



WATER MATTERS

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Online Reporting Available Through
LLNRD's Producer Dashboard

The Lower Loup NRD recently added online reporting capability so that producers in Water Quality Management Areas can conveniently fill out required annual reports for yield and nitrogen use for the past crop season. A smaller version was rolled out in 2024. Once the concept was proven, the program was pushed out for all producers to use for 2025. The process is simple, requiring a one-time sign-up. Subsequently, all future years' reports will show up in November, well ahead of the January 31 deadline, when operators log in to Producer Dashboard.



Follow the
QR code to the
Lower Loup
NRD's Producer
Dashboard at
LLNRD.org

The link to open this page is found by going to the Programs tab at LLNRD.org and scrolling down to "Producer Dashboard." On that page there is a short video explaining the process. The green button near the top labeled "Go to Dashboard" will take users to the login page.

Also new for 2025, graphs were added to show the history of each field. The producer can now see graphs and charts showing irrigation inches used, flow meter readings, crop type, expected and actual yield, pre-emergent and post-emergent commercial nitrogen applied, soil residual nitrogen, irrigation water nitrogen credit, irrigation

water test results, nitrogen from manure, legume nitrogen credit, soil organic matter nitrogen credit, and one very helpful graph showing all of the nitrogen split out by type that was on that particular field for each year the LLNRD has data.

Area 29 in Wheeler County and Area 30 in Platte County will only have data dating back to 2020. Those in Area 28 south of the Loup River from near Palmer to Columbus have data going back 15 years.

Producer information is password protected and not visible to the public. Producers who want to share their data may provide login information to agronomists or others who they trust to access the information.

A Public Hearing on a proposed Water Quality Management Sub-Area Designation will be held Tuesday, February 17 at noon at the Wheeler County Fairgrounds in Bartlett, Nebraska. Testimony related to the LLNRD proposal to consolidate townships 22N-09W, 22N-10W, 22N-11W, 22N-12W, and 23N-12W in Wheeler County into one Phase II Quality Management Area will be heard. Those unable to appear in person may submit written testimony to the Lower Loup NRD, 2620 Airport Dr., Ord, NE 68862, by 5 pm on February 16.

Tax Credit Available for Reverse Osmosis System Installation

The Reverse Osmosis System Tax Credit Act establishes a one-time refundable income tax credit for the installation of a reverse osmosis system at a primary residence of a taxpayer. The credit equals 50% of the cost incurred by the taxpayer for installing the reverse osmosis system as defined in the act during the tax year, up to a maximum credit of \$1,000.

Individual income taxpayers may claim a credit for the cost of installing a reverse osmosis water filtration system if the test results for the drinking water are above the following:

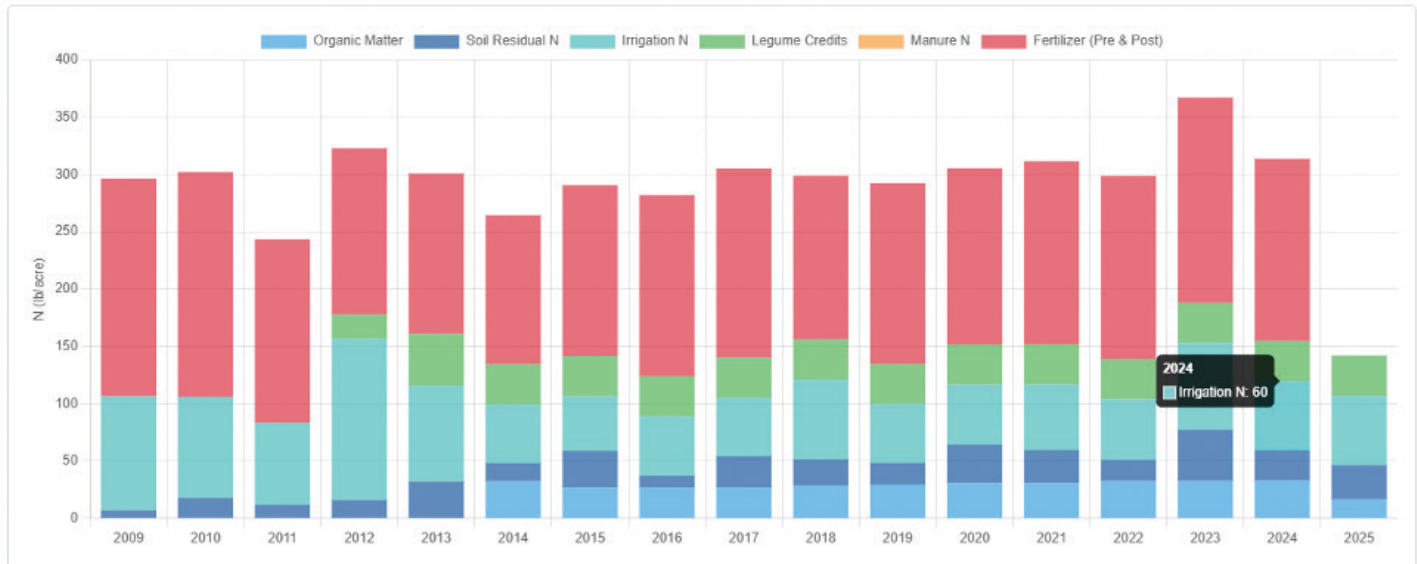
- Ten parts per million for nitrate nitrogen;
- Four parts per trillion for perfluorooctanoic acid or perfluorooctanesulfonic acid;
- Thirty micrograms per liter or 30 parts per billion for uranium; or
- One on the Hazard Index for perfluorononanoic acid, perfluorohexanesulfonic acid, hexafluoropropylene oxide dimer acid and its ammonium salt, or perfluorobutanesulfonic acid.



