Fall Fertilizer Program Comparison on Winter Wheat (17-707)

Experiment Info:

Planted:	10/12/2016
Harvest:	7/14/2017
Yield Goal:	120 bu/A
Target Fert.:	120-131-0
Variety:	P25R77
Population:	2 million
Row Width:	7.5"
Prev. Crop:	Navy Beans
Plot Size:	15 X 265
Replications:	4
TD	4/10/2017

Soil Test Values (ppm):

pH:	6.9
CEC:	13.3
%OM:	3.3
Bray P1:	14
Bicarb P:	-
K:	149
S:	18
%K:	2.9
%Mg:	21.7
%Ca:	74.6
%H:	0
Zn:	1.1
Mn:	4
B:	0.5

Objective:

To evaluate the effects that different nutrients added to a fall fertilizer program have on winter wheat yield.

Past research has shown that phosphorus fertilizer, as Pro-Germinator provided an excellent winter wheat fertility program. In this experiment, potassium and nitrogen were added to a fall phosphorus fertilizer program to determine if there were any yield benefits. Review of soil test showed decent potassium levels with 149 ppm and 2.9% base saturation. To evaluate a potassium response, 2 gal/A of Sure-K was added to the fall fertilizer program. The other treatment evaluated the benefits of moving one third (10 gal/A) of the total nitrogen program to a fall broadcast application, leaving the remaining nitrogen to be applied with a spring topdress application at Feekes 4.

All treatments received the same total amount of nitrogen per acre and with the exception of the above mentioned nitrogen comparison was applied as 30 gal/A PRIMAGRO at spring topdress.

Fall Fertilizer Program Additives on Winter Wheat
North Central Research Station - 2017

Average of 4 Replications

Treatment	Yield - bu/A
Nitrogen Only	87.6
4 gal Pro-Germ.	93.5
+ 2 gal Sure-K	97.3
+ 10 gal PRIMAGRO N*	90.5

All treatments topdressed with 30 gal PRIMAGRO N (Feekes 4)
*Topdress rate reduced to 20 gal

17-707

CV: 8.8%, LSD(0.2) 8.2
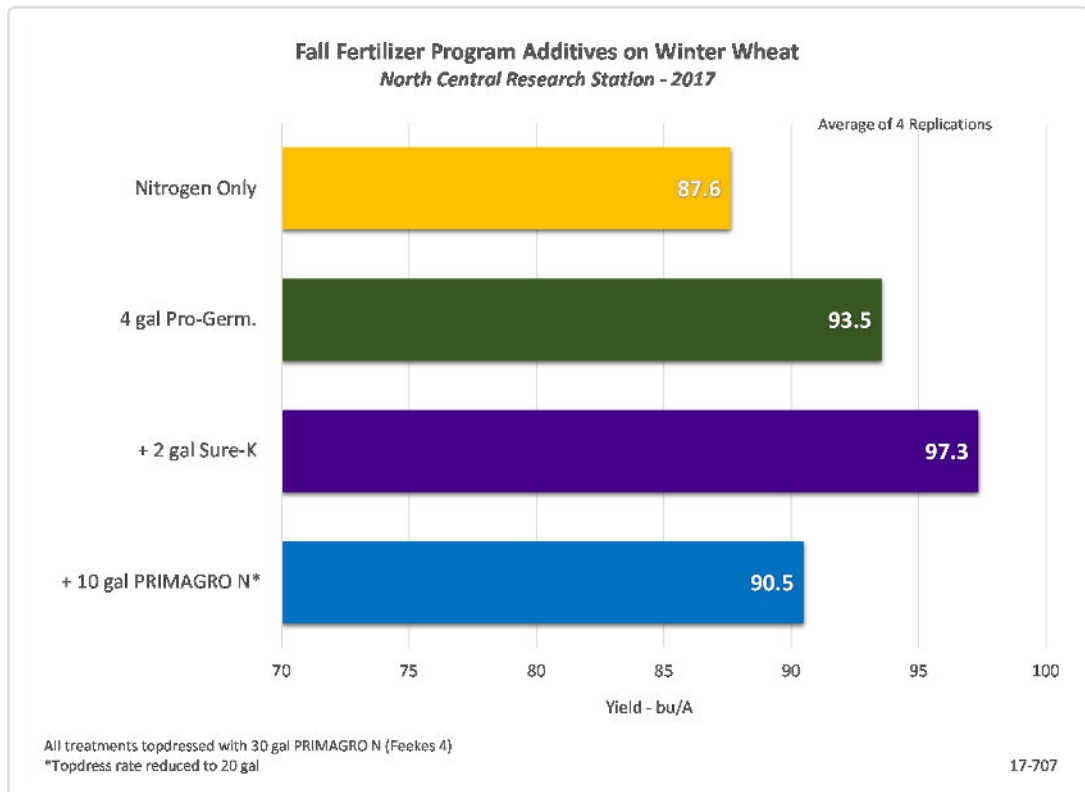
Conclusions:

• All fall fertilizer programs increased winter wheat yields over the nitrogen only check.

• The addition of 2 gal/A Sure-K to the fall fertilizer increased wheat yield by nearly 4 bu/A.

• Applying a third of the crops total nitrogen program in the fall, lowered yield compared by 3 bu/A compared to saving all the nitrogen for a spring topdress. With limited fall growth and high winter moisture in Michigan, some of the nitrogen may have been lost before it could be completely utilized by the wheat crop. Work with your local AgroLiquid Retail Partner to determine if this method of application could work in your area.