Phosphorus Application in Winter Wheat (20-508)

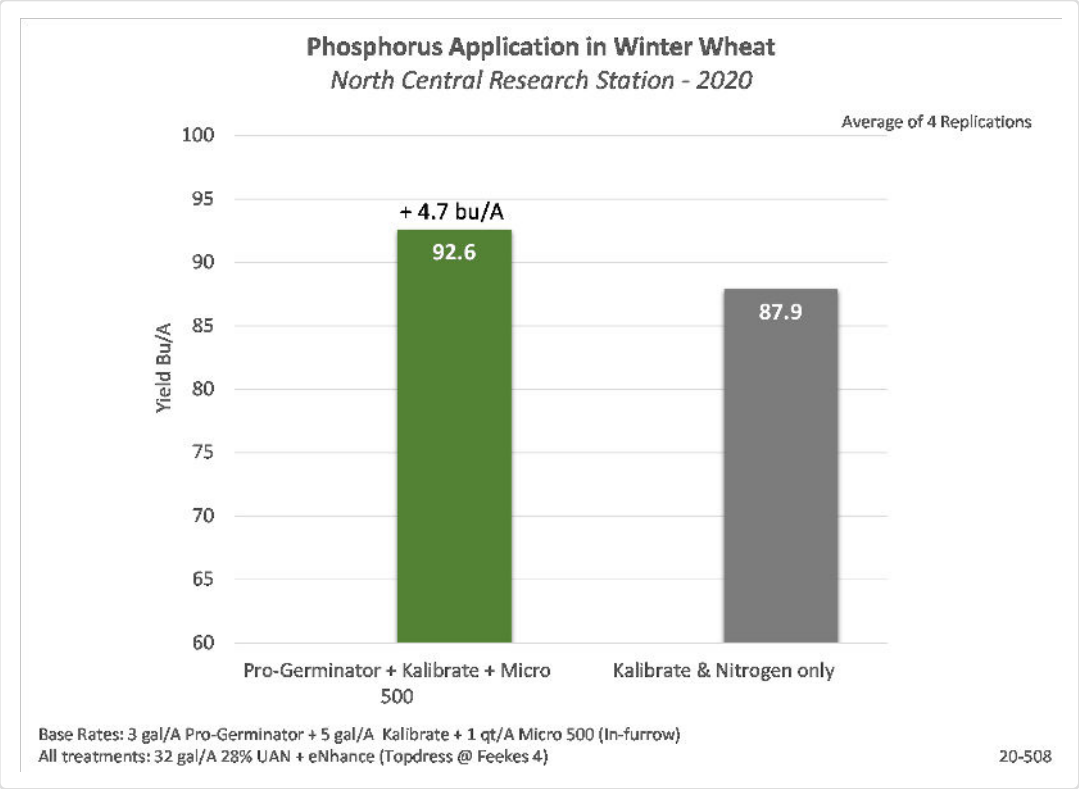
Experiment Info:	
Planted:	10/9/2019
Harvest:	7/15/2020
Yield Goal:	100 bu/A
Target Fert.:	120-68-118
Variety:	SY-100
Population:	2.0
Row Width:	7.5"
Prev. Crop:	Soybeans
Plot Size:	
Replications:	4

Soil Test Values (ppm):	
pH:	6.9
CEC:	7.2
%OM:	1.5
Bray P1:	24
Bicarb P:	
K:	48
S:	6
%K:	1.7
%Mg:	19.3
%Ca:	77.9
%H:	
Zn:	1
Mn:	6
B:	.5

Objective:

To evaluate the addition of phosphorus fertilizer to an in-furrow drill application at winter wheat planting time.

Recent studies have shown an increase in yield when fall applications of phosphorus have been applied at planting time. This result is likely from the plant having available phosphorus to the newly developing plant and root system to get the plant off to a good start. This available phosphorus helps to quickly develop a plant that tillers more before winter. The comparison below used 3 gallons of Pro-Germinator to provide an equilavent of 30 lbs P2O5 added to an in-furrow drill fertilizer application. The soils for this experiment had a P1 soil test value of 24 ppm (medium) and 48 ppm of K (very low) and a base saturation of K at 1.7%. See the results below.



LSD(0.2)4.8, CV:6.1%

Conclusions:

- Even with medium P1 soil test values, the addition of 3 gallons of Pro-Germinator in-furrow provided a 4.7 bu/A increase over the drill fertilizer without phosphorus or micro nutrients.
- Fertilizer combinations that include both major amounts of phosphorus and potassium have shown a yield advantage in other experiments.