

NEBRASKA WATER BALANCE ALLIANCE

2015 UPDATE

Field day focus on practical solutions

Despite threatening weather, over 200 people were on hand for the “Real Farmers, Real Experiences” event at Paulman Farms near Sutherland in August. Attendees engaged in a lively discussion with managers from seven natural resource districts. NRDs are responsible for managing land and ground water resources in their region.

During break-out sessions, attendees viewed cutting-edge technology at 21 vendor stations. Farmers from across the state shared their experience using

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this equipment in a panel discussion. They explained the pros and cons of implementing new water management strategies in their operations.

One attendee shared, “it was interesting to see how people are actually using this on their farms. It opened the door for a lot of great questions and interactions during the open vendor visiting time.”

Event evaluations were very positive. When asked what they liked best, one person replied “Seeing so many different groups of people coming together to learn how to better manage water for the future.

It was exciting to see farmers, vendors, the university, NRDs, educators and others all interested in water for generations.”



Nick Lapaseotes of Bridgeport and Jeana Harms of Gering explained how technology helps them make decisions on their farms. The panel of producers talked about the ways they justified their investment and what they would change for the future.

Global interests share viewpoints at NEWBA event

What began as a Nebraska based effort to promote water management, has captured the attention of a wider audience.



National and global interests believe this grassroots effort may have long term benefits.

“NEWBA has taken a significant leadership role in promoting discussion about how to return to a sustainable level of de-

velopment while preserving our economy and way of life. Industry leaders are intrigued with the important work the group is doing to bring together new water strategies for the future,” explains Lee Orton, Executive Director of the Nebraska Well Drillers Association.

The “Local to Global Water” panel at the August 3 event included the following viewpoints:

- **Third generation farmer and natural resource district board member Joe Wahlgren from Brady** provided a “boots on the ground” perspective on what it takes to implement and test new technologies. His willingness to share what has worked and what he is learning is critical to convincing other producers to try new water management strategies
- **Glenn Schur and Rick Kellison, with the Texas Alliance for Water Conservation**, shared how grower-led efforts can be effectively supported with university knowledge and resources. The Alliance works with Texas Tech University on producer-led initiatives similar to NEWBA’s demonstration projects.
- **Dr. Nick Brozovic, Director of Policy, Water for Food Institute in Lincoln**, talked of the need for improved global food production with limited water resources. For Nebraska farmers, a failed crop can mean economic

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Dear friends of NEWBA,

It was a privilege and a pleasure to again host the NEWBA Summer Field Day event at our farm.

Vendor participation was phenomenal. Lots of effort went into setting up real-time monitoring equipment, as well as recruiting one of their customers to share their experiences with the equipment on the Real Farmer panel. When weather forced us indoors the second day, it certainly wasn't ideal. But the vendors' willingness to tear down and move their stations in a little over an hour speaks volumes about how those in the ag industry respond to challenges and still make it work.

We also want to thank everyone who participated on the panel discussions. The Local to Global panel shared bright spots across the nation where folks pro-actively work toward long term water sustainability. They believe NEWBA can help bring growers, industry, educational institutions and others together. NRD managers helped us better understand how each region in the state is managed differently. The Real Farmer panel's grass-roots experiences — both good and bad — offered a pathway for other producers to follow.

Special thanks go to all the volunteers, industry reps and employees of Paulman Farms for their hard work to make the Real Farmers, Real Experience event possible.

Finally, thanks to all who made time to come to this event. New partnerships and cooperative efforts are already forming as a result. We'll update you on these at our winter grower's summit in early 2016. Watch for details coming soon.

Roric Paulman
NEWBA Chairman

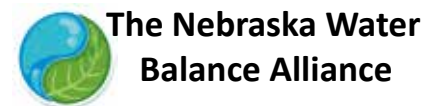
Thank you to our field day sponsors:

- Adams Bank and Trust
- Central NE Public Power and Irrigation District
- Dawson Public Power District
- Extreme Ag
- Farm Bureau
- Hershey State Bank
- Hershey Agency
- NE College of Technical Agriculture (NCTA)
- NebraskaLand National Bank
- Nebraska Corn Board
- Nebraska Wheat
- Nebraska Public Power District
- The Nature Conservancy
- UNL – Institute of Agriculture and Natural Resources

Real farmers: Telling it like it is



NEWBA's summer event provided practical information about new water management technologies. A panel of producers shared how they convinced other family members of the need for the technology and justified the initial costs in their business plan. They also discussed benefits received and future improvements they would like to see in technology.



www.nebraskawaterbalance.com

NEWBA is a non-profit, grass-roots organization formed in 2010 to be a non-partisan catalyst for practical water management.

We welcome everyone with an interest in water and constructive, solution-minded ideas to come together to share perspectives and help develop winning strategies to ensure water for generations.

For more information, contact us at newba2012@gmail.com.

Follow us on Facebook!

Grower insights are the key to demonstration project

For four years, Project Coordinator Ted Tietjen has led a NEWBA on-farm demonstration project. A dozen farmers tested and evaluated new water-saving technologies. As the project draws to a close, Tietjen shares key lessons learned:

Year One: Learning to use and trust technology

The project began with growers using ET gauges on two pivots and reporting changes in evapotranspiration weekly. A soil moisture probe installed on one of the pivots monitored available water in the soil. Resulting data was used to determine how much water to apply. The other pivot was managed the traditional way.

Lessons Learned: Growers gained an understanding of how water could be better managed.

Grower Input: Growers operating several pivots are reluctant to take time to go to the pivot to read instruments daily. A streamlined process providing real-time data was needed.

