

2008 On-Farm Network™ Conference: Schedule at a Glance

<i>Time</i>	Benton Auditorium	Breakout 1 Rm 260	Breakout 2 Rm 250	Breakout 3 Rm 240	Breakout 4 Rm 230	Breakout 5 Rm 220
7:00 AM	Registration / Check-In Opens: Pick up name badges (required for meals and all sessions)					
8 - 8:50 AM	Opening Session Sindergard	Application of Remote Sensing Spkr: Pearson	-----	Basics of Nitrogen Management Spkr: Binford	-----	-----
9 - 9:50 AM	Friest Blackmer Coleman	Soil pH and Liming Spkr: Rogovska	Fungicide Trial Results for Corn and Soybeans Spkr: Reeg	Interpreting Guided Stalk Sample Results Spkr: Brinkman	-----	-----
9:50-10:15 AM	B R E A K - E X H I B I T S O P E N					
10:15-11:05 AM	Opening Session <i>(Repeated)</i> Sindergard	Manure Management Spkr: Morris	Energy Planning Spkr: Ellison	Interpreting Guided Stalk Sample Results Spkr: Brinkman	Technology Update: Case-IH Spkr: Wesley	Grower Panel: Independence Area Group Spkr: Lindsay, Crawford, Alber
11:15 AM - 12:05 PM	Friest Blackmer Coleman	Cover Crops Spkr: Kaspar	Soil pH and Liming Spkr: Rogovska	Nitrogen Sensors Spkr: Schepers	Technology Update: Ag Leader Spkr: Ohrtman	Grower Panel: Jefferson/Greene County Group Spkr: Hebenstreit, Ostrander, Lawler, Wessling
12:05 to 1 PM	L U N C H - E X H I B I T S O P E N					
1 - 1:50 PM	A Strategy for Managing Nitrogen Spkr: Blackmer	Detecting and Verifying Equipment Patterns With Aerial Imagery Spkr: Oswald	Elevation Data Spkr: Ostermeier	Manure Management Spkr: Morris	Technology Update: Trimble Spkr: Pieper	Political Discussion Spkr: Balvanz
2 - 2:50 PM	Fungicide Trial Results for Corn and Soybeans Spkr: Reeg	Where to Find Free Data for Iowa Spkr: Deutmeyer	Variable Rate Nitrogen Evaluation Spkr: Kyveryga	Basics of Nitrogen Management Spkr: Binford	Technology Update: Deere Spkr: Uhlman	Why and How to Calibrate Your Yield Monitor Spkr: McGuire
2:50 - 3:15 PM	B R E A K - E X H I B I T S O P E N					
3:15 - 4:05 PM	Application of Remote Sensing Spkr: Pearson	Detecting and Verifying Equipment Patterns With Aerial Imagery Spkr: Oswald	Nitrogen Sensors Spkr: Schepers	A Strategy for Managing Nitrogen Spkr: Blackmer	Technology Update: Raven Spkr: Welbig	Year-Round Mapping with Your Ag Leader Spkr: Newell
4:15 - 5:05 PM	Highlights of 2007 Spkr: Blackmer	Cover Crops Spkr: Kaspar	Soil Electro-Conductivity (EC) Spkr: Jaynes	Variable Rate Nitrogen Evaluation Spkr: Kyveryga	-----	-----

**Iowa Soybean Association
On-Farm Network™ Conference
February 20, 2008
Scheman Building, Iowa State Center
Ames, Iowa**

**Opening Session 8:00-9:50
Repeated 10:15-12:05**

Benton Auditorium

Welcome

Curt Sindergard, President, Iowa Soybean Association, Rolfe, IA

The On-Farm Network™ - A Grower's Perspective

Dennis Friest, On-Farm Network Participant, Radcliffe, IA

Advances in the On-Farm Network™

Tracy Blackmer, Director of Research, Iowa Soybean Association

Description & Overview of Breakout Sessions

Dean Coleman, On-Farm Network Participant, Humboldt, IA

Breakout Sessions

Fungicide Trial Results for Corn and Soybeans (Patrick Reeg, CCA)

This breakout session will highlight the results of fungicide strip trials from the On-Farm Network™. Over 450 fungicide trials went out on soybeans and corn in 2007. Several different fungicide products were used including Domark, Headline, Quadris, Quilt, and Stratego. Find out how these products performed and what conditions provided the best return on investment.

Application of Remote Sensing (Randy Pearson, Ph.D.)

