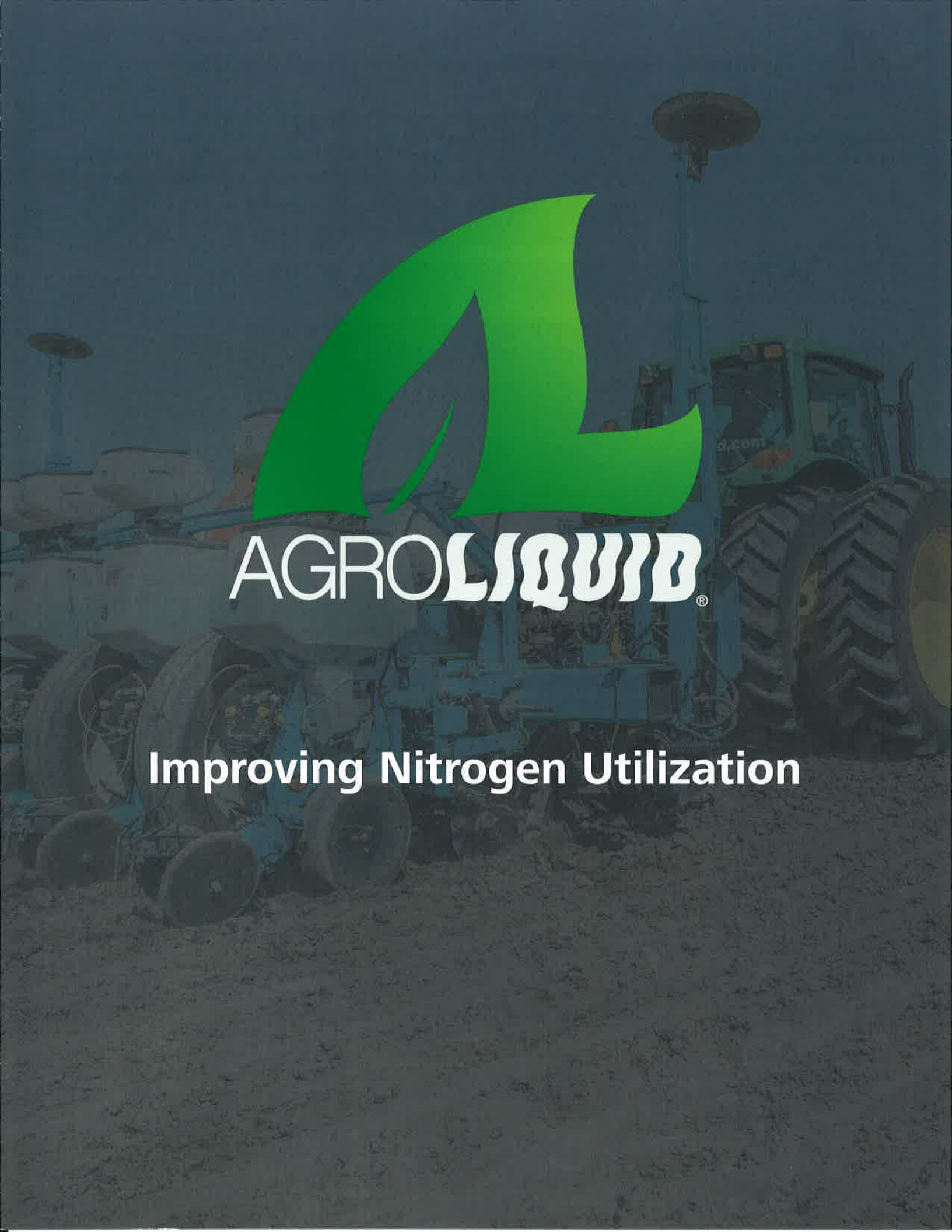
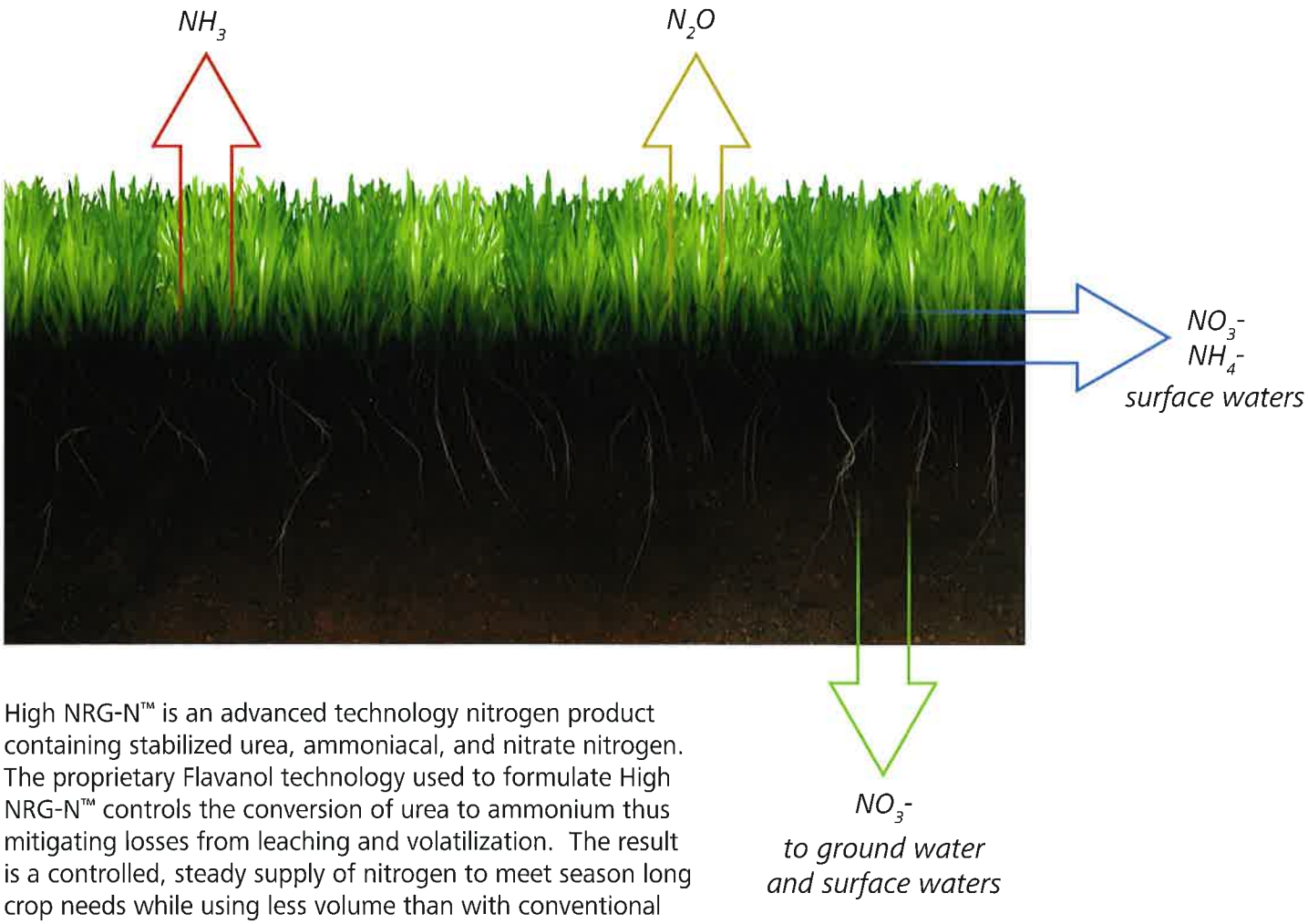


