



Nebraska Agricultural Technologies Association Conference and Trade Show

February 1-2, 2012

**Midtown Holiday Inn
Grand Island, NE**

Latitude: 40.897606 Longitude: -98.339008

**Exploring Emerging
Agricultural Technologies**

UNIVERSITY OF
Nebraska
Lincoln
Extension
A Division of the Institute of Agriculture & Natural Resources



**PRE-CONFERENCE
PROGRAM**

Variable Rate Technologies and Techniques Symposium

Many agriculturists contend that variable rate (VR) technologies and techniques are the next significant step in precision agriculture. This symposium offers a collection of VR topics taught by experts from the private and public sector. A fast-paced approach of 30-minute presentations combined with plenty of time for discussion and debate promise to make this a dynamic learning opportunity. (5.5 CCA Credits)

Important Considerations when Implementing VRS, Eric Dam, Pioneer Hi-Bred International
Assembling the VR System—What Experience Tells Us, Wes Williamsen, Crossroads GPS
Application of Variable Rate Technology in NRCS Programs, S. Corey Brubaker, Nebraska NRCS
Variable Rate: What's Soil Got to Do With It?, Aaron Nelson, Farmer/Crop Consultant and Eric Lund, Veris Technologies
R7 Tool – Bringing product information to the agronomic conversation, Kevin Royal, Winfield Solutions
Can small plot research help us with site specific phosphorus recommendations?, Charles Shapiro, UNL Extension
Variable rate lime recommendations, what information scale is needed?, Charles Shapiro, UNL Extension
Variable Rate Irrigation Success, Nick Emanuel, CropMetrics
Crop Canopy Sensors—Use and Operation, Tim Shaver, UNL Extension
The Heart of a Sensor-based Variable Rate N Applicator: The N Rate Algorithm, Kyle Holland, Holland Scientific
OptRx Crop Sensors: Simplicity in a Complex World of N Application, Chad Fick, Ag Leader.

**EVENING
GENERAL SESSIONS**

Nutrient Management: Now and in the Future

Tim Shaver, UNL Extension

There are numerous technologies currently in place, and many more being developed, that can aid farmers in more precisely managing fertilizer applications. Traditionally the tools used for enhancing nutrient management have centered on global positioning system (GPS) and geographic information system (GIS) technologies and is a large part of what has been termed "precision agriculture". While some nutrient management based precision agriculture technologies have proven quite helpful, other technologies have proven quite complicated and need more research for their potential to be fully realized. The purpose of this presentation is to educate the audience about some of the current technologies that are being used for crop nutrient management, as well as some future technologies that are being developed.

An Overview of Today's Precision Agriculture Topics and Issues

Dave Varner and Richard Ferguson, UNL Extension

Do you think you know all there is to know about precision agriculture? Here's an opportunity to test your knowledge against numerous precision agriculturists from across the Midwest. Make sense out of PA terminology and acronyms. Who are the PA experts that you should know? What are the PA technologies on the horizon? Learn about the latest Nebraska-based PA research projects.

**OPENING
GENERAL SESSION**

Employing Precision Ag Technologies to Attain Record Corn Yields

Tom McGraw, Midwest Independent Soil Samplers

What are the multitude of factors that affect corn yield? Which factors can you control? How are Nebraska's farms unique within the Corn Belt? What is the difference between the highest yield and highest economic return? Tom draws upon over sixty years of field experience working with farmers and consultants. Within a 25-year period, he expanded Midwest Independent Soil Samplers to the largest soil sampling company in North America, sampling over 1,000,000 acres a year primarily focused on precision agriculture. Aerial imagery, crop analysis, soil characteristics, seeding strategies and much more will highlight his remarks.

