



2021 AgroLiquid Trials with XtremeAg

Working with XtremeAg

AgroLiquid began engagement with center of influence groups with two main goals in mind. One to expand promotion of AgroLiquid products through various social media channels. Second to test AgroLiquid's core and experimental products in different geographies with different cultural practices on different crops.

One group we work with is XtremeAg. This is a group of successful farmers from across the United States that share their experiences from their farm operations through webinars, videos and social media interactions.

XtremeAg is very transparent with their what they do and will highlight both products and practices that work, along with those that don't. AgroLiquid has used this opportunity to test of the box ideas, push for high yields, and expand testing on crops we have little data on.

Below are the results for 2021 for each of the locations where testing was done.

Chad Henderson: Alabama

Double Crop Soybean Foliar Applications

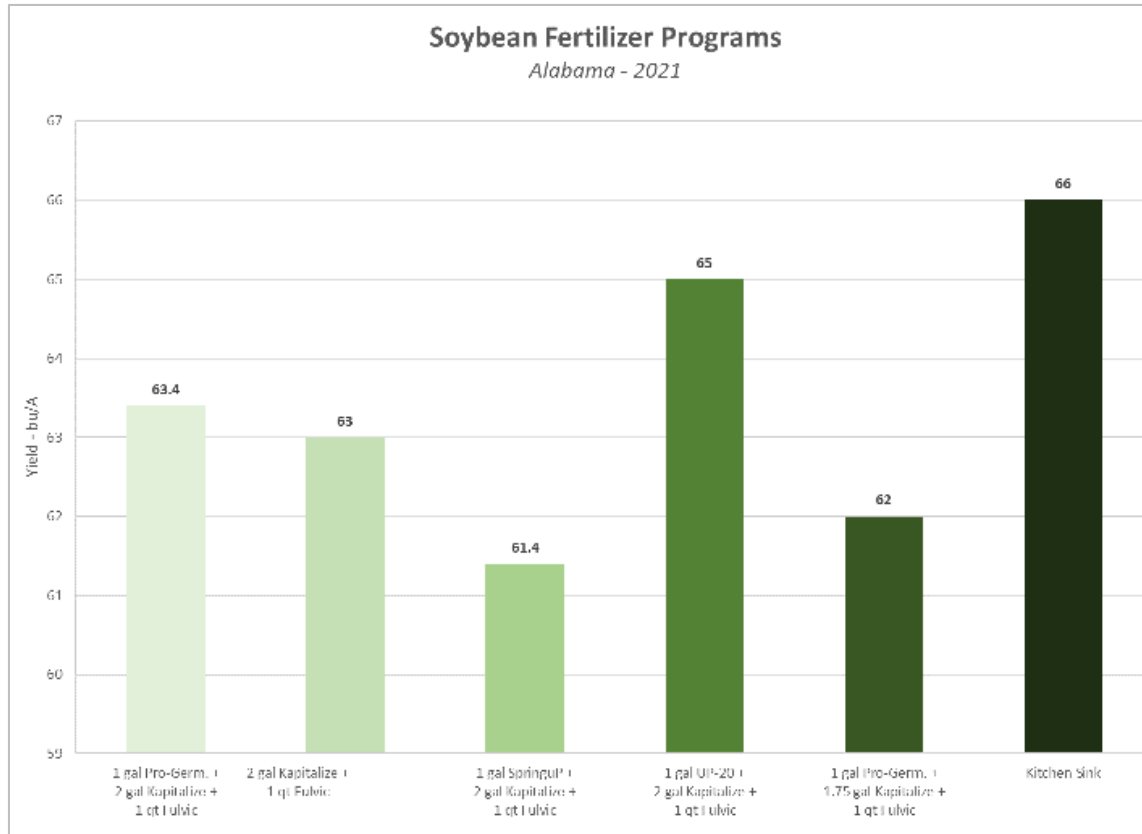
Objective: A comparison of foliar fertilizer programs on soybeans following wheat harvest

In this trial we were comparing different combinations of AgroLiquid's core products as a foliar application on soybeans in the early reproductive stage. Additionally, we had one treatment per Chad's request that we called the "Kitchen Sink". This combined all the tank mixes of the other treatments into one combination at an increased rate to see if we could injure the beans and/or improve soybean yield. Treatment list is below:

