

**Experiment Info:**

Planted:	5/17
Variety:	Interstate Seed RR
Row Spacing:	6.67
Previous Crop:	spring wheat
Plot size:	10'x 40'
Replications:	4
Harvested:	8/22

**Soil Test Values (ppm):**

NO <sub>3</sub> -N:	8
P:	8
K:	350
SO <sub>4</sub> -S:	7

**Objective:**

Canola is an important oil-seed crop grown in the Northern Plains of the US and into Canada. Canola is well known for its sulfur needs for top yields. This is the second year of the same treatments located at the Northern Plains Ag Research test center. As before, an application of 100 lb/A of nitrogen was the standard, which was 33 gal/A of 28% UAN. The standard sulfur application was 10 gal/A of Ammonium Thio Sulfate (ATS) which provided 29 lb/A of sulfur. For comparison, accesS at 5 and 10 gal/A were applied as additives to 28% UAN. The N Blend treatment was 43% High NRG-N and 57% 28% with eNhance (v/v). The eNhance was blended with 28% at the standard rate of 2 gallons per ton. The final treatment was 28% with eNhance at the 80% rate (vs straight 28%) plus accesS at 5 gal/A. The liquid fertilizers were applied pre-plant with stream nozzles and each treatment fertilizer was combined with 3.75 gal/A of Pro-Germinator + 1 qt/A Micro 500. Treatments were soil incorporated following application. Yield results from both years are in the following table.



Sulfur Fertilizer Program Comparisons in Spring Canola Northern Plains Ag Research 2011 - 2012 Yield - lb/A						
	Treatment*	Rate/A	2011	2012	Average	rank
1.	28%	33 gal	1286	1784	1535	6
2.	+ accesS	+ 5 gal	1448	1836	1642	4
3.	+ ATS	+ 10 gal	1395	1792	1594	5
4.	+ accesS	+ 10 gal	1498	2041	1770	1
5.	N Blend + accesS	23 + 5 gal	1511	2010	1761	2
6.	28%/eN. + accesS	26 + 5 gal	1581	1848	1715	3
		LSD(0.1)	265	251	**	
		LSD(0.2)	202	192		

\* - Fertilizers applied pre-plant incorporated, and combined with 3.75 gal/A Pro-Germinator + 1 qt/A Micro 500.  
 \*\* - Due to crop damage in 2011, only three replications were used. There were four replications in 2012. So AOV on the 2-yr average was not calculated.

**Conclusions:**

- Highest yields were obtained with some combination of accesS, either at 10 gal/A with 28% alone or at 5 gal/A in combination with the N Blend or 28% and eNhance. These latter two treatments have additional sulfur in the nitrogen formulations, which should help.
- For whatever reason, the ATS did not provide a significant yield effect when added to 28% UAN.
- Notice that the N Blend and 28% with eNhance (trt 5 and 6) were applied at rates lower than that of 28%, and still enabled top production in the combinations with accesS.