**LUNCHEON
GENERAL SESSION**

A Vision for Nebraska's Innovation Campus

Dan Duncan, Nebraska Innovation Campus

Nebraska Innovation Campus will be a premier private/public-sector sustainable research campus that capitalizes on research growth and expertise of UNL faculty to strengthen the economic growth potential of the state and the university. Innovation Campus will provide space for university research, incubator businesses or translational research, convenience or retail, tenant offices and labs. Duncan's primary responsibility will be to attract private sector tenants for Innovation Campus by engaging faculty as well as assuring that the development itself will respond to private-sector needs. He will work with UNL faculty, citizens and the private sector to leverage these joint assets to create opportunities for all Nebraskans. Learn what Dan and Nebraska's Innovation Campus have in store for Nebraska's future!

(Continued...)

LightSquared Impact on the Agricultural Sector

Raj Koshla, Colorado State University

LightSquared's high-powered LTE network would overpower GPS receivers, wreaking havoc with millions of devices that depend on the satellite network for location and timing information. While LightSquared has scaled back its deployment plans several times to try and mitigate those interference problems, government and GPS industry studies have all but concluded that no network the operator built — no matter how scaled down — would leave GPS unharmed.

Clouds on the Horizon: How Developments in IT as-a-serve Technologies Might Impact Rural America

Ron Roeber, Dell Services- Education, State & Local Government

The development of information technology parallels the electrical power industry a century ago. Discover how the drive to enhance IT efficiency will impact the plethora of online services. We are literally just seeing the tip of the iceberg. Learn about the opportunities and challenges Cloud-technologies present Rural America.



CONFERENCE SCHEDULE

WEDNESDAY FEB 1

8:30 am
 9:00 am - 5:00 pm
 4:00 - 5:00 pm
 5:00 - 6:00 pm
 6:00 pm
 7:00 pm
 8:00 pm
 9:00 - 10:00 pm
 10:00 pm

Symposium Registration
Variable Rate Technologies and Techniques Symposium
NeATA Board of Directors Meeting
Conference Registration - Exhibits Open
Dinner
Nutrient Management: Now and in the Future , <i>Tim Shaver, UNL Extension</i>
An Overview of Precision Agriculture Topics and Issues of Today and Tomorrow - <i>Dave Varner and Richard Ferguson, UNL Extension</i>
Break - View Exhibits - Networking - Roundtable discussions
Exhibits Close

