



Soybean Fertilizer Programs in a Permanent Plot Rotation (16-715)

Experiment Info:

Planted: 5/27/2016

Harvest: 10/11/2016

Yield Goal: 60 bu/A

Target Fert.: 0-0-96

Variety: 20RD20

Population: 164,000

Row Width: 15"

Prev. Crop: Corn

Plot Size: 15 x 210

Replications: 4

FOL (R1) 7/13/2016

Soil Test Values (ppm):

pH: 7

CEC: 12.4

%OM: 3.4

Bray P1: 25

Bicarb P: 17

K: 111

S: 5

%K: 2.3

%Mg: 21.4

%Ca: 75.9

%H: 0

Zn: 1.5

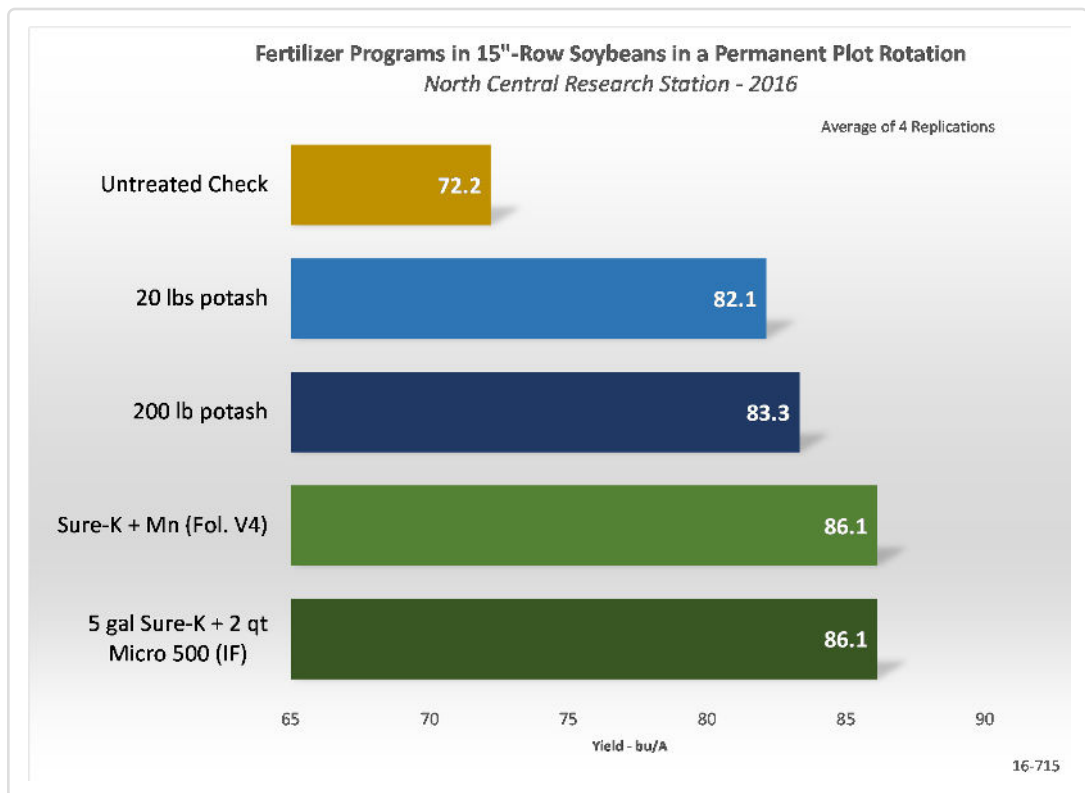
Mn: 4

B: 0.7

Objective:

Evaluation of soybean yield in the sixth year of testing long-term fertilizer programs in a permanent corn/soybean rotation.

This year marks the sixth season of the permanent plots comparing fertilizer programs in a long-term corn-soybean rotation. The soybean part of this rotation compares four fertilizer programs: (1) AgroLiquid planter program of 5 gal/A Sure-K and 2 qt/A Micro 500, (2) AgroLiquid foliar program of 3 gal/A Sure-K + 2 qt/A Mn at V4, (3) full rate dry program of 200 lbs/A potash, (4) low rate dry program of 20 lbs/A potash. This low rate fertilizer treatment matches the actual pounds of potassium that the AgroLiquid planter program provides. Potash applications were applied in the fall following previous soybean harvest to provide potassium for the following years corn and soybeans the year after that. Yield results appear on the table below.



LSD(0.05)12.3 LSD(0.1)10.2 LSD(0.2)7.9, CV: 11.9%

Conclusions:

- The abundance of rainfall in early August, provided perfectly timed moisture for soybeans to produce higher than normal yield.
- All fertilizer applications increased soybean yield over the untreated check, only the two AgroLiquid treatments resulted in a statistically significant yield increase over the untreated check.
- AgroLiquid planter and foliar application produced the same soybean yield of 86.1 bu/A. This is similar to what has been observed in the past, that a foliar application of Sure-K produces a similar, and sometimes greater, response to that of a planter application at a higher rate.