Low to High Tech Water Solutions

Choosing tools that work for your operation

Thursday, January 28, 2016

Nebraska College of Technical Agriculture, Curtis, NE

Nebraska Agriculture Industry Education Center

MORNING SESSION:

8:00 a.m. CST Registration - Coffee and Rolls -Visit with exhibitors

9:00 a.m. **Welcome and Overview**

Brad Ramsdale, PhD (Associate Professor of Agronomy, Nebraska College of Technical Agriculture)

What Tools are available to improve my irrigation management?

Daran Rudnick, PhD (Irrigation/Water Management Specialist, West Central Research & Extension)

Crop irrigation requirements depend on many factors, including crop type and growth stage, climate, rainfall, soil properties, nutrient availability, residue cover, among others. What irrigation management tools or practices can reduce pumping costs and nutrient losses without affecting yields? This presentation discusses advantages and limitations of various tools and strategies currently available for managing irrigation.

How much should I invest in water technology?

Matt Stockton, PhD (Agricultural Economist, West Central Research & Extension)

As producers are faced with more and more complex choices regarding the allocation and adoption of water technologies, it is ever more critical that they factor economics into these decisions. Marginal analysis is one tool that can help. This presentation of why and how to use marginal analysis reinforces better water allocation choices and is the foundation for making wise investments in water technology.

Grower Symposium – Success strategies from real farmers:

- How the NEWBA demonstration project changed how we farm and improved productivity
- Assessing strip till vs. no till soybean production using satellite imagery
- Dealing with pivot tracks
- Using satellite imagery to manage edible beans
- Challenges with changing sprinkler packages
- Probe placement – pros and cons of doing it yourself

10:30 a.m. **BREAK – *Visit with exhibitors***

10:45 a.m. **Grower Symposium – Success strategies from real farmers** (continued)
What the NEWBA Project has taught us
Recognition of NEWBA participating growers
Ted Tietjen (NEWBA Project Director)

Noon **LUNCH – *Please thank our generous SPONSORS:*** ◆ Holzfaster's Equipment ◆ Central Valley Irrigation ◆ Upper Republican NRD ◆ Middle Republican NRD ◆ Lower Republican NRD ◆ Central NE Public Power and Irrigation District ◆ Reinke ◆

AFTERNOON SESSION:

1:00 p.m. **Q & A session with Grower Panel**
Larry Umberger (NEWBA Vice Chair and General Manager of Midwest Electric Coop)

. **Advantages and challenges of different sprinkler packages**
Gene Ross (District Manager, Nelson Irrigation Corp.)

- One size does not fit all when it comes to center pivot sprinkler selection. Learn how to select the best fit for your crop rotation and field conditions.

1:45 p.m. **BREAK – *Visit with exhibitors***

2:00 p.m. **Breakout Sessions: Improving water management topics**

1. **Soil Knowledge for Efficient Irrigation Management**
   Brad Ramsdale, PhD (Associate Professor of Agronomy, NCTA)
   - Efficient irrigation management requires knowledge of the soil water holding capacity and water infiltration rates of the primary soils within a field. This presentation discusses how soil texture, soil structure, organic matter, residue cover and tillage systems can influence water holding capacity and infiltration rates. Learn methods for determining these essential soil parameters within a field. Soil moisture probe measurements and irrigation application rates will also be discussed in relation to these soil characteristics.
2. **UNL Irrigation Management Apps**
   Chuck Burr (Extension Educator, West Central Research and Extension)
   - Learn about irrigation management apps developed by the Nebraska Extension Irrigation Water Management group for Apple/Android phones and iPads: 1) CROP WATER - determine soil water content and last irrigation to apply irrigation water when needed to reduce crop stress and over application, 2) AGRICULTURE IRRIGATION COST -Determine pumping and ownership costs. 3) IRRIGATION PUMPING PLANT EFFICIENCY CALCULATOR - Determine pumping plant efficiency and how this compares to the Nebraska Pumping Plant Criteria, 4) WATER METER CALCULATOR - Track water use during season and compare to multi-year irrigation pumping allocations..
3. **Funding sources for irrigation efficiency equipment**
   Brad Soncksen (Assistant State Conservationist, NRCS) and Bob Merrigan (Assistant Manager, Middle Republican NRD)
   - Summary of federal funds available through NRCS for irrigation efficiency equipment. Natural Resources Districts also have varying programs across the state that provide assistance for irrigation efficiency equipment.
4. **Moving toward Site-Specific Irrigation Management**
   Amir Haghverdi, PhD (Management and Irrigation Specialist, Panhandle Research)
   - Most Nebraska farmers using center pivot irrigation systems practice uniform application. When there is soil type variability or topography changes within an irrigated field, variable rate irrigation may be beneficial. This presentation outlines the main questions that need to be answered for successful adoption of a variable rate irrigation system.

	Session 1 2:00 pm	**Session 2 2:30 pm**	**Session 3 3:00 p.m.**
Auditorium (200)	2	3	4
Classroom 1 (50)	1	1	2
Classroom 2 (50)	3	4	

3:30 p.m **Future Directions**
Roric Paulman (Sutherland NE producer and NEWBA Chairman)

3:45 p.m. Thank you for attending!