This session will focus on agricultural use of remote sensing technology, with specific aerial imagery examples from Iowa. While this session will touch on the basics of remote sensing, the majority of the emphasis will be placed on the application of remote sensing as it relates to Midwestern agriculture, specifically corn and soybeans.

Highlights of 2007 (Tracy Blackmer, Ph.D.) A selection of trials, experiences, and observations that Tracy Blackmer picked out that would be of interest to Iowa growers based upon the 2007 growing season.

Soil pH and Liming (Natalia Rogovska, Ph. D.)

The presentation will review some basics of soil pH and management practices that influence acidification of soils as well as common sampling techniques that are used to map soil pH within fields. An overview of the studies that looked at variable vs. fixed rate liming will be presented.

Manure Management (Tom Morris, Ph.D.) The reality of managing manure will be the focus. This is NOT a review of manure management plans in Iowa based upon regulatory guidelines, but rather a presentation on what you need to know agronomically to manage manure effectively.

Cover Crops (Tom Kaspar, Ph.D.) What do we know about cover crops in Iowa? This presentation will review data collected in Iowa for both agronomic and environmental impacts.

Detecting and Verifying Equipment patterns with Aerial Imagery (Tom Oswald)
This topic will help growers detect and verify equipment patterns in their fields by the use of aerial imagery.

Where to find Free Data for the state of Iowa (Troy Deutmeyer)
Many data sources including aerial imagery, soil survey information and more are available on-line at no cost to growers. Find out where.

Energy Planning (Heath Ellison, CCA)
CEMSA - Energy Planning in Environmental Management, Results from a Beta Test on 50 Farms. The Iowa Soybean Association's CEMSA program worked with nine crop consultants to test an energy planning and auditing process on fifty farms. The process focused on direct and in-direct energy usage associated with in-field crop management systems. This session will detail the planning process, tools used, and preliminary results.

Elevation Data (Gaylia Ostermeier, Ph.D.)
Elevation data is available from a variety of sources, or you can collect your own. Learn more about where and how to collect it as well as some of its applications.

Variable Rate Nitrogen Evaluation (Peter Kyveryga, Ph.D.)
The presentation will cover the application of different methods for evaluating the feasibility of variable rate nitrogen (N) fertilizer applications for corn. The author will present the results of 2007 on-farm strip trials when testing soil and sensor-based technologies for addressing spatial variability in yield response to N within fields.

Nitrogen Sensors (Jim Schepers, Ph.D.)
Crops respond to nitrogen (N) availability and soils vary in their ability to supply N to the crop. Recent advances in ground-based crop sensing technologies for making real-time variable rate fertilizer N applications will be presented.

Soil Electro-Conductivity (EC) (Dan Jaynes, Ph.D.)
Conductivity can be used to measure soil differences on a much finer scale than a soil survey map. Examples of data from Iowa soils and how they relate to on-farm testing will be presented.

Basics of Nitrogen Management (Greg Binford, Ph.D.) The more growers do on-farm testing for N, the more they realize they don't know. This is a back-to-the-classroom basics of nitrogen presentation.

Interpreting Guided Stalk Sample Results (Steve Brinkman, CCA)
Receiving the stalk nitrate results is only part of the information needed to fully understand what happened in the previous season and determine how to use it to guide future management.

A Strategy for Managing Nitrogen: (Tracy Blackmer, Ph.D.) This session is a discussion on what we learned from the results, including possible strategies growers can use to apply to their operation.

Technology Update: Case IH Advance Farming Systems (Kirk Wesley)

U.S. farmers have two options to meet strong demand for commodities and increase profits on their field operations: 1. become more efficient, 2. maximize yields. Case IH Advance Farming Systems presents a 50 minute break out session discussing ways that cutting edge technology is becoming common place as producers look to drive profit to their bottom line. Learn how progressive producers have paired investments in automated steering, mapping software and yield monitors with leading-edge iron to achieve their goals.

Technology Update: Ag Leader (Nick Ohrtman)

This session will cover the new products available from Ag Leader Technology for the 2008 season. Includes population monitoring, seed rate control, direct injection control, boom height control, GPS 1500 and EZ Guide 250.

Technology Update: Trimble (Ryan Pieper)

This topic will focus on Trimble Ag products and how they can be used to layout On-Farm Network trials. A basic overview of RTK, Autopilot, and Implement Steering.

