



54th Annual

NORTH CENTRAL EXTENSION-INDUSTRY SOIL FERTILITY CONFERENCE

November 20-21
2024

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WEDNESDAY, NOVEMBER 20

- 1:00pm Welcome
- 1:05pm **Managing Phosphorus and Potassium Soil Test Levels and Effects on Corn Response to Nitrogen with Variable Crop Prices**
John Jones - University of Illinois Urbana-Champaign
- 1:50pm **Phosphorus Management in the North Central Region: A Brief History, Current Unknowns and Next Steps**
Andrew Margenot - University of Illinois Urbana-Champaign
- 2:35pm Student Poster Minute
- 3:05pm Poster Break
- 3:40pm **Management Practices to Minimize Edge-of-Field Phosphorus Loss**
Lindsay Pease - University of Minnesota
- 4:25pm **Updating Nitrogen, Phosphate and Potash Rate Recommendations (AGR-1) for Kentucky Grain Growers**
John Grove - University of Kentucky
- 4:45pm Poster Break and Cash Bar
- 5:30pm Banquet and Awards

THURSDAY, NOVEMBER 21

- 8:00am **Implication of Soil Conservation Practices on Fertility Management**
Francisco Arriaga - University of Wisconsin-Madison
- 8:45am **The Iowa Nitrogen Initiative**
Sotirios Archontoulis - Iowa State University
- 9:05am **Is Field Crop Contamination with Heavy Metals an Emerging Concern?**
Kurt Steinke - Michigan State University
- 9:25am Poster Break
- 10:20am **The Three-Legged Stool: Nitrogen, Environment, and Crop Production**
Fabián Fernández - University of Minnesota
- 11:05am **Corn Grain Yield Response to Nitrogen Rate Timing, Source, and Nitrification Inhibitor in Missouri**
Gurbir Singh - University of Missouri
- 11:25am **Cover Crops and Nitrogen Cycling in North Dakota Cropping Systems**
Brady Goettl - North Dakota State University
- 11:45am **Wisconsin's Nitrogen Optimization Pilot Program: Highlights and Successes of On-Farm Research**
Monica Schauer - University of Wisconsin-Madison
- 12:05pm **Cover Crop Species and Planting Methods Influence on Corn N Requirement in Southern Illinois**
Amir Sadeghpour - Southern Illinois University
- 12:25pm End of Conference, Safe Travels Home!

