

# Nitrogen Source Comparisons in Corn. Real Farm Research. Mitchell, SD

### **Experiment Info:**

Planted:	05/21/15
Harvest:	11/05/15
Yield Goal:	140 bu/A
Target Fert.:	110-50-0
Variety:	Curry 732-99
Population:	25,000
Row Width:	30"
Prev. Crop:	sunflowers
Plot Size:	4 row x 157'
Replications:	2

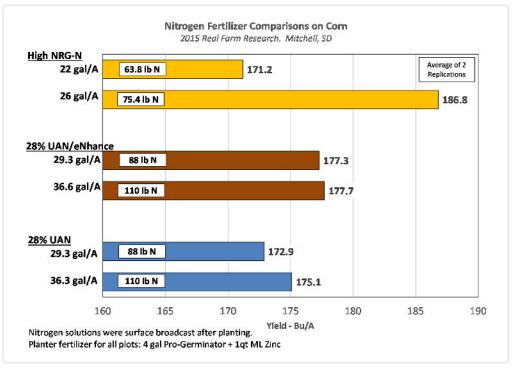
## Soil Test Values (ppm):

	(Р.Р).
рН:	5.5
CEC:	18.8
%OM:	4.3
Bray P1:	13 (M3)
Bicarb P:	
K:	313
S:	113
%K:	4
%Mg:	23
%Ca:	52
%H:	19
Zn:	1.47
Mn:	56.5
B:	

## Objective:

Evaluate different nitrogen solution sources for effect on corn yield. Sources are High **NRG-N**, **28% UAN and 28% UAN with eNhance** (2 gal per ton of 28%). These sources were each applied at two different rates.

High NRG-N is promoted as a controlled released nitrogen that is resistant to volatility and leaching loss. eNhance is a sulfur plus micronutrient fertilizer that also contains materials for enhanced nitrogen uptake and is added to UAN solutions for increased fertilizer performance. The treatments were applied as a single broadcast surface application after planting. This is a common method of N application for the area. All plots received the same in-furrow planter application of 4 gal/A Pro-Germinator + 1 qt/A of MicroLink Zinc. The very favorable growing conditions made it clear that yields would exceed the 140 bu/A target. However, no nitrogen deficiency symptoms were observed even though application rate was less than what would be projected as the necessary rate for higher expected yields.



LSD(0.05: 3.8; LSD(0.1): 3.1; CV: 3.1%

#### **Conclusions:**

- Hight NRG-N applications had the lowest rate of applied nitrogen and produced the highest yield, with the 26 gal/A rate producing the highest yield of all.
- The lower rate of 28% that contained the eNhance produced a yield that was significantly higher than the same rate of 28% without eNhance. There was not a further increase in yield by adding eNhance to the full rate of 28%