Reverse osmosis system installed under a kitchen sink.

Learn more and find the application at revenue.nebraska.gov.

Total N (Credits & Application)



Graph displaying Total Nitrogen on the LLNRD Producer Dashboard.
Hovering the cursor over the bars shows individual component contribution to the total.

Dollars and Sense: Applying Too Much Nitrogen Doesn't Pay

Nitrogen management continues to be one of the most important and expensive decisions that corn producers within the Lower Loup NRD face. While nitrogen is essential for producing corn, local field data and independent research consistently show that increasing nitrogen rates beyond crop demand rarely results in additional bushels. More times than not, it reduces Nitrogen Use Efficiency (NUE) and cuts into producer profits.

Nitrogen Use Efficiency is a measure of how a corn crop converts applied nitrogen into yield. A commonly cited benchmark is that corn requires 1.2 pounds of nitrogen per bushel produced. For example, a 200-bushel corn crop will typically need around 240 pounds of nitrogen. This number is not just for applied nitrogen however; it needs to include nitrogen from other sources such as residual nitrates in the soil, soil mineralization, irrigation water nitrates, manure, and legume credits if following a crop rotation.

A common mindset is that applying extra nitrogen provides insurance against yield loss. However, once the economic optimum nitrogen rate is reached, the yield response curve flattens. From data submitted by producers in our management areas, 20–50 additional pounds of nitrogen often result in little to no yield gain. Those extra pounds may look small on paper, but at today's fertilizer prices, they add up quickly. The real cost of overapplication is not just wasted fertilizer that can leach into the groundwater, but lost profit margin. Extra nitrogen increases upfront input costs with no guarantee of returns.

Improving Nitrogen Use Efficiency is one of the most reliable ways to protect both yield and profitability. Practices such as realistic yield goals, soil nitrate testing, split or in-season applications, and variable-rate technology can help better match nitrogen supply with crop demand. When nitrogen is applied at the right rate, and at the right time, growers can maintain yields while reducing unnecessary expense.

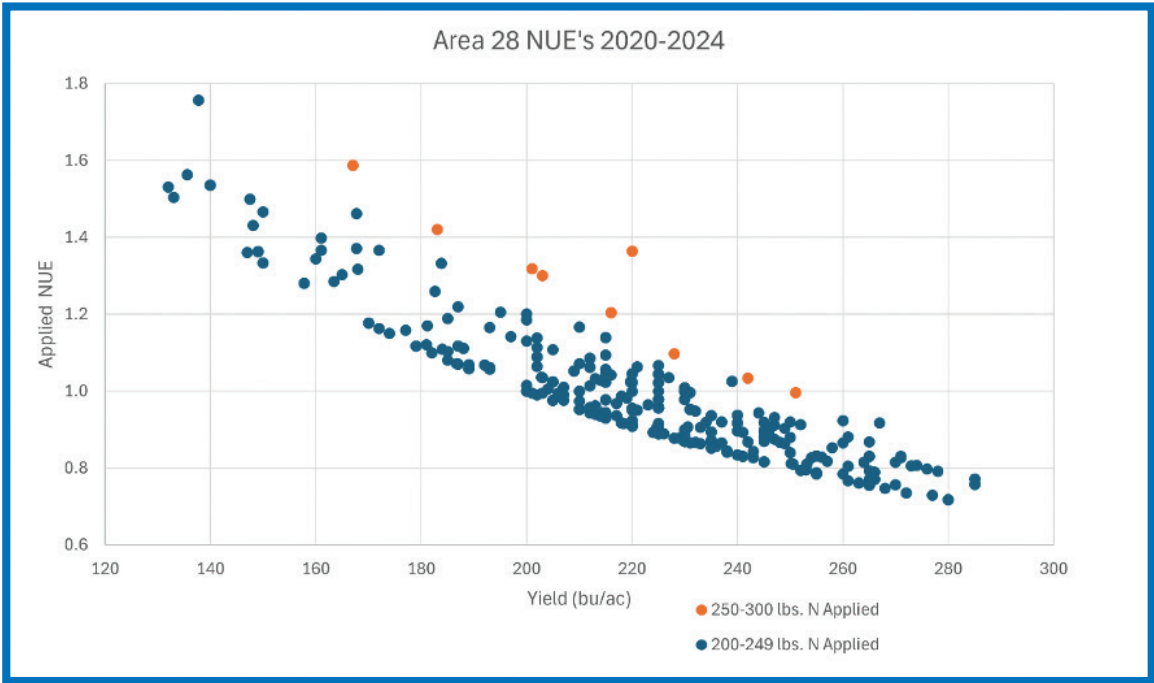
In today's tight-margin environment, we shouldn't think about applying more inputs, instead, we should be thinking about how to apply them efficiently and economically. Nitrogen application beyond what the crop can use is rarely an investment or a yield insurance and more often, it is a cost that works against producers.



