Innovative Nitrogen Dashboard to Improve Fertilizer Efficiency, Water Quality

LINCOLN, Nebraska – The Nebraska Corn Board, Nebraska Association of Resources Districts (NARD) and 17 of Nebraska’s 23 Natural Resources Districts (NRDs) are pleased to announce the development of a nitrogen dashboard in partnership with Longitude 103, a leading provider of agricultural technology solutions.

Producer Connect, a web and mobile application suite, allows producers to access their crop reporting data and includes a fertilizer recommendation based on yield goals. This collaborative effort aims to empower agriculture producers to optimize inputs, which will enhance agricultural profitability, water quality and irrigation efficiency.

In the last 10 years, Nebraska has made gains in nitrogen management through split-fertilizer application and irrigation efficiency, but there are opportunities for improvement. Nebraska’s agriculture economy depends on groundwater and fertilizer; however, the overuse of fertilizer can come at a cost by contaminating groundwater, which most Nebraskans depend on for drinking water.

“With the growing concern of increased nitrate in groundwater, it is essential for NRDs and ag producers to work together to address the problem,” said Dr. Orval Gigstad, NARD president. “By developing a tool that is mutually beneficial for both ag producers and our natural resources it’s a win-win situation. We applaud the Nebraska Corn Board for helping lead the way.”
The partnership between the Nebraska Corn Board and the Natural Resources Districts exemplifies the commitment of key stakeholders to foster a thriving agricultural industry while protecting our water quality and quantity. The Nebraska Corn Board has generously contributed funds to assist with the development of Producer Connect, recognizing the potential it holds in transforming the landscape of modern farming.

“We are proud to support this innovative initiative to provide agriculture producers with more tools for nitrogen management,” said Kelly Brunkhorst, Nebraska Corn Board executive director. “By empowering producers with their own data, we can improve fertilizer efficiency, maximize profits and protect our valuable water resources.”

Tri-Basin NRD, headquartered in Holdrege, is participating in the Producer Connect project. “Agriculture today is very technology and data intensive. Our farmers need good data about crop fertilizer and irrigation water needs. Producer Connect will help farmers make better-informed decisions about how much nitrogen their crops require to achieve maximum profitability.” said Tri-Basin NRD manager, John Thorburn.

Producer Connect will be free to producers and offer a wide range of features designed to simplify nitrogen and water management. Ag producers will have a password-protected log in and only be able to see their own data. A few of the potential features include:

- **Producer-specific data:** Ag producers will have access to their reported data, which includes previous crops grown, actual yield, fertilizer applied, water usage, crops to be grown, expected yield, soil and water test results, and legume or manure credits.
- **Protected data:** All data will be held by the local NRD, and individual producer data will not be shared. Aggregate data may be used by the NRD for educational activities, certified applicator training and producer meetings.
- **Customizable recommendations:** The dashboard will provide a personalized nitrogen recommendation based on yield goals. The nitrogen efficiency of bushels per pound of applied fertilizer will be displayed and compared to the average of producers within the area. An economic analysis could show cost savings using the calculated nitrogen application versus a typical fertilizer application.
- **Irrigation efficiency:** The dashboard will also include the ability to track water-use data.
- **Historical data analysis:** By analyzing past nitrogen usage and crop performance, the dashboard will enable producers to identify trends in water use, fertilizer application and crop yield.
- **Environmental impact assessment:** The platform will assist farmers in quantifying the impact of their nitrogen usage, aiding in compliance with regulations and demonstrating commitment to sustainable practices.
- **Information exchange:** The dashboard will allow for communication between the producer and the local NRD. Producers will also be able to view current research results to improve profitability.
Producer Connect is currently in its initial stages of development and is expected to launch in January 2024. The initial roll out will be in Phase 2 and Phase 3 Groundwater Quality Management Areas and areas that have irrigation allocations.

“This partnership between the Nebraska Corn Board and Nebraska’s NRDs showcases the power of collaboration and a shared vision in driving sustainable change to improve producer profitability and nitrogen-use efficiency while protecting Nebraska’s water resources,” Gigstad said. “It exemplifies why Nebraska leads the nation in irrigated acres and water management.”

The Nebraska Corn Board is funded through a producer checkoff investment of ½-cent-per-bushel checkoff on all corn marketed in the state and is managed by nine farmer directors. The mission of the Nebraska Corn Board is to increase the value and sustainability of Nebraska corn through promotion, market development, and research.

The Nebraska Association of Resources Districts (NARD), the trade association for Nebraska's 23 Natural Resources Districts (NRD), works with individual districts to protect lives, property and the future of Nebraska’s natural resources. NRDs are unique to Nebraska, and act as local government entities with broad responsibilities to protect Nebraska’s natural resources. Major Nebraska river basins form the boundaries of the 23 NRDs, enabling districts to respond to local conservation and resource management needs. Learn more about Nebraska’s NRDs at www.nrdnet.org.

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About Tri-Basin Natural Resources District
Tri-Basin Natural Resources District (NRD) protects lives, property, and the future of Gosper, Phelps, and Kearney counties through a wide-range of stewardship, management, and education programs—from tree planting to groundwater quality and quantity monitoring, from irrigation management to outdoor recreation and more. Activities and projects of Tri-Basin NRD are reviewed and approved by a locally elected board of directors. Tri-Basin NRD is one of 23 Natural Resource Districts across the state. For more information, visit tribasinnrd.org or call (308) 995-6688.

EDITORS NOTE – PHOTO CAPTIONS
Producer Connect: Producer Connect, a web and mobile application suite, allows producers to access their crop reporting data and includes a fertilizer recommendation based on yield goals. This collaborative effort between Nebraska’s NRDs and the Nebraska Corn Board aims to empower agriculture producers to optimize inputs for agricultural profitability, water quality and irrigation efficiency.

Chemigation Inspection: Tri-Basin NRD Water Resources Technician Pat Nott inspects a chemigation injection point at an irrigation well. Nebraska’s agriculture economy depends on groundwater and fertilizer; chemigation allows producers a timely application of fertilizer at a specific stage of crop growth. This helps protect the groundwater, which most Nebraskans depend on for drinking water.