Improving Nitrogen Utilization

Improving Nitrogen Utilization

Nitrogen fertilizer is subject to losses due to volatilization, denitrification, and leaching. The severity of loss is often dependent on soil moisture, temperature, and the placement of nitrogen in the soil. Many liquid fertilizers contain three forms of nitrogen – urea ($(NH_2)_2CO$), ammonium (NH_4^+) and nitrate (NO_3^-). Most plants can utilize the ammonium and nitrate forms of nitrogen, although the biological processes in the soil work to convert nitrogen to the nitrate form. Nitrate is the most susceptible to loss through leaching.



High NRG-N™ is an advanced technology nitrogen product containing stabilized urea, ammoniacal, and nitrate nitrogen. The proprietary Flavanol technology used to formulate High NRG-N™ controls the conversion of urea to ammonium thus mitigating losses from leaching and volatilization. The result is a controlled, steady supply of nitrogen to meet season long crop needs while using less volume than with conventional fertilizer sources. High NRG-N™ does not inhibit biological activity in the soil.

eNhance™ is a nutritional supplement that amends the urea and ammonium portions of UAN solutions to reduce the amount of ammonium converted to nitrate. That reduces volatility and denitrification, making nitrogen available to the plant as it is needed. eNhance™ also works within the plant to aid in nutrient transport, making other nutrients that enter the plant more efficient.