1. 1 gal/A Pro-Germinator + 2 gal/A Kapitalize + 1 qt/A AgroLiquid Fulvic
2. 2 gal/A Kapitalize + 1 qt/A AgroLiquid Fulvic
3. 1 gal/A SpringuP+ 2 gal/A Kapitalize + 1 qt/A AgroLiquid Fulvic
4. 1 gal/A experimental phosphorus + 2 gal/A Kapitalize + 1 qt/A AgroLiquid Fulvic
5. 1 gal/A experimental phosphorus + 1.75 gal/A Kapitalize + 1 qt/A AgroLiquid Fulvic
6. Kitchen sink



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Summary:

- All soybeans yielded over 60 bu/A
- The add phosphorus either Pro-Germinator or SpringuP did not provide significant yield over the no phosphorus treatments.
- The experimental phosphorus product did provide at 2 bu/A increase over the no phosphorus foliar treatment.
- Reducing the rate of Kapitalize by 1 qt/A did reduce yield slightly.
- Highest yield was achieved with the kitchen sink treatment, no injury as observed.

Corn Planter Phosphorus Fertilizer Comparison

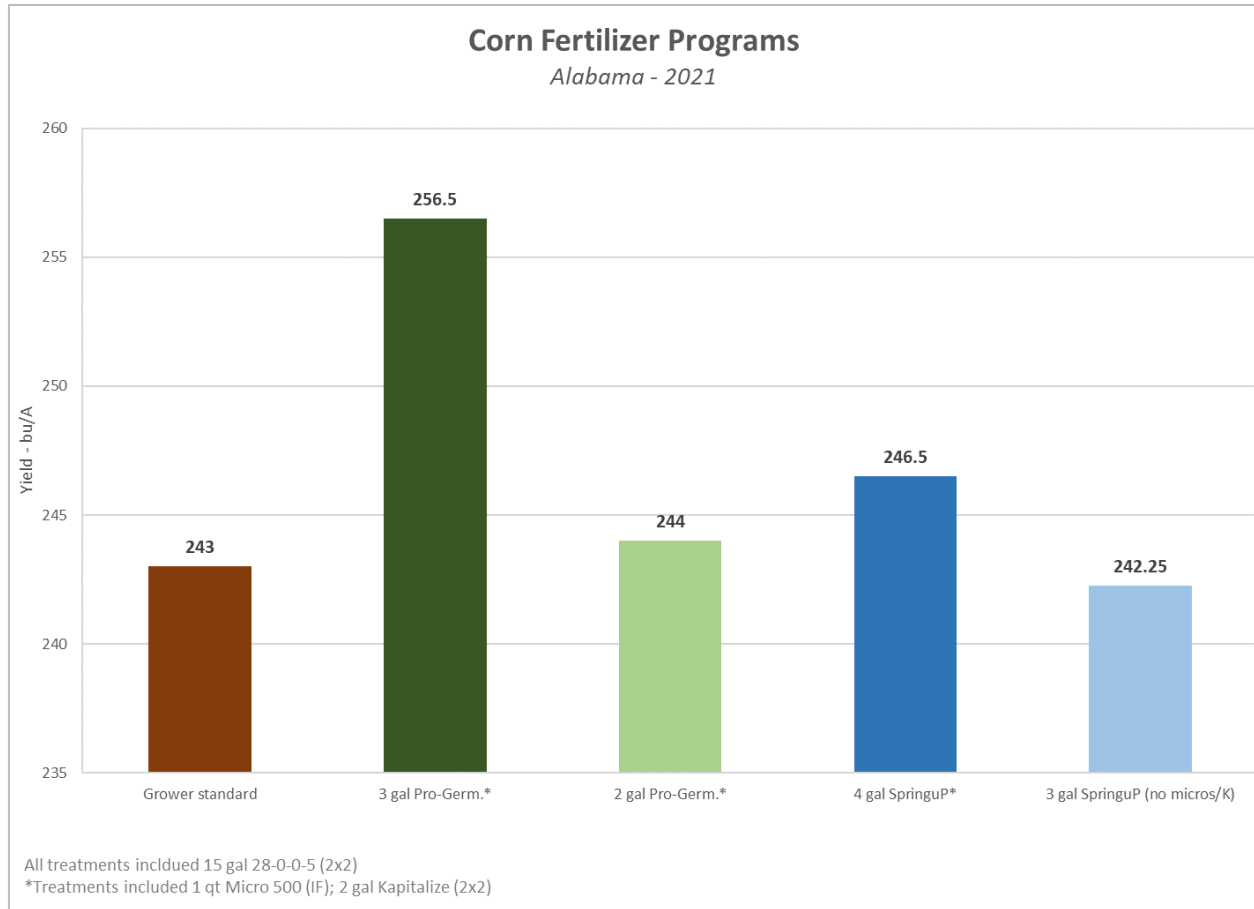
Objective: To compare different AgroLiquid fertilizer sources applied in-furrow on corn.

