



Topdress Nitrogen Comparisons in Winter Wheat

Crop Guard Research - Hinton, OK

Experiment Info:

Planted:	11-16-2015
Harvest:	07-05-2016
Yield Goal:	50
Target Fert.:	50-0-0-
Variety:	Duster
Population:	90 lb
Row Width:	7.5"
Prev. Crop:	milo
Plot Size:	10 x 100 ft
Replications:	1

Soil Test Values (ppm):

pH:	6.3
CEC:	8
%OM:	0.7
Bray P1:	14
Bicarb P:	
K:	137
S:	10
%K:	4.4
%Mg:	15.6
%Ca:	68.8
%H:	10.2
Zn:	0.4
Mn:	4
B:	0.4

Objective:

Evaluation of different fertilizer treatments in comparison to standard to discover enhancements.

Winter wheat is a major crop of the Great Plains states, although recent commodity price depression has discouraged production. However, if there are opportunities for treatment enhancements to increase yield with minimal inputs, then such programs would be advantageous. This area is on very sandy soil with minimal soil inputs. Replicated plot research is difficult enough, but sometimes a "check" plot is far enough from the treatment plot that field variability gives false interpretations. So in this experiment, it was decided to have each treatment be adjacent to the standard treatment, and the comparisons would be for yield increase or decrease compared to the yield of the standard. In this case, the standard was a topdress application of 10 gal/A of High NRG-N. There were originally two replications which enabled the plots to be 100 feet long. But there were some stand issues in part of the second replication. So only one replication is presented.

Topdress Nitrogen Applications to Winter Wheat: Treatment vs Adjacent Plot of High NRG-N
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	Topdress	gal/A	Rep 1	% vs HN
1	High NRG-N	10	47.4	
2	28-0-0-5/eN	13	46.6	-1.7
4	High NRG-N	10	45.3	
3	Hi-N + NC-14	8+2	44.1	-2.70
4	High NRG-N	10	45.3	
5	NB-15*	11.5 (75%)	47.6	+5.1
7	High NRG-N	10	46.3	
6	NB-15 + Micro 500	11.5 + 0.25	50	+8
7	High NRG-N	10	46.3	
8	Hi-N + Micro 500	10 + 0.25	49.2	+6.3
10	High NRG-N	10	45.6	
9	Hi-N + accesS	10 + 1	48.4	+6.1
10	High NRG-N	10	45.6	
11	28%/eNhance	13.25 (80%)	45.1	-1.01
13	High NRG-N	10	44.5	
12	28%	16.6 (50N)	46.7	+4.9

* - Experimental 30-0-0

Drill: 3 gal Pro-Germinator + 5 gal High NRG-N + 1 qt Micro 500

Conclusions:

- In spite of concerns over variability, all standard high NRG-N treatments yielded similarly.
- Contrary to results in other tests, the inclusion of the chloride product NC-14 (22-0-0-9Cl) did not result in higher yield. Chloride was not measured in the soil test.
- NB-15 at 11.5 gal/A did result in a 5.1% yield increase over a 10 gal/A rate of High NRG-N.
- The addition of 1 qt/A of Micro 500 to topdress applications of High NRG-N and NB-15 resulted in approximately 3% yield increase vs NB-15 alone and a 6.3% yield increase vs High NRG-N alone. So this is a potential yield increasing take-away from this test. A similar increase was seen with addition of accesS.