



AgroLiquid and Dry Fertilizer Combinations on Soybeans (18-717)

Experiment Info:

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|---------------|------------|
| Planted: | 5/26/2018 |
| Harvest: | 10/18/2018 |
| Yield Goal: | 60 bu/A |
| Target Fert.: | |
| Variety: | 21LH02 |
| Population: | 150000 |
| Row Width: | 15" |
| Prev. Crop: | Corn |
| Plot Size: | 15x210 |
| Replications: | 4 |

Soil Test Values (ppm):

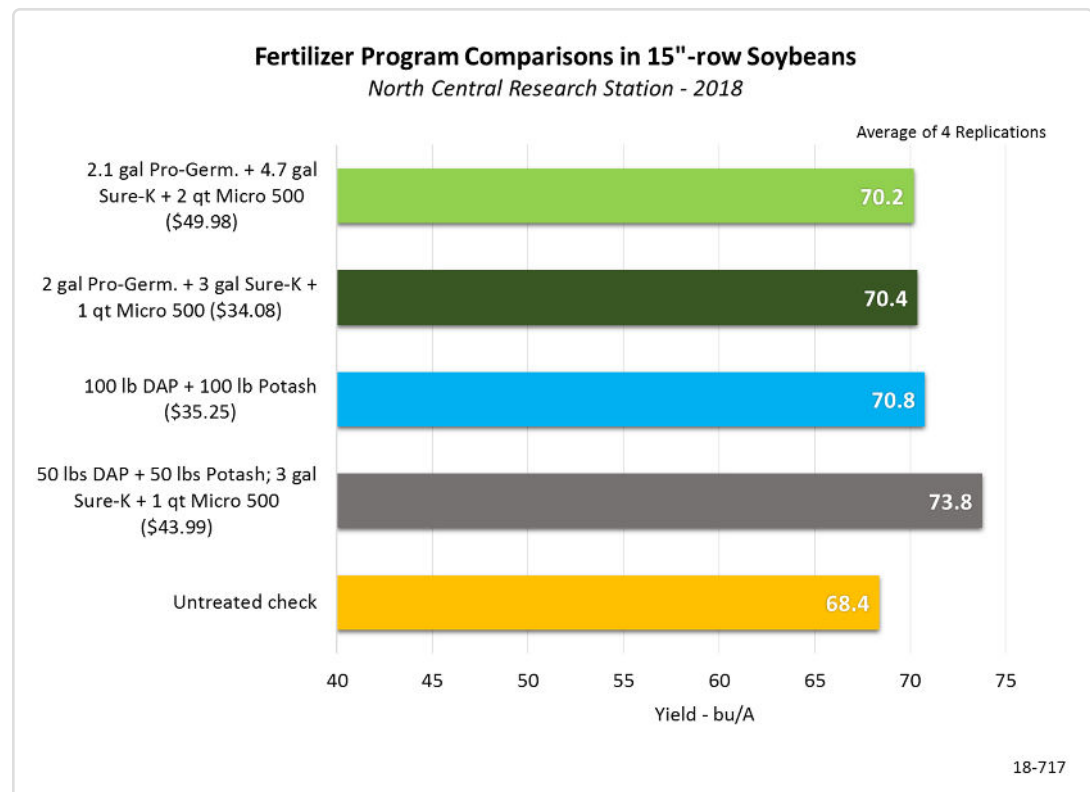
| | |
|-----------|------|
| pH: | 7.2 |
| CEC: | 15.8 |
| %OM: | 3.6 |
| Bray P1: | 11 |
| Bicarb P: | 10 |
| K: | 88 |
| S: | 5 |
| %K: | 1.4 |
| %Mg: | 23.4 |
| %Ca: | 74.9 |
| %H: | |
| Zn: | 2.4 |
| Mn: | 2 |
| B: | .6 |

Objective:

To compare both liquid and dry fertilizer programs and their associated costs on soybean yields.

Soybeans require large amounts of potassium and with soil test levels below 100 ppm K yield response to added potassium can be shown.

This experiment looked at four comparison fertilizer programs based both on economics and nutrient values. The programs included: 1. Soil Test recommended program of 2.1 gal/A Pro-Germinator + 4.7 gal/A Sure-K + 2 qt/A Micro 500. 2. All liquid program with equivalent dollar value as number 3 of 2 gal/A Pro-Germinator + 3 gal/A Sure-K + 1 qt/A Micro 500 (\$34.08/A). 3. All dry program with equivalent dollar value as number 2 of 100 lb/A DAP + 100 lb/A potash (\$35.25/A). and 4. Combination dry and liquid program with 50 lb/A DAP + 50 lb/A potash +3 gal/A Sure-K + 1 qt/A Micro 500.



LSD(0.2)3.8, CV:7.7%

Conclusions:

- Program 4 had the lowest rate of P2O5 added with 23 equivalent lbs/A and the highest rate of K2O added with 70 equivalent lbs/A which resulted in the highest yield of 73.8 bu/A. A significant yield advantage over the untreated check and the 3rd highest dollars per acre applied. This program was still economically viable over the untreated check and the all dry program using \$9/bu soybeans.
- The all liquid program number 2 resulted in the same yield as both the soil test program 1 and the all dry program 3. Program 2 was also the cheapest program applied at \$34.08/A.
- The additional potassium levels applied in program 4 probably help overcome the low soil test value of 88 ppm K and 1.4% base saturation level of K and provided the necessary nutrients needed.