In this trial we compared AgroLiquid's Pro-Germinator and SpringuP and different rates to the grower standard fertilizer program. AgroLiquid treatments also included 1 qt/A Micro 500 in-furrow and 2 gal/A Kapitalize 2x2. Treatment are listed below.

1. Grower Standard
2. 3 gal/A Pro-Germinator + 1 qt Micro 500 (IF); 2 gal Kapitalize (2x2)
3. 2 gal/A Pro-Germinator + 1 qt Micro 500 (IF); 2 gal Kapitalize (2x2)
4. 4 gal/A SpringuP + 1 qt Micro 500 (IF); 2 gal Kapitalize (2x2)
5. 3 gal/A SpringuP (no micros or potassium)



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Summary:

- All AgroLiquid treatments with micronutrients and potassium yielded numerically higher than the grower standard program.
- A 2 gal/A rate of Pro-Germinator yielded similar to the grower standard is a lower rate recommended for high yielding corn.
- Highest yield was achieved with 3 gal/A Pro-Germinator.
- SpringuP out yielded the grower standard but did not perform as well as a protected source of phosphorus in these soil conditions.
- The SpringuP application without the addition of Micro 500 and Kapitalize yielded similar to the grower standard proving we needed a full nutritional program to address the crops needs.

Matt Miles: Arkansas

In-Furrow Applications on Corn, Soybean and Cotton

Objective: Determine the effects of AgroLiquid Fulvic and an experimental multinutrient program added to a fertilizer program.



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In these trials we were evaluating the effects of the addition of 2 qt/A Fulvic in an in-furrow corn and cotton. Additionally, a comparison was done adding 2 qt/A of an experimental multinutrient product applied in-furrow on soybeans.

Yields appear on the chart below.

2021 Trials - Arkansas		
2 qt/A Fulvic (IF)	209.3	corn
Control	189.9	
2 qt/A RAF-19 (IF)	88.6	soybean
Control	85.3	
2 qt/A Fulvic (IF)	1525.0	cotton
Control	1375.0	

Summary:

- AgroLiquid Fulvic improved yield of both corn and cotton when applied as part of the in-furrow planter fertilizer program.
 - Corn achieved nearly a 10 bu/A yield improvement
 - Cotton yield approved 150 lb/A
- The experimental product improved yield by over 3 bu/A.

