2019 Nitrogen Fertilizer Additives in Spring Wheat at Minot

TRT	Product	Heading Date	Plant Height	Test Weight	Grain Protein	Harvest Moisture	Grain Yield
		DAP[1]	inches	lbs/bu	%	%	bu/A
1	No applied N fertilizer	62	26	63.6	14.5	14.6	43.1
2	124 lbs/A NZONE MAX treated Urea applied mid-row	63	28	63.3	15.1	14.3	56.8
3	124 lbs/A ContaiN MAX treated Urea applied mid-row	62	27	--	--	14.5	61.5
4	124 lbs/A Agrotain Ultra treated Urea applied mid-row	62	27	63.2	15.1	15.7	55.4
5	124 lbs/A Untreated Urea applied mid-row	62	27	63.0	15.7	14.1	54.5
6	93 lbs/A NZONE Max treated Urea applied mid-row	63	28	--	--	14.6	55.9
7	93 lbs/A ContaiN MAX treated Urea applied mid-row	63	27	--	--	15.0	52.7
8	93 lbs/A Agrotain Ultra treated Urea applied mid-row	62	27	63.2	15.4	15.0	57.1
9	93 lbs/A Untreated Urea applied mid-row	62	27	63.2	15.0	14.2	53.1
10	124 lbs/A ContaiN Max treated Urea surface broadcast	63	28	63.6	14.6	15.5	52.9
11	124 lbs/A Untreated Urea surface broadcast	62	28	63.1	14.1	15.5	53.9
12	61 lbs/A ContaiN Max treated urea applied mid-row + 61 lbs/A ContaiN Max treated urea broadcast at flag leaf	62	27	63.0	14.8	14.6	55.0
13	61 lbs/A Untreated Urea applied mid-row + 61 lbs/A ContaiN Max treated urea broadcast at flag leaf	62	28	63.5	15.0	14.6	56.0
Trial Mean		62	27	63.4	14.8	14.8	54.4
C.V. %		1.5	4.4	--	--	7.8	4.4
LSD 0.05		NS	NS	--	--	NS	4.1

[1] *Days After Planting* *NS = no statistical difference between treatments.*

Tillage = No-till. Previous crop = soybean. Soil type = Williams loam.

Summary: The trial was planted on April 24 with SY Ingmar hard red spring wheat. Fertilizer treatments 2 - 9 were applied in a mid-row band at planting. Fertilizer treatments 10 and 11 were applied to the soil surface at planting. Fertilier treatments 12 and 13 had split applications of fertilizer as stated. Residual soil nitrogen was 28 pounds per acre at 0-24" plus an additional 40 lbs/A soy credit. The trial was harvested on August 20. There were no statistical differences between treatments for heading date, plant height or harvest moisture. Grain proteins and test weights were not statistically analyzed. The 124 lbs/A ContaiN MAX treatment (trt 3) produced a significantly higher yield than other 124 lbs/A treatments (trts 2, 3 and 5). 93 lbs/A treatments (trts 6 -8) produced statistically similar yields to the 93 lbs/A untreated urea check (trt 9). Split applications (trts 12 and 13) did not enhance yields or seed quality compared to the 124 lbs/A untreated check (trt 5). Surface applied ContaiN MAX (trt 10) produced a similar yield and seed quality to the untreated surface application (trt 11) and both of these treatments produced significantly less yield than the soil incorporated ContaiN MAX treatment (trt 3).