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Agricultural Laboratory Proficiency Program



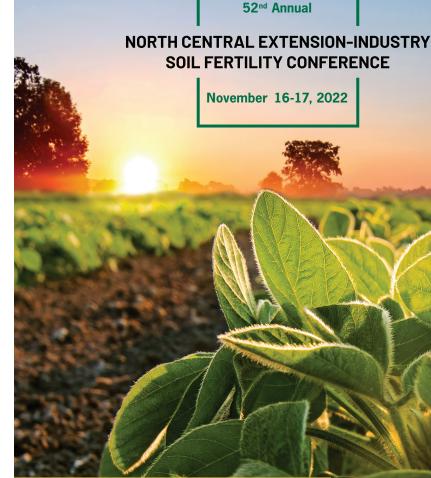




NORTH CENTRAL EXTENSION-INDUSTRY SOIL FERTILITY CONFERENCE

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Planning Committee

Chair: David Franzen, North Dakota State University Ed Lentz, The Ohio State University Jason Clark, South Dakota State University Daniel Kaiser, University of Minnesota Matt Ruark, University of Wisconsin-Madison Cristie Preston, Nutrien Matt Clover, Corteva

> Conference Organizer: PAQ Interactive, Inc. ONLINE PROCEEDINGS: northcentralfertility.com



52nd Annual NORTH CENTRAL EXTENSION-INDUSTRY SOIL FERTILITY CONFERENCE

WEDNESDAY, NOVEMBER 16

- 1:00 pm Welcome
- 1:05 pm Integrated and Impactful Research and Extension Through Digital On-farm Research Laura Thompson, University of Nebraska-Lincoln
- 1:40 pm **Practical Farmers of Iowa On-farm Research Program** Stefan Gailans, Practical Farmers of Iowa
- 2:15 pm Poster Break
- 3:30 pm **Design, Wrangling and Analysis of an On-farm Strip Trial Iowa Soybean Association Methodologies** Scott Nelson, Iowa Soybean Association Research Center for Farming Innovation
- 4:05 pm The Ammonia Rainbow Alan Blaylock, Nutrien Inc
- 4:40 pm Poster Break and Cash Bar
- 5:45 pm Banquet and Awards

THURSDAY, NOVEMBER 17

- 8:00 am Pelleted Lime Application Strategies for Iowa Corn and Soybean Production Antonio Mallarino, Iowa State University
- 8:20 am N, S and Micronutrient (B + Zn) Interactions in Soft Red Winter Wheat Nutrition John Grove, University of Kentucky
- 8:40 am Agronomic Management of Nitrogen to Reduce N2O Emissions in Manitoba John Heard, Manitoba Agriculture
- 9:00 am Utilizing Fertilizer and Fungicide Strategies to Enhance Winter Wheat Grain and Straw Production Kurt Steinke, Michigan State University
- 9:20 am Poster Break
- 9:55 am Carbon Credit and Sequestration in Agroecosystems; Lessons from Trials in Southern Illinois Amir Sadeghpour, Southern Illinois University Carbondale
- 10:30 am Landscape Position Affects Management Decisions for Crop Production Gurbir Singh, University of Missouri
- 10:50 amAdvances in North Dakota Soil Fertility 2022David Franzen, North Dakota State University
- 11:10 amCover Crops, Manure, and Nitrogen
Matt Ruark, University of Wisconsin-Madison
- 11:30 am Closing and Adjourn

POSTER PRESENTATIONS

GENERAL

A Minnesota-Wide Assessment of Critical Pre-Plant and in-Season Soil Nitrate for Adjusting Nitrogen Rate Guidelines Emerson Souza, University of Minnesota

Biochemical Soil Health Indicators Related to Economic Optimum Nitrogen Rate in Corn Daniela Orjuela Diaz, University of Wisconsin-Madison

Comparison of Wheat and Barley to Rye as a Cover Crop for Maize Rob Nalley, University of Kentucky

Evaluation of Soybean Response to Surface and Sub-surface Phosphorus Fertilizer Placement Jovani Demarco, Kansas State University

Lower Soil Test P Values Do Not Affect Crop Yield Values when Under Conservation Practices Clarence Winter, South Dakota State University

Updating Soil-test Phosphorus and Potassium Calibrations for Wisconsin John Jones, University of Wisconsin-Madison

GRADUATE AWARD STUDENT POSTER

Manure Total Nitrogen Variability Due to Analytical Method and Total Solids Content Nancy Bohl Bormann, University of Minnesota

Assessing the Impact of the 4R Nutrient Management on Nitrogen Use Efficiency in Corn

Pedro Morinigo Ferreira, Kansas State University

Benchmarking Nitrogen Recommendation Tools for Nebraska Winter Wheat Jose Cesario Pinto, University of Nebraska-Lincoln

Consideration of Clay Mineralogy for Enhanced Prediction of Optimal Corn Potassium Fertilizer Rates Andrew Ahlersmeyer, South Dakota State University

Cover Crop Species and Planting Methods Influence on Corn N Requirement in Southern Illinois Casey Kula, Southern Illinois University Carbondale

Does Interseeded Cover Crops Composition Affect Corn N Fertilizer Needs and Corn and Soybean Yields? Srinadh Kodali, South Dakota State University

Drainage and Nitrogen Management Affects Soil Health and Soil Properties Harpreet Kaur, University of Missouri Columbia Effects of Silicon Supplementation on Growth and Silicon Accumulation in Tall Fescue (*Festuca arundinacea*) and Bentgrass (*Agrostis stolonifera*) *Sara Qian, University of Kentucky*

Improving Digital Soil Maps for Site-specific Soil Fertility Management Using Feature Selection Caner Ferhatoglu, Iowa State University

Managing Trade-offs of Winter Rye as a Cover Crop Monica Schauer, University of Wisconsin Madison

Soybean Biological Nitrogen Fixation and Production As Affected by Starter Fertilizer, Nitrogen Application, and Planting Date Storm Soat, Michigan State University

Individual Leaf Selection to Best Represent Whole-Plant Nutrient Status in Modern Corn Cropping Systems Brendan Hanson, Purdue University

Versatility of Mycorrhizal Fungi Applications to Increase Maize Productivity Logan Woodward, University of Illinois Urbana-Champaign

GRADUATE AWARD STUDENT/STATE POSTER

Elucidating How N Management Practices and Excess Water Conditions Affect Corn N Uptake and Grain Yield Wanderson Novais, The Ohio State University

STATE POSTER

Corn Responses to Sulfur Fertilizer in Indiana James Camberato, Purdue University

Evaluation of Plant Tissue Analysis to Assess Phosphorus Nutritional Status in Corn and Soybean Gustavo Roa, Kansas State University

Evaluation of Soil Test Potassium Guidelines in Minnesota Daniel Kaiser, University of Minnesota

Promoting Adoption of Precision Nitrogen Management Technologies Through On-farm Research Laura Thompson, University of Nebraska - Lincoln

Updating Phosphorus Recommendations for Illinois Andrew Margenot, University of Illinois Urbana-Champaign

What Soil Measurements Relate Best to Corn Economic Optimal N Rate? Jason Clark, South Dakota State University