2021 AgXplore Foliar Fertilizers in Spring Wheat at Minot

TRT	Product	Days to Head	NDVI	Plant Height	Lodging	Test Weight	Grain Protein	Grain Yield
		DAP*	0-1	inches	0-9**	lbs/bu	%	bu/A
1	Untreated	50	0.30	14	0	55.7	14.7	14.8
2	16 oz/A NutriPak[1] + 16 oz/A SulPak[2] at 4 leaf	49	0.31	14	0	60.3	14.8	12.9
3	32 oz/A NitroUltra[3] + 16 oz/A SulPak at 4 leaf	50	0.29	14	0	60.2	14.9	13.8
4	32 oz/A NitroElite[4] at 4 leaf	50	0.32	14	0	60.3	15.0	15.8
5	12.8 oz/A OnWard at flag leaf	49	0.30	15	0	60.5	14.8	14.8
6	32 oz/A NitroUltra at 4 leaf *fb* 12.8 oz/A OnWard at flag leaf	48	0.32	15	0	60.7	14.3	16.1
7	32 oz/A NitroElite4 at 4 leaf *fb* 12.8 oz/A OnWard at flag leaf	49	0.29	15	0	60.5	14.6	13.4
Trial Mean		49	0.30	14	0	59.7	14.7	14.5
C.V. %		1.6	8.1	12	0	7.8	4.4	25.2
LSD 0.05		1	NS	NS	NS	NS	NS	NS

*Days After Planting **Lodging: 0 = none, 9 = lying flat on ground

[1]AgXplore NutriPak: 8-10-2

[2]AgXplore SulPak 17: 8-0-0-17S

[3]AgXplore NitroUltra: 10-0-0-0.05B-0.2Cu-0.2Fe-0.1Mn-0.1Mg-0.2Zn

[4]AgXplore NitroElite:

[5]AgXplore OnWard: Plant growth regulator for enhancing root and shoot growth, photosynthesis, abiotic stress resistance and mineral uptake.

NS = no statistical difference between treatments.

Summary: The primary objective of this trial was to enhance grain protein content and overall plant vitality with various foliar fertilizer treatments. The trial was planted with 6 replications per treatment with SY Valda hard red spring wheat into no-till chickpea stubble on May 10. 50 lbs/A of MAP (11-52-0) was applied in the seed furrow at planting. Residual soil fertility levels at 0 - 24" were 10 lbs/A N (+ 40 lbs/A legume crop N credit) and 17 ppm P. No additional nitrogen fertilizer was applied. Soil is a Williams loam with a pH of 6.4. Foliar treatments were applied to 4 leaf wheat on June 15 and to flag leaf wheat on June 21. Fertilizer treatments were mixed with water and applied at a rate of 20 gallons/A with a CO_2 propelled backpack sprayer. The trial was harvested on August 12. The trial sustained extreme heat and moisture stress throughout the growing season. NDVI ratings (leaf greenness) were obtained 5 days after flag leaf treatments, and ratings on all treatments (except for heading) were statistically similar. None of the foliar fertilizer treatments provided any enhancement to grain protein content or grain yield. Data should be viewed with caution due to abnormal growing conditions.