Technology Update: Deere (Josh Uhlman)

The Payoff from Precision – topic will focus on John Deere's precision ag product offerings and the value this technology brings to its users.

Technology Update: Raven (Paul Welbig)

This topic will focus on Raven's precision ag products and the value this technology brings to its users.

Grower Panel: Independence Area Group (Dennis Lindsay, Greg Alber, Mark Crawford)

Hear from an agronomy grower group about how they have remained active and what participants learned from their trials, which included Tillage, Fungicide & Nitrogen.

Grower Panel: Jefferson/Greene County Group (Sheila Hebenstreit, Jay Ostrander, Bruce Wessling, Steve Lawler) Hear from an agronomy grower group about how they have remained active and what participants learned from their trials, emphasis on Fungicide & Nitrogen trials.

On-Farm Political Discussion (Carol Balvanz)

This session will focus on the political process and current policy and how these relate to On-Farm Network™ participants.

Why and How to Calibrate Your Yield Monitor (John McGuire)

This session will describe the potential pitfalls faced by growers who do not take the time to properly calibrate the sensors of their yield monitoring system. Techniques for accurately calibrating the systems will be described in detail.

Year-Round Mapping with AG Leader (Aaron Newell)

This session will cover the Insight monitor and how it can be utilized year-round. This will include using the Insight for Seed Command, Direct Command of liquid and granular products and Yield Monitoring.

Speakers:

Carol Balvanz, Director of Member Services, Iowa Soybean Association. Carol coordinates the defining and implementation of policy for ISA.

Greg Binford, Ph.D., Associate Professor, Soil Fertility, University of Delaware. Greg's work as a graduate student in Iowa provided the foundation for the end of the season stalk nitrate test. Greg is a current collaborator with ISA doing similar activities in Maryland in Delaware as part of a larger project.

Tracy Blackmer, Ph.D., Dr. Tracy Blackmer received his B.S. in agronomy from Iowa State University, and his M.S. and Ph.D. degrees in agronomy from the University of Nebraska in Lincoln. While at Nebraska, Tracy worked on incorporating remote sensing technologies into precision farming practices. After receiving his Ph.D., he was a soil scientist for the USDA-ARS in Lincoln, Nebraska. Currently, Tracy is the director of research at the Iowa Soybean Association. He directs the ISA On-Farm Network™ and is the principal investigator on more than a dozen projects using advanced technologies to help improve grower profitability and reduce environmental impact.

Steve Brinkman, CCA, State Nutrient Management Specialist, USDA Natural Resources Conservation Service. Steve is a member of the On-Farm Network Advisory Council and oversees the NRCS nutrient recommendations for Iowa.

Troy Deutmeyer, CCA Troy is an Area Program Specialist with the USDA NRCS Area 3, assisting field offices in management and implementation of NRCS conservation programs such as WHIP, EQIP, and CSP. Troy provides training and support for all GPS/GIS applications for Area 3. Prior to this Troy was employed as a Crop System Specialist with John Deere. Troy has a B.S. in Ag Systems Technology and a M.S. in Agronomy from ISU and raises corn, soybeans, and swine in NE Iowa.

Heath Ellison, CCA, Agricultural and Environmental Specialist, Iowa Soybean Association. Heath works with producers in developing environmental farm plans as part of the Certified Environmental Management Systems for Agriculture (CEMSA).

Dan Jaynes, Ph.D., Soil Scientist with the Soil and Water Quality Research Unit at the USDA-Agricultural Research Service located at the National Soil Tilth Lab in Ames IA and a Collaborating Professor in the Dept of Agronomy at Iowa State University. Dr. Jaynes' research includes developing and evaluating new management practices to reduce nitrate contamination of surface waters. These practices include modifying and managing tile drainage systems, N fertilizer management, and precision agricultural techniques.

Tom Kaspar, Ph.D., Plant Physiologist (GS-14), USDA, ARS, National Soil Tilth Laboratory, and Professor/Collaborator, Department of Agronomy, Iowa State University since 1999. Dr. Kaspar's research program focuses mainly on crop and soil management to improve water quality and soil productivity. He has conducted field-scale research on root growth in response to soil temperature, tillage systems, and compaction; water infiltration as affected by wheel traffic compaction and tillage; stand establishment in no-till as affected by planter attachments; and spatial variability of corn and soybean yields in response to soil characteristics. Most recent research has focused on the environmental benefits of small grain cover crops in corn-soybean rotations. Dr. Kaspar is the lead scientist on a continuing specific research problem area involving the use of small grain winter cover crops in corn – soybean rotations to reduce the negative impacts of this system on soil and water quality. Kaspar is currently the Lead Scientist for a new project to assess management options reduce nitrate losses from

agricultural fields through subsurface drainage systems. Kaspar earned his Ph.D. in Agronomy from Iowa State University (Crop Production and Physiology) in 1982.

