



PrimAgro N as a nitrogen source on spring wheat

Ferhinger Agricultural Consulting. Billings, MT - 2018

Experiment Info:

Planted:	05/07/2018
Harvest:	09/12/2018
Yield Goal:	70 Bu/A
Target Fert.:	80-35-0
Variety:	Vida
Population:	1,000,000
Row Width:	7.5"
Prev. Crop:	Spr. wheat
Plot Size:	4' x 70'
Replications:	4

Soil Test Values (ppm):

pH:	7.6
CEC:	29.5
%OM:	2.1
Bray P1:	
Bicarb P:	14
K:	418
S:	6
%K:	3.6
%Mg:	
%Ca:	
%H:	
Zn:	1.1
Mn:	1.8
B:	

Objective:

Evaluate PrimAgro N and High NRG-N as nitrogen sources for spring wheat.

PrimAgro N is the newest nitrogen fertilizer from AgroLiquid. It is a 30% nitrogen (compared to 27% for High NRG-N) that combines a faster acting nitrogen with controlled release nitrogen. Additionally, as part of the PrimAgro line, it contains beneficial microbes for enhancement of soil health reactions. In this case it is *Bacillus subtilus*. Based on field testing, despite differences in %N, both High NRG-N and PrimAgro N are applied at equal volume rates when used as nitrogen sources,

These treatments evaluated both High NRG-N and PrimAgro N at equal methods of application: preplant with streamer nozzles combined with Pro-Germinator, Micro 500 and accesS. An additional treatment was a partial rate of High NRG-N applied at pre-plant and the balance applied as PrimAgro N at topdress, to see if there was a benefit to an in-season application. Results are in the table.

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Fertilizer treatment per acre	Bu/A	%protein	flag leaf % N
1 Preplant stream (16 + 3.5 + 0.25 + 1 gal) High NRG-N + Pro-Germ + Micro 500 + accesS	77.7	14.4	4.91
2 Preplant stream (16 + 3.5 + 0.25 + 1 gal) PrimAgro N + Pro-Germ + Micro 500 + accesS	77.1	14.5	4.9
3 Preplant stream (12 + 3.5 + 0.25 + 1 gal) High NRG-N + Pro-Germ + Micro 500 + accesS Topdress at 12" growth (4 gal) PrimAgro N	75.4	15	4.85

Yield: No statistically significant diff. (F=0.83); Protein: LSD(0.2): 0.5; CV: 5%

Conclusions:

- Both N sources enabled equal yield and grain protein. The microbial effects did not result in an expressed yield benefit in the year of application.
- There was a significantly higher protein level from the topdress application of PrimAgro N. So perhaps the in-season application was beneficial for making protein. Although the flag-leaf nitrogen level was not higher than the other treatments. A flag leaf level of 4.25% N is considered to be the level for adequate plant nitrogen to reach the baseline target of 14% grain protein. So all treatments exceeded the minimum.