods in Predicting Corn Economic Optimal Nitrogen Rates**
Jason Clark - South Dakota State University
- 12:00 pm Closing Remarks

POSTER PRESENTATIONS

GENERAL

Comparison of Wheat and Barley to Rye as a Cover Crop for Corn

Rob Nalley - University of Kentucky

Developing a Sustainable Sufficiency Paradigm

Megan Bourns - Kansas State University

Does Nitrogen Fertilization with Manure Injection Versus Surface Application Influence Corn for Silage and Winter Rye Yield, Quality, Phosphorus Balance and Soil Test Phosphorus Over Three Years?

Sirwan Babaei - Southern Illinois University

Does Nitrogen Management in Winter Wheat Affects Its Yield and Nitrate-N Leaching in a Wheat-Soybean Double Cropping System?

Oluwaseun Ola - Southern Illinois University

Examination of Topography and Soil Health Properties and Their Relationship to Corn Yield Stability in Central Iowa Agricultural Fields

Leanne Makens - Iowa State University

Exploring the Impact of Temporal Variability in Emergence on Corn Grain Yield and Development Patterns

Larousse Dorissant - South Dakota State University

Impact of Cover Crop Composition on Nitrogen Application Rates and the Subsequent Yields of Corn and Soybean

Srinadh Kodali - South Dakota State University

In-season Application of Swine Manure to Corn

Melissa Wilson - University of Minnesota

Integration of Satellite and UAV Imagery for Assessing Corn Nitrogen Uptake at Early Vegetative Growth Stages

Ana Gabriela Morales Ona - Purdue University

Investigating Soybean Response to Phosphorus with a Cover Crop and Fertilizer Combination in Kansas

Jovani Demarco - Kansas State University

Nitrogen Fertilizer and Irrigation Effects on Soil and Plant Nitrogen Dynamics

Tyler Donovan - Colorado State University

Nitrogen Fertilizer Rates and Nitrification Inhibitor Impact Agronomic and Economic Returns in Corn Production in Kansas

Pedro Morinigo Ferreira - Kansas State University

Response of Corn to Planting Methods of Cover Crop Species and Nitrogen Rate in Southern Illinois

Gulcin Sener - Southern Illinois University

GRADUATE AWARD STUDENT POSTER

Cereal Rye Cover Crops Mitigate Soil Phosphorus Stratification from Long-term No-tillage

Reid Barker - Iowa State University

Conservation Practices Lower Soil Test Phosphorus Requirements and Optimize Crop Yield

Clarence Winter - South Dakota State University

Corn Response to Nitrogen Fixation Technology in Upstate Missouri

Dustin Steinkamp - University of Missouri

Does Sensor-based Nitrogen Management Maintain Crop Production and Decrease Nitrate-N Leaching?

Osman Guzel - Southern Illinois University

Effect of Long-Term Tillage and Crop Rotation on Mineral Associated Organic Matter Distribution Along the Soil Profile

Asmita Gautam - Purdue University

Effects of Fertilizer Nitrogen Management on Biomass, Oil, and Nitrous Oxide Emissions in Peppermint in Nebraska Panhandle

Sujani De Silva - University of Nebraska-Lincoln

Effects of Variable Nitrogen Fertilizer Rates on Corn Grain Yield, Profitability, and Nitrogen Losses in Southwestern Minnesota

Zachary Aanerud - University of Minnesota

Employing Statistical Models to Determine the Soil Tests and/or Soil Characteristics that Improved EONR Prediction in Corn

Daniela Orjuela Diaz - University of Wisconsin-Madison

Influence of Biological Seed Treatment on Soybean Grain Yield in the U.S.

Fabiano Colet - The Ohio State University

The Alfalfa Yield Plateau: is Soil Fertility the Cause?

William Fleming - University Of Kentucky

Water Use Efficiency and Soil Changes After Long-term Crop Rotation Under Limited Irrigation

Paula Garcia - Kansas State University

GRADUATE STUDENT POSTER/STATE REPORT

Impacts from Autumn Starter Fertilizer, Late-season Nitrogen, and Fungicide Timing on Winter Wheat Yield, Straw, and Quality

Maria Kenneth Lane Suplito - Michigan State University

Soil Carbon Additions Improve Soil Nutrient Cycling and Yield of Corn

Darby Danzl - University of Illinois

STATE POSTER

Comparing the Effectiveness of Calcium Products in Neutralizing Soil Acidity

Edwin Ritchey - University of Kentucky

Corn Nitrogen Requirement in Winter Cereal Cover Crop Trials in Southern Illinois

Amir Sadeghpour - Southern Illinois University

Effects of Soil Phosphorus and Potassium Levels on Corn Yield Response to Nitrogen Fertilization, Nitrogen Use Efficiency, and Profitability

John Jones - University of Wisconsin-Madison

Iowa Phosphorus and Potassium Soil-test Interpretations Were Updated in 2023: Changes and Reasons

Antonio Mallarino - Iowa State University

Revamping Nitrogen Fertilizer Recommendations for Missouri

Gurbir Singh - University of Missouri

Thank You to our Sponsors

We would like to extend a thank you to all of our sponsors for the 53rd North Central Extension-Industry Soil Fertility Conference.



This event was made possible through the financial support of the fertilizer industry.

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