POSTER PRESENTATIONS

Graduate Student Award Posters

- 1 Soybean Response to Phosphorus Fertilizer and Cover Crop Combination in Kansas
Jovani Demarco - Kansas State University
- 2 Finding the “Sweet” Spot: Nitrogen Strategies for Variable Sugarbeet Harvest Timings
Spencer Fleming - Michigan State University
- 3 Nitrogen Dynamics and Agronomic-Environmental Impacts of Annual Vs. Perennial Cover Crops in Irrigated Corn-Soybean Systems on Sandy Soils
Eduardo Garay Lagos - University of Minnesota
- 4 Can CRP Serve As a Soil Health Benchmark: A Minnesota Case Study Utilizing SMAF
Oliver Hoffman - The Ohio State University
- 5 A Direct Approach to Measure Cover Crop Nitrogen Uptake from Dairy Manure Via 15N Enrichment
Tanner Judd - University of Wisconsin-Madison
- 6 Cover Crop Composition: Implications for Crop Yields, Nitrogen Use, and Soil Health in Corn-Soybean Rotations
Srinadh Kodali - South Dakota State University
- 7 Landscape Positions and Nitrification Inhibitors Affect Corn Productivity and Grain Quality on Claypan Soils
Pranay Kumar Kadari - University of Missouri-Columbia
- 8 Effect of Phosphorus and Potassium Application on the Growth and Yield of a 14 Year Old Miscanthus X Giganteus Stand
Ashton Larson - Iowa State University
- 9 Can Multi-Year Fertilizer Applications Improve Productivity in a Corn and Soybean Rotation?
Samuel Leskanich - University of Illinois
- 10 The Effect of Nitrogen Management in Winter Wheat on Nitrous Oxide Emissions in a Wheat-Soybean Double Cropping System
Oluwaseun Ola - Southern Illinois University
- 11 Short-Stature and Full-Stature Corn Hybrid Response to Nitrogen Rate and Plant Population
Erick Oliva - Purdue University
- 12 Evaluating the Effects of Nitrogen Source, Placement, and Timing on Corn Yield and Nitrogen Losses in the Sandy Soils of Northeast Nebraska
Anmol Singh - University of Nebraska-Lincoln
- 13 An Evaluation of Summer Cover Crops for Agroecosystem Services in Small Grain Systems
Shelby Watkins - University of Kentucky
- 20 Assessing Fall Applied Phosphorus Sources and Wheat Cover Crop on the Following Soybean Performance
Moain Javid - Southern Illinois University
- 21 Assessing Different Sources of Phosphorus Fertilizer on Nitrate Leaching in the Fall Period and Its Effect on the Following Corn
Sowmya Koduru - Southern Illinois University
- 22 Corn Response to Sulfur Fertilization in Central Iowa Soils
John Kovar - USDA Agricultural Research Service
- 23 County-Level Phosphorus Balances for 2017 in Illinois
Xian Liu - Southern Illinois University
- 24 Effect of Barley and Winter Pea Cover Crops on Nitrogen Availability in No-Till Corn
Emily Marsh - University of Kentucky
- 25 Effects of Cover Crops on Surface Runoff Under Increasing Precipitation Intensities
Sarah Moylan - Kansas State University
- 26 Corn Response to Nitrogen Rate at Three Topographic Positions Within a Terraced Landform
Mehtab Muhammad Aslam - University of Missouri-Columbia
- 27 Industrial Hemp Response to Nitrogen Applications
Anjeeta Nain - University of Missouri
- 28 Corn Grain Yield and Quality Response to Commercial Biostimulant Products and Nitrification Inhibitors
Rose Paul - University of Missouri-Columbia
- 29 Enhancing Nitrogen Fertilizer Efficiency in Sorghum to Boost Yields and Reduced Nitrogen Loss
Mauro Platero - Kansas State University
- 30 Tillage, Cereal Rye Cover Crop, and N Placement Effects on Corn and Soybean
Federico Rolle - University of Illinois
- 31 Short Term Effect of Double Cropping and Cover Cropping on Soil Physical Properties
Fatemeh Sheikh Shahriyar - Southern Illinois University
- 32 Impact of Different Inorganic Phosphorus (P) Fertilizer Rates on Soil P Pools
Jaspreet Singh - The Ohio State University
- 33 Field Evaluation of Dicyandiamide and Enhanced Efficiency Fertilizers on Corn Production in Upland Missouri
Dustin Steinkamp - University of Missouri
- 34 Investigating the Effects of Tillage Practices and Fertilizer Placement Strategies on Corn Yield and Nutrient Uptake in Eastern South Dakota
Charles Tesch - South Dakota State University

General Posters

- 14 Impact of Nitrogen Application Timing on Corn Yield and Farm Profitability in Different Wheat Cover Cropping Systems
Folahanmi Adeyemi - Southern Illinois University
- 15 Nitrogen Application Timings in No-Till Dryland Corn Production System
Nutifa Adotey - University of Tennessee
- 16 Phosphorus Drawdown Affects Profit and Water Quality
Megan Bourns - Kansas State University
- 17 Nitrogen Rate and Harvesting Time Based on Growing Degree Days Influenced Winter Cereal Rye Morphological Traits, Forage Yield, Quality, and Farm Profit in Poorly Drained Alfisols
Gabriella Burkett - Southern Illinois University
- 18 Impacts of Starter Fertilizer Placement and Rates on Corn Nutrient Uptake and Grain Yield
Larousse Dorissant - South Dakota State University
- 19 Assessing the Effectiveness of Green-Seeker Algorithm in Minimizing Nitrogen Loss in Corn Production Systems
Osman Guzel - Southern Illinois University

State Reports

- 35 Polymer Coated Urea and Time of Application for Corn Production in Minnesota
Fabián Fernández - University of Minnesota
- 36 Long-Term (16-year) Comparison of Phosphorus Fertilization Strategies: Targeted Soil Test Values Vs. Crop Removal in Corn Production
Swetabh Patel - University of Nebraska-Lincoln
Javed Iqbal - University of Nebraska-Lincoln
- 37 Combined Effects of Nitrogen Rate, Source, and Enhanced Efficiency Fertilizer Use in Indiana Corn Production
Daniel Quinn - Purdue University
- 38 Crop and Soil Response to Different Phosphorus Management Approaches
Manbir Rakkar - The Ohio State University
- 39 A Novel Calcmeter for Soil Carbonate Assessment with Implications for Accurate Soil Test Methods
Bryan Rutter - Kansas State University
Dorivar Ruiz Diaz - Kansas State University

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