Corn Yield Response to Potassium Application

Matthews Family Farms, North Carolina: 2024

Experiment Info	
Planted:	
Harvested:	
Yield Goal:	
Variety:	
Pop.:	
Row Width:	
Prev. Crop:	
Plot Size:	
Reps:	

Soil Test (ppm)	
pH:	6.7
CEC:	13.2
%OM:	3.14
Bray P1:	91
Bicarb P:	--
K:	298
S:	22
%K:	5.8
%Mg:	15.9
%Ca:	56.4
%H:	21.2
Zn:	18
Mn:	209
B:	0.85

Objective:

AgroLiquid's Kapitalize is a unique combination of potassium, calcium and sulfur specifically designed for the highly weathered southeastern soils. This trial evaluated three corn hybrids to see their response the the addition of 5 gal/A Kapitalize applied at planting in a 2x2 band.

This trial was established in South Carolina in soils with good potassium levels but low calcium levels. Even with the higher potassium levels, past in-season tissue reports were low in potassium. Therefore, the recommendation for Kapitalize was made to provide additional potassium and calcium to see if there was a yield benefit.

Yield results appear on the table below.

	Yield Summary			Economic Summary			
Treatment Number	Fertilizer	Yield: (bu/A)	+/- Grower Standard	Treatment ($/A)	Crop Value ($/A)	Crop - Trt$	+/- Grower Standard
P1511YHR		260.5			$950.83	$950.83	
P1511YHR	5 gal Kapitalize 2x2	279.5	19	$39.05	$1,020.18	$981.13	$30.30
P1608YHR		202.2			$738.03	$738.03	
P1608YHR	5 gal Kapitalize 2x2	235.7	33.5	$39.05	$860.31	$821.26	$83.23
P17677HR		220.6			$805.19	$805.19	
P17677HR	5 gal Kapitalize 2x2	243.6	23	$39.05	$889.14	$850.09	$44.90

Conclusions:

- All three corn hybrids showed a yield increase with the 5 gal/A application of Kapitalize at planting.
- Yield increased ranged from 19-33 bu/A which paid for the additional fertilizer application and provided an additional $33-88/A return on investment.
- This trial shows that different hybrids will respond differently to fertilizer application, attention should be given to match the two.
- A similar trial was completed on soybean, see that report for yield results.