THURSDAY FEB 2

7:00 am
 8:00 am
 9:00 am
 9:50 - 10:15 am
 10:15 am
 11:05 am

Breakfast - Registration - Exhibits Open			
Employing Precision Ag Technologies to Attain Record Corn Yields - <i>Tom McGraw, Midwest Independent Soil Samplers</i>			
AMBASSADOR ROOM	EXECUTIVE ROOM	GOVERNOR ROOM	ISLANDER ROOM
<p>McCrometer CONNECT: Farm-Based Networks for Irrigation Management <i>Ken Quandt, McCrometer Great Plains</i></p> <ul style="list-style-type: none"> • Telemetry: Satellite, UHF Radio, Cellular • Web-based software • Irrigation water management sensors 	<p>Automated Section Control <i>Joe Luck, UNL Precision Agriculture Specialist</i></p> <ul style="list-style-type: none"> • Reducing overlap with automated section control (ASC) • Effects of field shape and size • Setting up an ASC system 	<p>Variable Rate Irrigation Success <i>Nick Emanuel, Crop Metrics and Nick Lammers, Fontenelle Hybrids</i></p> <ul style="list-style-type: none"> • Variable Rate Irrigation Optimization • Crop Metrics/AquaView VRI Program • 2010 VRI Yield Results 	<p>Smartphone and Tablet Applications for the Farm <i>UNL Extension Educators</i></p> <ul style="list-style-type: none"> • Discover apps for agriculture • Share your favorite apps with participants • What apps are on your wish list that would benefit you and other agriculturists
Break - View Exhibits			
<p>Using Automated 4-Propeller Model Helicopters for Crop Management <i>Vishal Singh and David Wiens</i></p> <ul style="list-style-type: none"> • Aerial drones - Advantages, limits, and sensors • Software - GPS, video feed, and ground control • Cameras - Regular, infrared, and image resolution 	<p>Slingshot Technology <i>Ryan Molitor, Raven Industries</i></p> <ul style="list-style-type: none"> • Learn about the latest Slingshot capabilities • How API allows Slingshot to integrate with third-party software • Send prescriptions wirelessly between implements and the farm office. 	<p>Irrigation Sensor Remote Data Access - Portal to the Future <i>Jason Klein, Klein Sales</i></p> <ul style="list-style-type: none"> • Why should a grower invest in data monitoring? • Understanding telemetry technologies • What is the best technology for specific agricultural applications? 	<p>Data Collection & Analysis Strategies <i>Tom McGraw, Midwest Soil Samplers</i></p> <ul style="list-style-type: none"> • What data should farmers collect? • Interpreting data • How data should drive farm management decisions
<p>Improving Cell and Wi-Fi Signals in Rural Nebraska and on Your Farm <i>Jeff Schuck, ERC Communications</i></p> <ul style="list-style-type: none"> • Designing an efficient and effective Wi-Fi network for your farm business. • Amplifying cell signals to give you the "bars" that you need to communicate. • The basics of a telematics backbone for agriculture telemetry systems. 	<p>Automated Section Control <i>Joe Luck, UNL Precision Agriculture Specialist</i></p> <ul style="list-style-type: none"> • Reducing overlap with automated section control (ASC) • Effects of field shape and size • Setting up an ASC system 	<p>On-the-Go Sensing of Soil Physical, Biological, and Chemical Properties <i>Eric Lund and Aaron Nelson</i></p> <ul style="list-style-type: none"> • Soil texture, organic matter, and pH sensors: how they work, what they show. • Topography and soil sensing: completing the picture. • Action steps: how to use these maps to improve the bottom line. 	<p>Innovative Techniques Improving the Dissemination of Drought Monitoring Information for the United States <i>Brian Fuchs, Climatologist National Drought Mitigation Center</i></p> <ul style="list-style-type: none"> • A new suite of high resolution tools are now available to best determine drought intensity levels. • Data and information from the United States Drought Monitor is now available for the public to use. • A new "Drought Impact Reporter" database archives drought impacts and also is a conduit for producers to provide information on drought to the U.S. Drought Monitor authors.

12:00 pm
 12:45 pm
 1:00 pm
 1:45 pm
 2:15 pm
 2:40 pm

 3:30 pm
 4:20 pm
 4:30 pm

Lunch			
NeATA Business Meeting- <i>Lon Bohn, NeATA President</i>			
A Vision for Nebraska's Innovation Campus - <i>Dan Duncan, Executive Director, Nebraska Innovation Campus</i>			
LightSquared Impact on the Agricultural Sector - <i>Raj Koshla, Colorado State University</i>			
Break - View Exhibits			
Using Automated 4-Propeller Model Helicopters for Crop Management <i>Vishal Singh and David Wiens</i> <ul style="list-style-type: none"> Aerial drones—Advantages, limits, and sensors Software—GPS, video feed, and ground control Cameras—Regular, infrared, and image resolution 	Slingshot Technology <i>Ryan Molitor, Raven Industries</i> <ul style="list-style-type: none"> Learn about the latest Slingshot capabilities How API allows Slingshot to integrate with third-party software. Send prescriptions wirelessly between implements and the farm office. 	JD Apex Through a Farmer's Eyes <i>Brandon Christiansen, BC Farms</i> <ul style="list-style-type: none"> Setup and simplicity Pre-season tasks and decision making Post-season tasks and applications 	Smartphone and Tablet Applications for the Farm <i>UNL Extension Educators</i> <ul style="list-style-type: none"> Discover apps for agriculture Share your favorite apps with participants Describe apps that would benefit you and other agriculturists
Clouds on the Horizon: How Developments in IT As-A-Service Technologies Might Impact Rural America - <i>Ron Roeber, Dell Services - Education, State & Local Government</i>			
Conference Wrap-up - Door Prizes			
Have a Safe Trip Home!			