Kevin Matthews: North Carolina

Planter Fertilizer Program Comparison

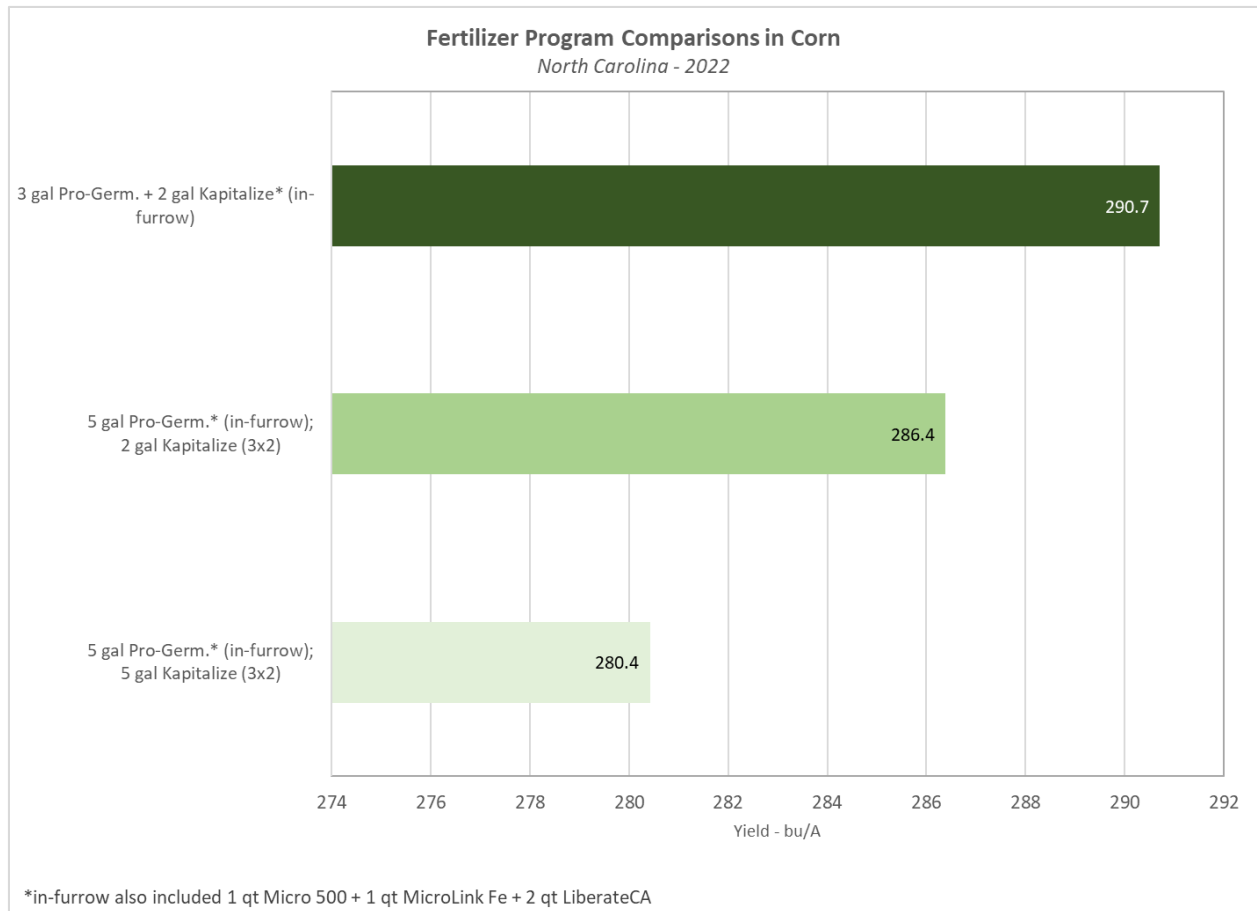
Objective: Comparison of AgroLiquid planter fertilizer program rates and placement.

This trial had 2 key focuses. First a comparison of 2 rate of Pro-Germinator applied in-Furrow, either 3 gal/A or 5 gal/A. To keep Kevin's in-furrow rate at 5 gal/A placement of potassium and calcium was adjusted. The second part of this trial looked at 2 and 5 gal of Kapitalize at different placements. Treatments are listed below.

1. 3 gal Pro-Germ. + 2 gal Kapitalize (in-furrow)
2. 5 gal Pro-Germ. (in-furrow); 2 gal Kapitalize (3x2)
3. 5 gal Pro-Germ. (in-furrow); 5 gal Kapitalize (3x2)



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Summary:

- Highest yield was achieved with the fertilizer program based on the soil test and crop demand where 3 gal Pro-Germinator and 2 gal Kalibrate were put in-furrow.
- There was no yield benefit to increasing the Pro-Germinator rate from 3 to 5 gal/A.
- Further there was not yield benefit to the higher rates of both Pro-Germinator and Kapitalize.