Peter Kyveryga, Ph.D., Peter earned his Ph.D. in Soil Science and Soil Fertility from Iowa State University in 2005. He worked under the guidance of Dr. Alfred Blackmer evaluating and adopting various methods for characterizing spatial variability in supply of N from the soil and fertilizer, as well as characterizing variability in yield response to N fertilization within fields. He is currently working for the ISA On-Farm Network™ providing his expertise in analyzing and summarizing data of on-farm trials, communicating the results to growers, industry professionals, and scientific community.

John McGuire, Precision AG Technologist, Simplified Technology Services. John has worked for the past twelve years in the Precision Agricultural Industry. During this time he has earned a Masters Degree in GIS and Remote Sensing from Southern Illinois University. Professionally, during those twelve years John has held several positions with a variety of companies. He has lent his precision agricultural expertise and honed his skills in the ag retail market during his time with Terra Industries, in chemical manufacturing research with Monsanto, in on-farm production with Spatial Ag Systems and with agronomic consultants associated with Brookside Laboratories. Most recently John has started his own technology consulting company, Simplified Technology Services, which provides the farmers of tomorrow the expertise necessary to fully utilize the tools and techniques of Precision Agriculture.

Tom Morris, Ph.D., Associate Professor, Soil Fertility, Department of Plant Science, University of Connecticut. Tom's work as a graduate student in Iowa focused on soil nitrate testing and stalk testing in NE Iowa in the Big Spring Basin project. Tom is a current collaborator with ISA doing similar activities in Pennsylvania as part of a larger project.

Aaron Newell, Technical Support team at Ag Leader Technology. Aaron earned a B.S. degree in Public Service and Administration from Iowa State University with an emphasis on Agronomy in May 2005.

Nick Ohrtman, Technical Support Supervisor with Ag Leader Technology. Nick earned a B.S. degree in Agricultural Studies with an emphasis on Agronomy from Iowa State University in August of 2006.

Gaylia Ostermeier, Ph.D., Gaylia received her BS from Purdue University in Agriculture and Biological Engineering (Environmental and Natural Resources). After graduation she worked for Case IH in Advanced Technology, focusing on using aerial photography to make rescue fertilization treatment maps. She has since attended Iowa State University to complete her MS and Ph D with Dr Alfred Blackmer and Dr Antonio Mallarino. Her master's and doctorate research used precision farming technology to evaluate nitrogen management practices for corn. Gaylia currently works at John Deere Ag Management Solutions as a GIS Product Support Specialist exploring new products which would add agronomic value for John Deere customers.

Tom Oswald, Grower/On-Farm Network participant from Cleghorn, IA. Tom has been farming for 26 years. He earned his B.S and Master's degrees in Agriculture from ISU. He sold and serviced Pioneer seed from 1987-1997. He has logged field records including application rate, site verification, and yield mapping with GPS since 1996. He has been a participant in the On-Farm Network from its inception and currently serves on the On-Farm Advisory Council and as an At Large Director of the Iowa Soybean Association.

Randall Pearson, Ph.D., Professor and Chair, Department of Geography, Southern Illinois University Edwardsville. Dr. Pearson has worked with remote sensing in agriculture for over twenty years. He started his career with NASA's Space Remote Sensing Center in 1988 where he worked with various airborne and satellite-based systems as they related to agricultural productivity. Dr. Pearson has worked extensively with the ag-related industry to help understand and facilitate the use of remote sensing

technologies. He is currently the Department Chair at Southern Illinois University where he teaches remote sensing and GIS as they relate the natural sciences. Dr. Pearson's expertise in remote sensing and Geographic Information Systems (GIS) has made him a valuable resource and consultant to the On-Farm Network™.

Ryan Pieper, Product Manager for Trimble Navigation, Ltd. Started working in precision ag 10 years ago as an employee with Iowa Soybean Association. Ryan helped conduct field trials, collect data from growers and process their data. Five years ago Ryan moved to Trimble where he currently is a Product Manager. Ryan's extensive GIS background continues to make him an asset to the On-Farm Network™.

