AGRO-CULTURE LIQUID FERTILIZERS

Sure-K Method of Application for Navy Beans (14-309)

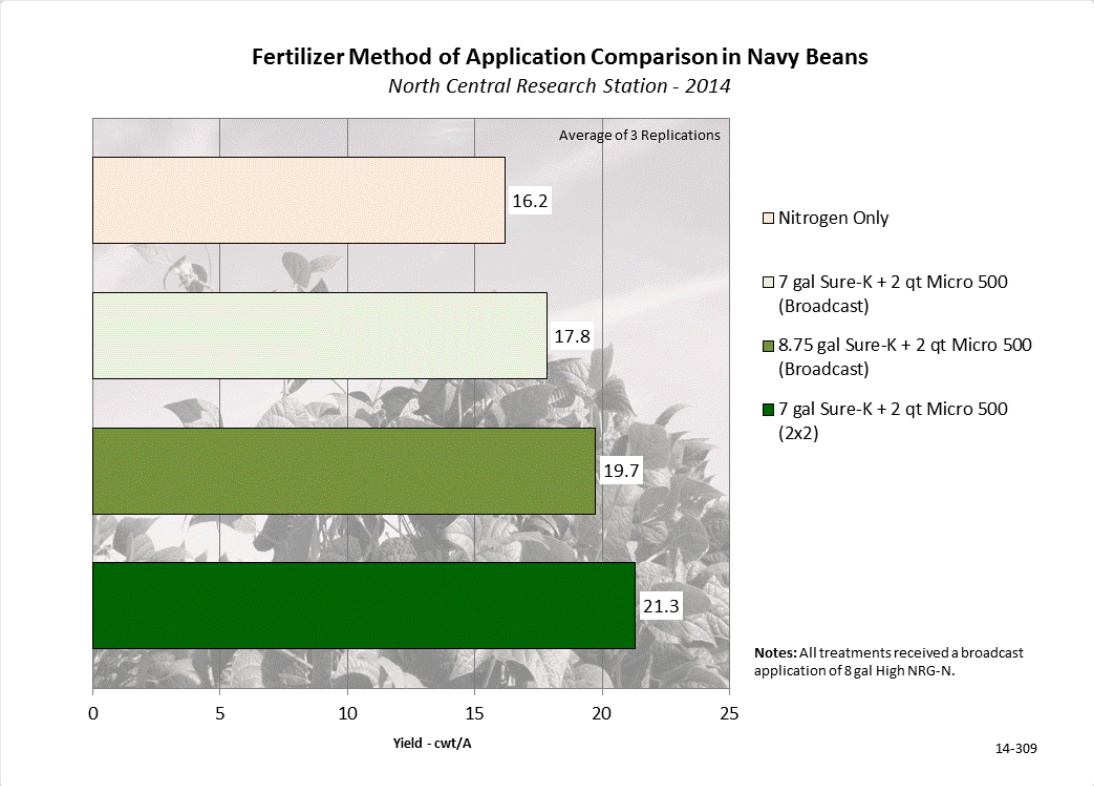
Experiment Info:	
Planted:	6/5/2014
Harvest:	9/29/2014
Yield Goal:	30 cwt/A
Target Fert.:	34-1-137
Variety:	T9905
Population:	108,000
Row Width:	30"
Prev. Crop:	Corn
Plot Size:	15x180/210/13
Replications:	5
Liquid BC:	6/6/2014

Soil Test Values (ppm):	
pH:	7.2
CEC:	7.4
%OM:	1.2
Bray P1:	22
Bicarb P:	8
K:	43
S:	10
%K:	1.5
%Mg:	15.1
%Ca:	82.2
%H:	0
Zn:	0.9
Mn:	6
B:	0.5

Objective:

To evaluate the method of Sure-K application on 30 inch row navy bean yields.

The navy bean has a small and shallow root system requiring fertilizer to be placed nearby for optimum utilization. Navy Beans seeds are sensitive to fertilizers and therefore nutrients need to be placed away from the seed. This experiment evaluated Sure-K + Micro 500 placed 2x2 with the planter vs a broadcast application. Two rates, 7 and 8.75 gal/A of Sure-K were used for the broadcast treatments. The higher rate of 8.75 gal/A is 25% higher than the recommended rate of 7 gal/A. Other research has shown that a broadcast rate must be increased 20% to 25% to result in yields equal to a planter applied rate. Broadcast treatments were made the day after planting on the soil surface. All treatments received a broadcast application of 8 gal/A of High NRG-N. Yields for the method of application treatments appear in the chart below.



LSD(0.2) 2.7, CV: 20.6%

Conclusions:

- Placing the recommended rate of potassium 2x2 next to the plant, where it is available and needed the most, gave the greatest yield.
- The 7 gal/A rate of Sure-K placed 2x2 gave a significant yield advantage over the same rate broadcast applied.
- There was no statistically significant difference in yield between the 7 gal/A rate band applied and the 8.75 gal/A rate broadcast applied. This confirms the +25% rate increase when broadcast applications are used in navy beans.
- All rates of Sure-K + Micro 500 gave a yield advantage over the nitrogen only treatment. This shows the importance of applying the nutrients the crop needs and placing them where they are best available.