AGRO-CULTURE LIQUID FERTILIZERS

High NRG-N Rate Comparison in High Organic Matter Soils (14-1201)

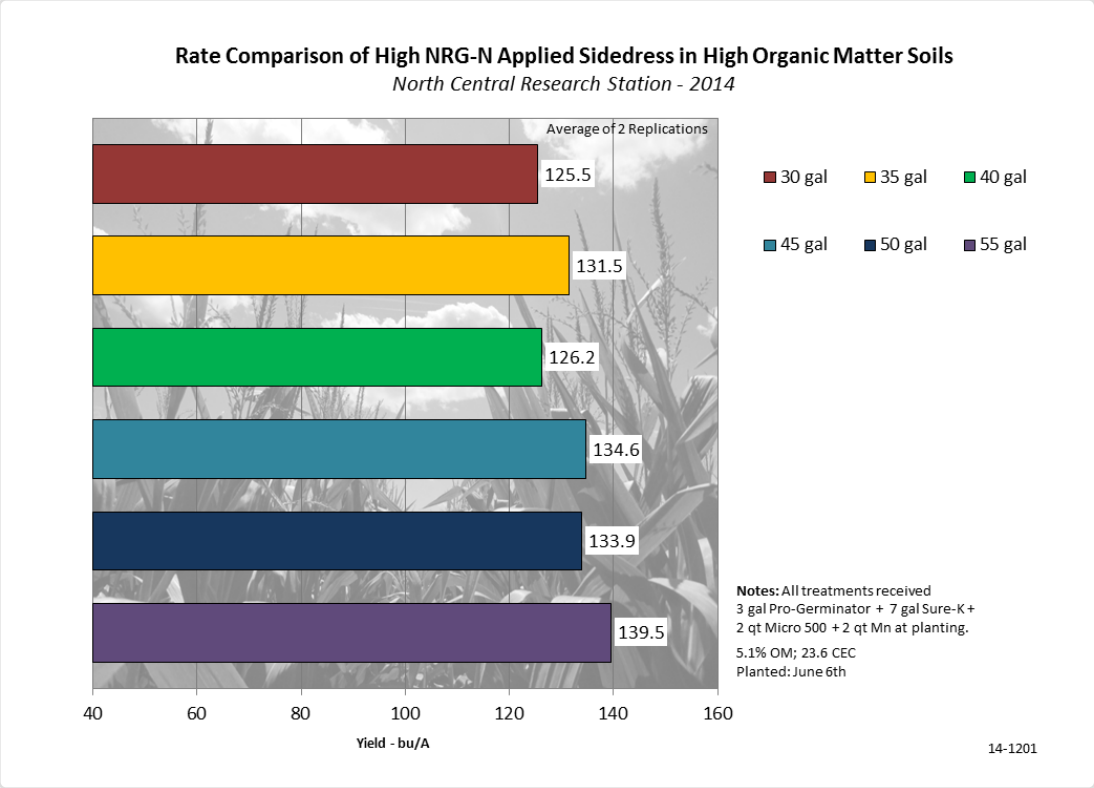
Experiment Info:	
Planted:	6/6/2014
Harvest:	11/4/2014
Yield Goal:	150 bu/A
Target Fert.:	165-86-111
Variety:	DKC 46-61 RIB
Population:	30,000
Row Width:	30
Prev. Crop:	Corn
Plot Size:	15 x 350
Replications:	2
Sidedress:	6/30/2014

Soil Test Values (ppm):	
pH:	7.2
CEC:	23.6
%OM:	5.1
Bray P1:	9
Bicarb P:	10
K:	111
S:	14
%K:	1.2
%Mg:	23.3
%Ca:	75.2
%H:	0
Zn:	1
Mn:	3
B:	1

Objective:

To determine the best High NRG-N rate when growing corn in soils with high organic matter.

Soils with high organic matter have the ability to provide nitrogen for a corn crop through mineralization. This experiment was established in an area of the NCRS that has 5.1 percent organic matter. Increasing rates of High NRG-N: 30, 35, 40, 45, 50 and 55 gallons per acre were applied sidedress to help determine what the sufficient rate should be in this highly organic soil. Unfortunately due to heavy spring rains, the corn was not planted until June 6th so yields were much lower than expected. A yield goal of 150 bu/A was targeted. Yield results appear on the chart below.



LSD(0.2) 11.3, CV: 5.5%

Conclusions:

- Only the high rate of 55 gal/A High NRG-N was statistically higher than the lower rates. However this would not be economical for the added bushels.
- It was expected that having higher organic matter in the soil that it would have provided additional nitrogen so similar results would have been seen with a lower than recommended rate of nitrogen, which was observed. However, it was surprising that there was over an 8 bu/A yield increase observed when increasing the High NRG-N rate from the recommended rate of 40 gal/A to 45 gal/A.
- This test will be repeated in the future with normal planting date and more typical expected yields.