

# Water and Cropping Systems 2024 Impact At-A-Glance



A priority of the Water and Cropping Systems program area is to partner with growers to optimize their crop production nitrogen requirements. By taking a holistic approach to crop nitrogen, we help growers translate the science of nitrogen and irrigation recommendations, soil health, and manure application to best fit their individual operation.

Jenny Brhel, Water and Cropping Systems Extension Educator of 20 years, engages growers in a personal and uniquely local way through her 'Nitrogen Challenge.'

Brhel challenged irrigated corn growers who apply fall or spring pre-plant nitrogen to consider experimenting with less pre-season and more in-season application of nitrogen using emerging digital agriculture technology.

A first-year participant shared, "I was surprised how well the digital tools worked all year and when it said I needed nitrogen. It was able to detect it before I knew it and I applied less nitrogen overall as a result."

"On-Farm Research results showed that the lower nitrogen rate didn't compromise crop productivity. The grower saw the potential savings and shared plans to lower his nitrogen application rates next season. His positive experience with on-farm research interested him in doing more studies with Extension next season"-Marina Duarte de Val, WCS Extension Educator

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**Growers participating in the On-Farm Research Network focused on reducing nitrogen applications.**

**1,500+**

**Attendees of Soil Health Workshops and Conferences.**

**5,500 +**

**Attendees of Extension Programing on Nitrogen and Water Management.**

**STRENGTHEN NEBRASKA  
AGRICULTURE & FOOD SYSTEMS**

**INSPIRE NEBRASKANS &  
THEIR COMMUNITIES**

**ENHANCE THE HEALTH & WELLBEING  
OF ALL NEBRASKANS**



## Water and Cropping Systems



### Strengthen Nebraska Agriculture & Food Systems

Nebraska Extension is the go-to resource for ag producers seeking unbiased research, proven science and just plain good advice on a wide range of critical issues including incorporating new technologies, improving water quality, reducing water usage, evaluating the effectiveness of crop inputs, managing pests, disease, and weather extremes, exploring the viability of diverse crops, and protecting public lands and waterways. Nebraska Extension brings University resources to bear on millions of acres across the state, helping advance the knowledge, efficiency, and success of producers statewide.

- **\$10.50 per acre value estimated of knowledge gained from Nebraska 4Rs Nutrient Stewardship Field Day.**
- **98% of participants reported improvement in their understanding of soil and nutrient management practices after attending Annual Soils School.**
- **60,000 acres influenced from the Year-round Systems Approach to Water and Nitrogen Management winter program.**

“...Directly from the [UNL TAPS] competition I have changed my nitrogen rates seeing that top 30% of yields from the competition many times have a wide range of nitrogen applied. This means the little extra nitrogen that many believe boosts the yield typically does not provide the benefit. I now apply at or below the UNL rate...” - Ryan Hanousek, corn producer

**“I appreciate that Nebraska Extension is an unbiased and trustful organization. One example is the On-Farm Research results update meeting I attended last week. You are showing the actual results and not trying to hide the ‘bad’ results or negative outcomes. This brings credibility to the research work.” - Roger L. Koertner, Nebraska Producer.**

