



# The Economic Challenge in Soybeans ( 16-1103 )

## Experiment Info:

Planted: 5/24/2016

Harvest: 10/12/2016

Yield Goal: 50 bu/A

Target Fert.: 0-85-133

Variety: 24RH62

Population: 151,000

Row Width: 30"

Prev. Crop: Corn

Plot Size: 15 x 725

Replications: 4

DBC (Fall)

FOL (R1) 7/27/2016

FOL (R5) 8/23/2016

## Soil Test Values (ppm):

pH: 6.9

CEC: 8.2

%OM: 2

Bray P1: 6

Bicarb P:

K: 65

S: 22

%K: 2

%Mg: 20

%Ca: 76.7

%H:

Zn: .7

Mn: 7

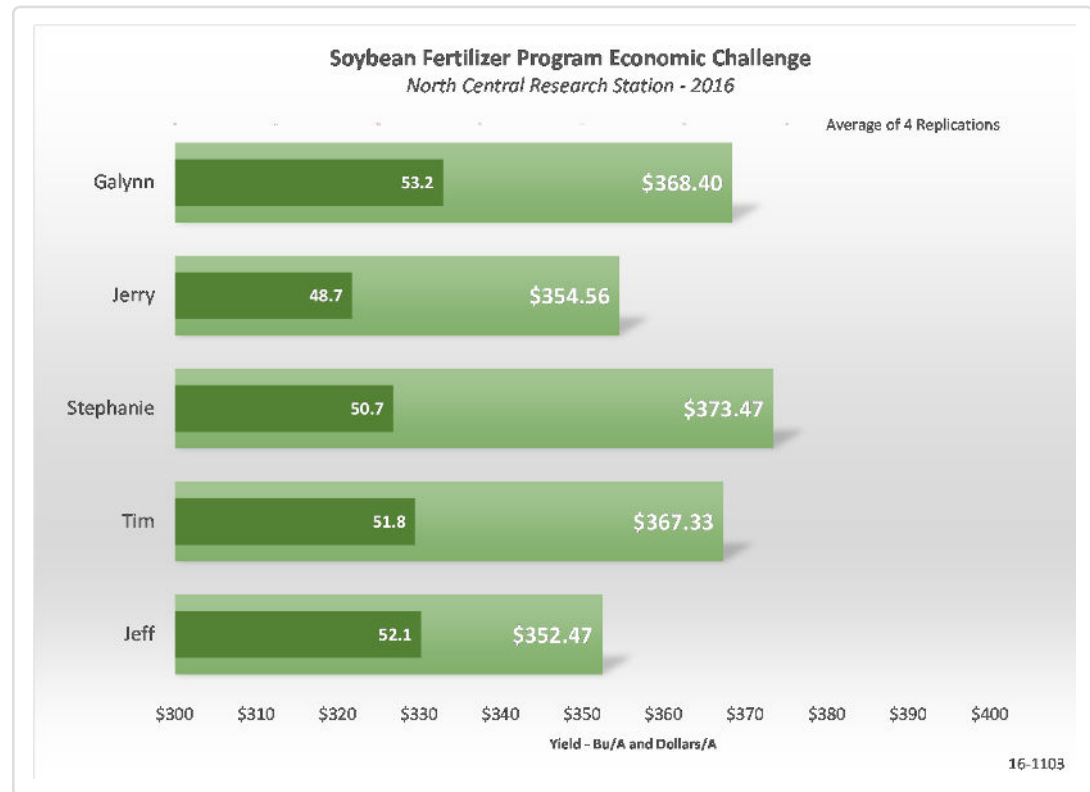
B: .5

## Objective:

To compare fertilizer programs based on economic return of fertilizer dollar invested.

In 2015, researcher at the NCRS and Senior Managers Galynn Beer and Jerry Wilhm started a challenge that took recommendations from each participant based on soil test and personal experience and developed them into a research trial. Fall fertilizer prices were used to develop an economic fertility program. Economic return was determined by subtracting the cost of fertilizer applied from the value of the corn at harvest using that day's cash price. In 2016, this challenge continued with a soybean crop. The participants' programs are as follows, yields are below.

- Galynn: 100 lbs potash + 20 lb S + 12.5 Mn + 5.6 Zn (Fall); 10 gal 28% + 4 gal PG + 2 gal SK + 1 qt Zn + 1 qt Mn (2x2)
- Jerry: 100 lb potash (PPI); 2.5 gal Sure-K + 2 qt Micro 500 (IF); 2.5 gal Sure-K + 2 qt Mn (R1)
- Stephanie: 100 lb potash (PPI); 2 gal PG + 1 gal SK + 2 qt M500 (IF); 1 gal SK + 1 gal fR + 1 qt Mn + 1 pt B (R1)
- Tim: 4 gal Pro-Germ. + 3 gal Kalibrate + 2 qt Micro 500 (2x2); 3 gal Sure-K + 1 qt Mn (R1); 1 gal NResp. (R5)
- Jeff: 4 gal Pro-Germ. + 6 gal Sure-K + 2 qt Micro 500 + 1 qt Mn + 1 qt Moly (2x2); 2 gal ferti-Rain (R1)



LSD(0.05)4.3 LSD(0.1)3.5 LSD(0.2)2.7, CV: 6.9%

## Conclusions:

- All treatments yielded similar to one another, however economic return was the focus of this trial.
- Based on corn prices at harvest minus the fertilizer expense, Stephanie's fertilizer program provided the greatest return at \$373.47 followed closely by Galynn and Tim with \$368.40 and \$367.33 respectively. However, not shown in the chart above Jeff continues to lead total economic return when you factor in the 2015 corn crop.
- With values in yield and dollars remaining close, this shows that there are many options a growing can use in a fertility program to provide a good economic return.
- Programs were developed and winter wheat was planted this fall, look for more information on that in 2017.