



2x2 Fertilizer Economic Challenge in Soybeans

Matthews Family Farm, NC

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

Objective:

In 2025 we did economic challenge plots with XtremeAg to see how three growers from different parts of the country build a fertility program using a set application method and budget. In Arkansas we compared foliar applications on cotton with a \$50/A fertility budget. Programs are below:

Matt (AR): 2 gal Kapitalize, 2 pt LiberateCa, 2 pt B, 46 oz Micro 500 (1st/3rd PGR) 2 qt LiberateCa, 2 pt Boron (2nd/4th PGR)
 Kelly (IA): 1.5 gal Kapitalize, 1 gal NResponse, 2 qt B, 2 qt LiberateCa, 1 qt Mn, 12 oz Fulvic (4 PGR)
 Kevin (NC): 2 gal Kapitalize, 1.2 gal fertiRain, 1 qt Zn, 1 qt Mn, 1 qt eNhadne, 1 qt B (1st/3rd PGR)

Soil Test (ppm)	
pH:	
CEC:	
%OM:	
Bray P1:	
Bicarb P:	
K:	
S:	
%K:	
%Mg:	
%Ca:	
%H:	
Zn:	
Mn:	
B:	

Cotton Fertilizer Economic Challenge

Miles Farms, Arkansas: 2025

Fertilizer Budget \$50/A	Treatment	Yield: lbs/A	Profit	ROI
Fertilizer Timing Foliar x4 apps	Matt	1808.6	\$1,216.02	25.3
	Kelly	1805.6	\$1,213.92	25.2
	Kevin	1739.7	\$1,167.79	24.1
Crop Value \$0.70/lb	No foliar	1638.0	-	-

*Profit and ROI is return over fertilizer program costs

Conclusions:

- All foliar applications increased cotton yield over the no foliar check.
- Highest yield was achieved by Matt with 1808 lbs/A and highest fertilizer ROI of 25.3. This program focused on nutrients needed by growth stage alternating programs.
- A close second yield was Kelly with 1805 lbs/A focusing on a wide range of nutrients after each application.
- Kevin chose to save applications applying only after the 1st and 3rd PGR treatments with a multinational package. However, applications are being made either way, so there is likely benefit to including nutrition each time.
- Key take home for all these trials is there are a number of ways to get to the same yield end point. Utilize good agronomist practices as well as efficient products to help get top yield.