



# Soybean 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:	

## 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 soybean varieties to see their response to the addition of 3 gal/A Kapitalize applied at planting in a 2x2 band.

This trial was established in North 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.

Soil Test (ppm)	
pH:	6.9
CEC:	11.3
%OM:	2.63
Bray P1:	73
Bicarb P:	--
K:	256
S:	8
%K:	5.8
%Mg:	17.4
%Ca:	58.2
%H:	17.7
Zn:	17
Mn:	145
B:	0.8

Treatment Number	Yield Summary			Economic Summary			
	Fertilizer	Yield: (bu/A)	+/- Grower Standard	Treatment (\$/A)	Crop Value (\$/A)	Crop - Trt\$	+/- Grower Standard
P43Z44SE		85.21			\$840.17	\$840.17	
P43Z44SE	3 gal Kapitalize 2x2	87.12	1.91	\$23.43	\$859.00	\$835.57	-\$4.60
P45Z44SE		78.65			\$775.49	\$775.49	
P45Z44SE	3 gal Kapitalize 2x2	84.26	5.61	\$23.43	\$830.80	\$807.37	\$31.88
P49Z02E		82.96			\$817.99	\$817.99	
P49Z02E	3 gal Kapitalize 2x2	85.83	2.87	\$23.43	\$846.28	\$822.85	\$4.87

## Conclusions:

- All three varieties there was a yield benefit to the addition of 3 gal/A Kapitalize at planting.
- Although there was nearly a 2 bu/A yield response to Kapitalize with the first variety, it was not enough to cover the added cost of the fertilizer application.
- Two soybean varieties provided a yield increase high enough to cover the cost of the additional fertilizer application plus some providing an extra \$32.88 and \$4.87 per acre.
- 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 corn, see that report for yield results.