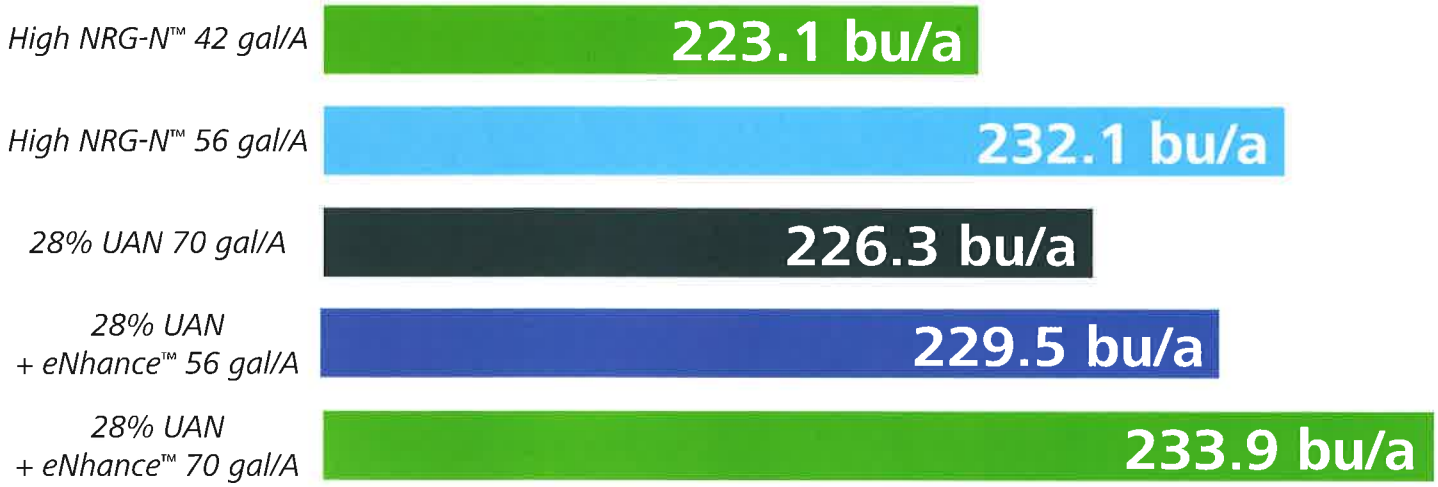
Traditional nitrogen "stabilizers" are used to prevent nitrogen loss so their use can be considered an insurance policy. If soil and environmental conditions are not conducive to nitrogen loss there would be no benefit to the addition of those stabilizers. However, High NRG-N™ or eNhance™ improves the utilization of nitrogen in the plant and are not dependent on soil and environmental conditions. Adding eNhance™ to UAN solution allows the user to reduce the rate of fertilizer and maintain yields, or use the full rate of fertilizer and have the potential for higher yields than achieved by UAN without eNhance™.