CERTIFIED CROP ADVISOR (CCA) CREDITS REQUESTED • Symposium and Conference 5.5 to 14.0 CCA Credits

Exhibitor and Sponsor Information: <http://neata.org>

Online Conference Registration: <http://neata.org>
 or Mail to: **Nebraska Agricultural Technologies Association, 1206 W 23rd Street, Fremont, NE 68025-2504**

For additional Conference Information: Call: 402-720-2275 or E-mail: dvarner1@unl.edu

(Registration refunds granted through January 27, 2012)

Registration Form

Nebraska Agricultural Technologies • Association Conference & Trade Show

February 1 & 2, 2012

Midtown Holiday Inn • 2503 S. Locust Street • Grand Island, NE 68801

Room Reservations: 1.800.548.5542

NeATA Room Rate:

\$70/1-4 Occupants plus 14.28% room tax

Check-in: 4:00 pm

Check-out: 12:00 noon

Rooms are held until 6 pm unless guaranteed for late arrival with a major credit card.

Rates valid thru January 17, 2012

Registration must be postmarked by January 27, 2012 to take advantage of the advanced registration rate.

Listen to KRVN 880 AM or KTIC 840 AM for weather related announcements.

Name: _____

Spouse Name (if registered): _____

Farm/Business Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____

E-mail: _____

Symposium Registration

Space is limited...Register early!

Variable Rate Technologies and Techniques (9:00 am - 5:00 pm)

NeATA Members	x \$50 =
Non-NeATA Members	x \$60 =

Conference Registration

NeATA Members: (includes program materials, dinner, breakfast, lunch, & refreshments)

Advanced Registration	x \$110 =
Registration postmarked after January 27, 2012 or at the door	x \$135 =
Spouses	x \$50 =
Students	x \$50 =

Non-NeATA Members: (includes program materials, dinner, breakfast, lunch, & refreshments)

Advanced Registration	x \$135 =
Registration postmarked after January 27, 2012 or at the door	x \$160 =
Spouses	x \$50 =
Students	x \$50 =

TOTAL \$

Nebraska Agricultural Technologies Association Conference
1206 W 23rd Street
Fremont NE 68025-2504

NON-PROFIT
ORGANIZATIONS
U.S. POSTAGE
PAID
FREMONT NE
PERMIT NO. 26



SPONSORED BY:

NEBRASKA AGRICULTURAL TECHNOLOGIES ASSOCIATION

AND

UNIVERSITY OF NEBRASKA - LINCOLN EXTENSION



Know how. Know now.

Through a network of 83 offices serving all 93 Nebraska counties, extension is your front door to the University of Nebraska Lincoln—no matter where you live or what you do. Your local extension educator, extension specialists and university researchers work together to bring unbiased, relevant and empowering information to families, farmers and rancher, business and industry, communities, homeowners and young people across the entire state.

Discoveries and findings rapidly make their way into the hands and minds of the people who need them—so you can apply this knowledge to answer your questions, make better decisions, achieve your objectives or improve your life in some way.

Extension is committed to helping Nebraskans know how—know now.



The Nebraska Agricultural Technologies Association NeATA is a membership network that provides a venue for members to share agricultural research experiences and related knowledge with each other. NeATA was founded in 2001 by innovative Nebraska farmers, ranchers, agribusiness representatives, and UNL Extension.

NeATA strives to identify and explore new technologies practical for agriculture with consideration to financial returns for producers. Identifying agronomic practices that reduce economic and environmental risks thus promoting the stewardship of land water resources are paramount to this effort.

NeATA is organized as a Nebraska Not-For-Profit Corporation and is operated exclusively for charitable, educational and scientific purposes.