Patrick Reeg, CCA, Patrick is currently the Technology Manager for the Iowa Soybean Association. He has a B.S. Degree in Agricultural Business from Iowa State University and is completing a M.S in Agronomy at Iowa State. Pat provides technical expertise for training, implementation, and analysis of on-farm evaluations for the ISA On-Farm Network™ agronomic programs. He is also responsible for communicating with growers, CCA's, and industry professionals. Prior to joining the Iowa Soybean Association Reeg worked for AgVantage FS, Inc. as the Precision Farming Specialist. Pat is also a Certified Crop Advisor and serves on the Iowa CCA board.

Natalia Rogovska, Ph.D., Postdoctoral Research Associate, Department of Agronomy, Iowa State University. Natalia earned her Ph.D. in soil science from Iowa State in late 2006. Her graduate work was done under the guidance of the late Dr. Alfred Blackmer and focused on soil pH and how it influenced soybean yields and nematode population densities. She is currently working as a Postdoctoral Research Associate under the guidance of Dr. Richard Cruse and Dr. David Laird.

Jim Schepers, Ph.D., Dr. Schepers is a Soil Scientist and recently retired as the Research Leader of the ARS Agroecosystems Management Research Unit in Lincoln, NE. He is a native of Nebraska where he spent the last 32 years of his career conducting research that focused on developing technologies and management strategies to protect groundwater from nitrate contamination. Remote sensing and crop canopy sensors are two of the tools that hold considerable promise for improving N management.

Josh Uhlman, AMS Regional Specialist Graduate of Iowa State with a BS in Agricultural Business and minor in Agronomy. Currently working on Masters in Business Administration from U of I. Throughout undergrad years he completed internships with various seed, chemical, equipment, and credit companies. Since 2003 Josh has been working for John Deere's AMS (precision ag) division in various roles in marketing and product support. Currently serves as a Regional Manager for John Deere's AMS Greenstar Product lines and works with John Deere dealers throughout Iowa, Minnesota, and Nebraska to grow sales and support of John Deere's Precision Ag product lines.

Paul Welbig, Marketing Manager & Director of Business Development, Raven Industries, Sioux Falls, South Dakota

Kirk Wesley, CCA, Kirk is a Product Specialist for Case IH Advanced Farming Systems (AFS). He is responsible for the integration of precision guidance with field operations and data collection to increase the productivity and efficiency of Case IH customers. The AFS Product Specialist is dedicated to providing optimal technical and sales support for current customers and Case IH Dealerships. He also provides insights to guide future product development. Wesley holds a degree in agriculture from Southern Illinois University, and has taught and consulted at the university level as well as within agribusiness.

Grower Group, Independence, Iowa

Dennis Lindsay, Grower/participant from Masonville, IA. Dennis has participated in replicated strip trials for many years; he has been instrumental in getting others in his area to understand the value of pooling their data. He has been a member of the Advisory Council for the On-Farm Network™ for several years.

Mark Crawford, Grower/participant from Independence, IA. Mark raises corn, soybeans and swine and has participated in the On-Farm Network for several years.

Greg Alber, Grower/participant from Independence, IA. Greg raises corn and soybeans and has participated in the On-Farm Network for several years.

Dave Lehs, Grower/participant from Independence, IA. Dave raises corn and soybeans and has participated in the On-Farm Network for several years.

Steve Copenhaver, Grower/participant from Independence, IA. Steve raises corn and soybeans and has participated in the On-Farm Network for several years.

John Francois, Grower/participant from Winthrop, IA. John raises corn, soybeans, and swine and has participated in the On-Farm Network for several years.

Grower Group, Jefferson, Iowa

Sheila Hebenstreit, Group leader/agronomist from Jefferson, IA with West Central COOP. Sheila has coordinated on-farm testing for over 8 years and is also currently serving on the board of directors for the Iowa Soybean Association.

Jay Ostrander, Grower/participant from Jefferson, IA. Jay grows both corn and soybeans and has participated in On-Farm Network replicated strip trials for over 5 years.

Steve Lawler, Grower/participant from Ogden, IA. Steve grows corn and has been involved in trials for the On-Farm Network over multiple years.

Bruce Wessling, Grower/participant from Grand Junction, IA. Bruce grows corn, soybeans and raises hogs. He also serves on the Advisory Council for the On-Farm Network™