Soybean Foliar Application Comparison

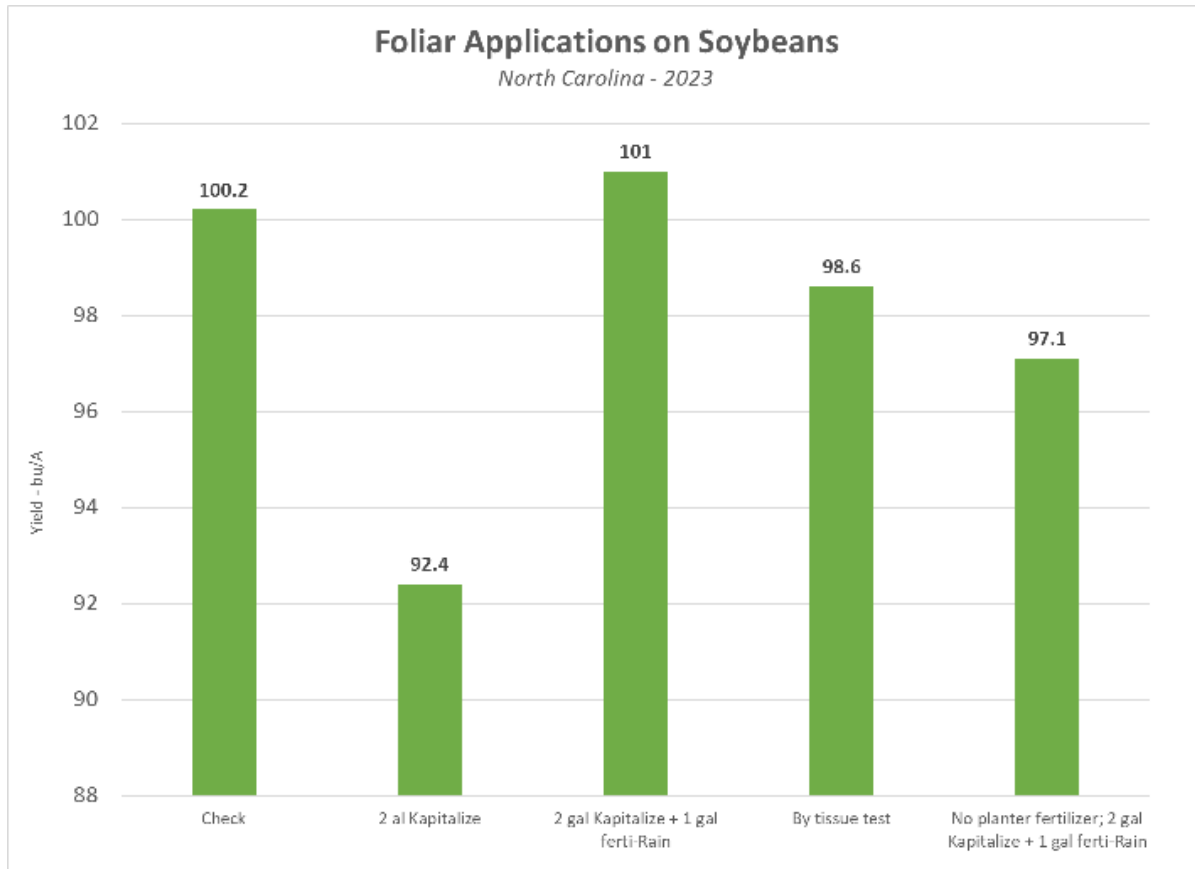
Objective: Comparison of AgroLiquid planter fertilizer program rates and placement.

This soybean trial had a complete AgroLiquid fertilizer program applied at planting time including 3 gal Pro-Germinator, 2 gal Kapitalize, 1 qt Micro 500, 1 qt MicroLink Iron, and 2 qt LiberateCa. This program was applied across all acres to provide the nutrients need based on a soil test and crop demand. Additionally, foliar applications were made to address additional in season needs.

Treatments and yield appear on chart below.



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Summary:

- None of the foliar applications significantly improved yield over the check treatment which was only the planter application of AgroLiquid products.
- Highest numerical yield included a foliar application of Kapitalize and ferti-Rain but did not provide an economic return on fertilizer dollars invested.
- These results are consistent to past data, if you provide a soybean crop with a good balanced planter time fertilizer program, there is less chance of seeing a response for foliar applications in season.