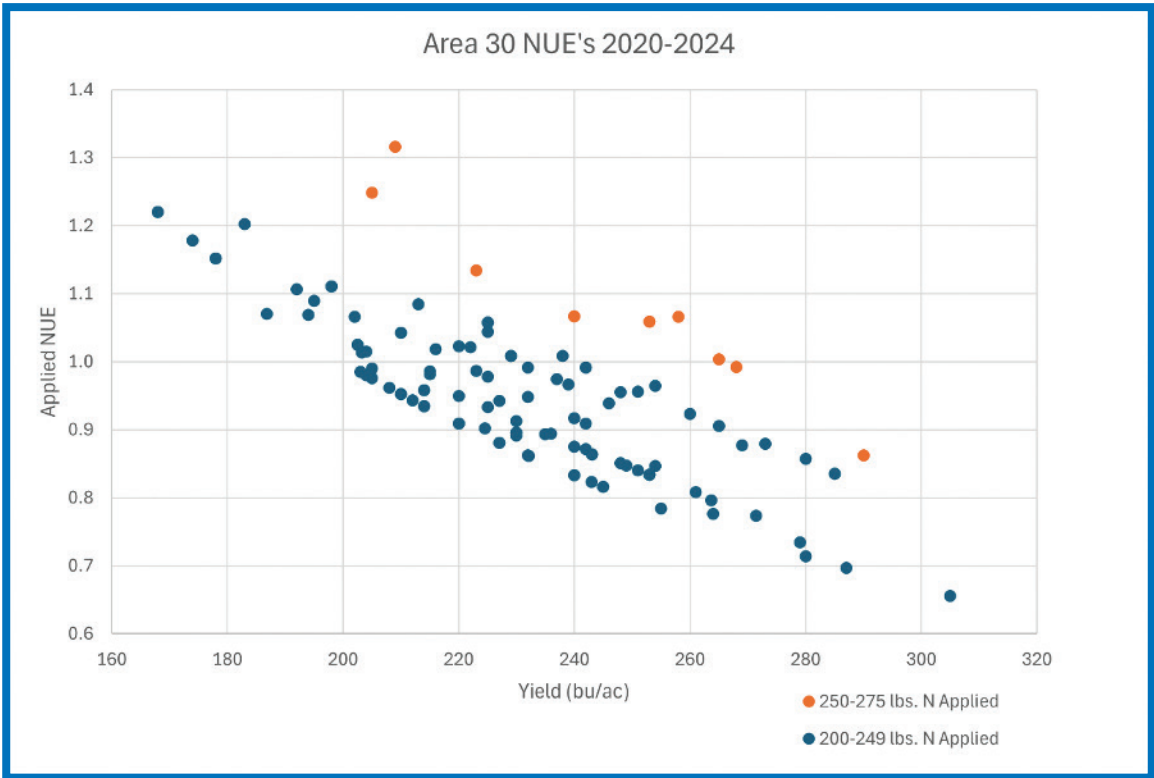
Application of fertilizer and other agrichemicals when crops are present to use those chemicals (in-season application) is best for plant health, which in turn is better for a producer's bottom line.
Photo courtesy of University of Nebraska – Lincoln.



Fall application of fertilizer is not recommended. Research shows that applying fertilizer in the fall, like the fall application pictured, is not efficient and it leads to expensive fertilizer inputs often being leached out of the reach of crops. Those chemicals then move toward groundwater resources, threatening the health of the people who rely on those resources for their drinking water and other needs.



Water Quality Management Area 28, 5-Year Average Nitrogen Use Efficiency Comparing Nitrogen Rates



Water Quality Management Area 30, 5-Year Average Nitrogen Use Efficiency Comparing Nitrogen Rates