Improving Nitrogen Utilization

North Central Research Station

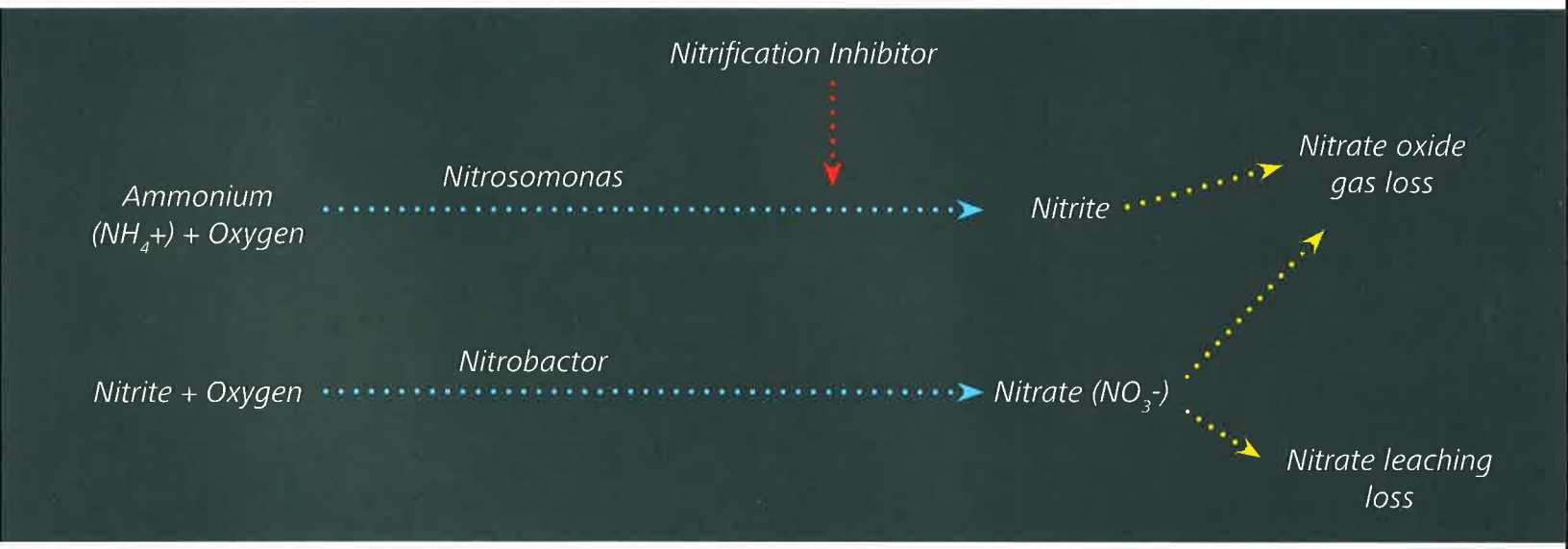
Nitrogen Source Effect on Corn Yield

(Averaged over Sidedress Dates)



Planter fertilizer applied to all treatments: 4 gal/A Pro-Germinator + 6 gal/A Sure-K + 1 qt/A Micro 500 + 1 pt/A Boron

In contrast, most nitrogen stabilizers on the market today inhibit the biological processes in the soil that convert nitrogen into the nitrate form. Urease inhibitors, such as Agrotain® inhibit the enzyme urease that is produced by many soil bacteria, preventing the formation of ammonia (NH_3). Nitrification inhibitors such as N-Serve®, eNtrench®, Agrotain®Plus, and Instinct® inhibit the activity of the soil bacteria *Nitrosomonas*, preventing the conversion of NH_4^+ to NO_3^-.



Unlike traditional nitrogen stabilizers that inhibit biological activity in the soil, eNhance™ works within the plant, fortifying the crop's physiology to more efficiently utilize applied nitrogen. eNhance™ is not a traditional nitrogen stabilizer, but as the name implies, it enhances UAN fertilizer performance.

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High NRG-N™

High NRG-N™ is used in all crops that require applied nitrogen to achieve top yields. High NRG-N™ is an advanced formulation of 27% nitrogen, 1% sulfur, and trace amounts of known chlorophyll-building secondary and micronutrients. High NRG-N™ is stabilized with organic compounds, including proprietary flavonol technology, to protect the nitrogen and reduce losses from leaching and volatility. Not all of the nitrogen in High NRG-N™ is immediately available at application; the flavonol technology provides a controlled release of plant-available nitrogen over an extended period of time. High NRG-N™ may be used at lower volumes and produce quality and yields comparable to those crops grown with conventional nitrogen sources, providing increased profits from lower fuel and labor costs and application rates.

DIRECTIONS FOR USE

High NRG-N™ should be applied using any method that would enable placement in the vicinity of, but not direct contact with the plant roots or seeds.

High NRG-N™ can be applied:

- versatile planter placement options
- broadcast application prior to or following planting
- application through drip or overhead irrigation (including traveling gun-type irrigation and water wheel irrigation)
- band application below seed placement with strip tillage equipment
- surface band at planting several inches to the side of the seed placement line
- side-dress application to the soil surface or injected

High NRG-N™ is not seed safe at normal application rates and should not be applied to crop foliage as tissue burn can occur. An exception to this would be with early topdress applications to small grain crops. Although some burn may occur in certain environmental conditions, those situations have not been shown to affect subsequent growth, quality, or yield.

Technical Data

Weight Per Gallon @ 68° F	10.7 lbs/ gal
Specific Gravity	1.282
pH @ 68° F	7.13
Freezing Point	< -5° F

Composition
Guaranteed Analysis:

Total Nitrogen	27.00%
6.75% Nitrate Nitrogen	
6.75% Ammoniacal Nitrogen	
13.5% Urea Nitrogen	
Sulfur (S)	1.00%
1.00% Combined Sulfur	

Derived from: Ammonium Nitrate, Ammonium Sulfate, Urea

For proper agronomic application rates suitable for your geographical area or the maximum allowable non-nutrient application rates per acre, consult a trained soil specialist at AgroLiquid.

Information regarding the contents and levels of metals in this product is available at http://www.aapfco.org/metals.htm.

www.agroliquid.com/product-information

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