Kelly Garrett: Iowa

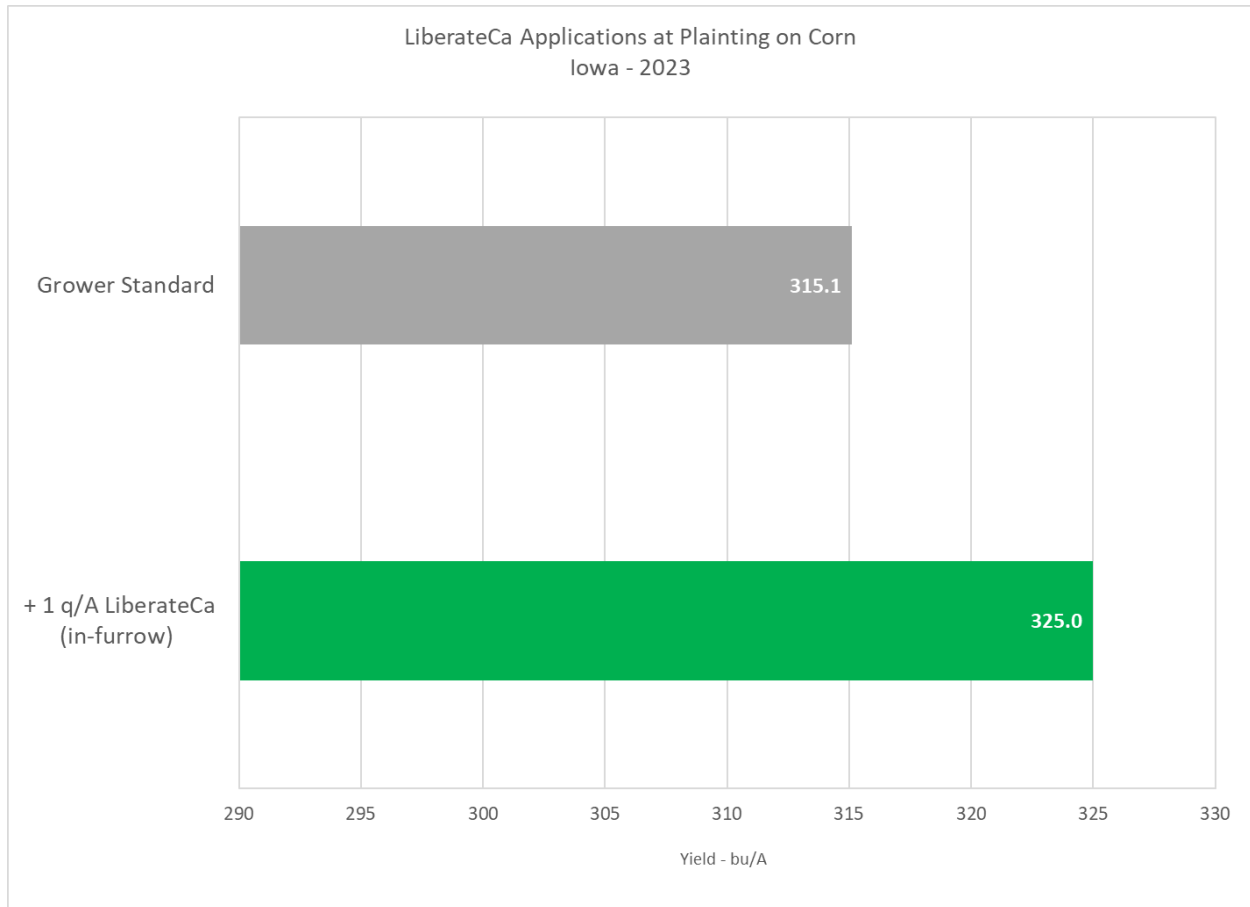
LiberateCa Applications on Corn

Objective: To determine the yield benefit of an in-furrow application of LiberateCa on corn.

In this trial we added 1 qt/A of LiberateCa, a planter safe and compatible form of calcium to the grower standard in-furrow fertilizer program.



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Summary:

- Calcium continues to be a critical limiting nutrient for Kelly on both his soybean and corn crops. In this trial he achieved nearly a 10 bu/A yield increase with an planter application of LiberatCa.

LiberateCa Applications on Corn

Objective: To determine the yield benefit of an in-furrow application of LiberatCa on soybeans.

Similar to his corn trial, Kelly was looking to address calcium needs with an in-furrow application of LiberatCa on his soybeans. For this trial he selected 3 sites where he added 1 qt of LiberatCa into his grower standard program. Yields appear on the table below.



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LiberateCa In-Furrow on Soybeans

Iowa - 2022

	Site 1	Site 2	Site 3	Average
Grower Standard	66.2	73.9	80.7	73.6
+ 1 qt/A LiberateCa	65	77.2	84.2	75.5
<i>Average +/- bu/A</i>	<i>-1.2</i>	<i>3.3</i>	<i>3.5</i>	<i>1.9</i>

Summary:

- Two of the three sites increased soybean yield when LiberateCa was added to the in-furrow program. The other site showed a slight yield decrease.
- On average the three sites showed nearly a 2 bu/A yield increase with the LiberateCa application.