Year Two: Expecting more from the technology

NEWBA contacted vendors to find user-friendly products providing real time data on the producer's cell phone to speed up the process. Additional technologies provided data from soil moisture probes, flow meter readings, weather stations, pressure transducers and, in some cases, Variable Rate Irrigation (VRI) equipment to make irrigation decisions.



After harvest, project participants met at an annual NEWBA grower symposium to discuss the year's successes and difficulties.

Lessons Learned: Real-time data is critical for informed water management decisions.

Grower Input: To access data, growers had to open different vendor websites — a time-consuming process.

Year Three: Ease of use improves

Vendors helped develop a dashboard where growers could read soil probes, flow meters and pressure gauges on a single website. Those with VRI equipment could also start and stop pivots with a cell phone. Power companies with automatic meter reading capabilities also participated, providing real-time operating information useful in determining how much water was applied at a given time.

Lessons Learned: Easier access to data and familiarity with different technologies began to change the way producers managed irrigation scheduling.

Year Four: Accuracy improved; partnerships built

The last year of the project was spent making sure equipment was functioning properly. Thanks to grower



Roric Paulman thanks Ted Tietjen for his years of dedication to the demonstration project and being "outstanding in his field." Tietjen has worked with several producers to help them see the benefit of technology and worked to make it more reliable and convenient to use.

input and vendor responsiveness, participating farmers look forward to having a complete dashboard in 2016 with real time flow meter readings, pressure transducers, soil probes, weather station data and satellite images.

Statewide diversity requires custom solutions

NEWBA's project included growers from Holdrege to Mitchell — a distance of more than 300 miles with an elevation change of 1887 feet. Average precipitation varies from 24 inches in central Nebraska to 15 inches in the Panhandle. Soil types range from a Silty Clay Loam to Valentine sands. Water allocations range from none to 12 inches in the Panhandle.

Lessons Learned: Growers taught us how diverse management styles implement best management practices in different environmental and regulatory conditions.

Considering the role of cover crops

With abundant precipitation during the 2014 growing season, growers were not concerned about exceeding water allocations. The question was posed: "Since you will not use all of your water allocation this year, will you put in a fall cover crop?" A Holdrege grower said, "I'm thinking about it, but haven't made a decision yet." A Bridgeport area grower replied, "No. I want the moisture to carry forward for next year in case rainfall is limited." Both growers looked at this situation differently, yet made practical management decisions. Clearly, future water policy should continue to offer maximum flexibility and local control to reflect differences in regulatory and environmental conditions. Producer input is critical if we are to continue to improve the management of our water supply for future generations.



Two keys to the project's success are listening and striving for progress. Feedback has helped the group overcome obstacles that had limited the adoption of new technology and farming practices.

Urban - Ag Initiatives:

Finding common ground in diverse perspectives

A series of roundtable meetings are being held to discuss water issues and opportunities for both urban and agricultural land uses. Organizers emphasize that these sessions foster better understanding and improved strategies for long term water management.

The Lower Platte South NRD, Upper Big Blue NRD, the York County Extension and NEWBA have sponsored the meetings to date. Conversations have included municipal concerns to assure water quality as well as quantity. National and Ne-



Nebraskans know that our water challenges affect the whole state. All citizens benefit when urban and rural entities work together to identify problems and offer solutions.

braska organizations, that have traditionally held a municipal focus, are taking a wider, more collaborative approach to water issues.

The NRDs emphasize working with the best available data and adaptive local policies in managing water use while maintaining groundwater levels.

The American Water Works Association has termed this new direction, “total water solutions”.

NEWBA is uniquely positioned to bring together diverse experience through demonstration projects, producer field days and facilitated discussions.

NEWBA’s past efforts have brought diverse interests together to explore improved water management on the farm. A similar approach with urban and agricultural interests shows promise for improved understanding and increased collaboration between all water users. One futurist observes, “The universe is full of magical things patiently waiting for our wits to sharpen.” NEWBA’s Urban-Ag round table sessions offer an opportunity to sharpen our approach to managing water quantity, water quality, energy and nutrients with benefits for all.

Urban-Ag Roundtables discussion topics may include:

- Building mutual water management policies and practices
- How urban and ag interests can learn from each other relative to water use and consumption
- Compatible urban and adjacent agricultural local land uses
- Trends in local food production
- Water quality issues
- The future of Nebraska’s streams and aquifers given increasing number of water users
- Benefits of energy efficiency

Global interests... Continued from Page 1

hardship. In other parts of the world, it can mean starvation. He applauded NEWBA’s work to encourage innovative, grower-level improvement in water management while maintaining high-level food production.

- **David Cleary, Director of Global Agriculture, The Nature Conservancy**, focused on long term sustainability of water resources, a purpose we can all support. TNC’s Western Irrigation Project is an extension of the NEWBA Water for Generations demonstration project and a model for TNC efforts worldwide.
- **Rob Meyer, Sustainability Director of Global Agro Operations, PepsiCo**, was originally involved with the development of the Frito Lay plant at Gothenburg. He returned to Nebraska to share his global perspective on PepsiCo’s responsibility as a corporate citizen to better manage water resources in their production process worldwide.

Upcoming event:

Mark your calendars and plan to attend:

Low to High Tech Water Solutions

January 28, 2016

at the Nebraska College of Technical Agriculture in Curtis

This event will focus on practical irrigation solutions ranging from simple to sophisticated.

Co-Sponsored by NEWBA, NCTA and University of Nebraska Extension

Check the NEWBA website and Facebook page for details!