AGRO-CULTURE LIQUID FERTILIZERS

Nitrogen Source and Method of Application Comparison in Irrigated Corn (13-504)

Experiment Info:

Planted:	5/9
Variety:	P0216HR
Population:	38,500
Row Spacing:	30"
Previous Crop:	Soybeans
Plot Size:	15'x270/310'
Replications:	4
PRE:	5/13
Sidedress:	6/12
Harvested:	10/15

Soil Test Values (ppm):

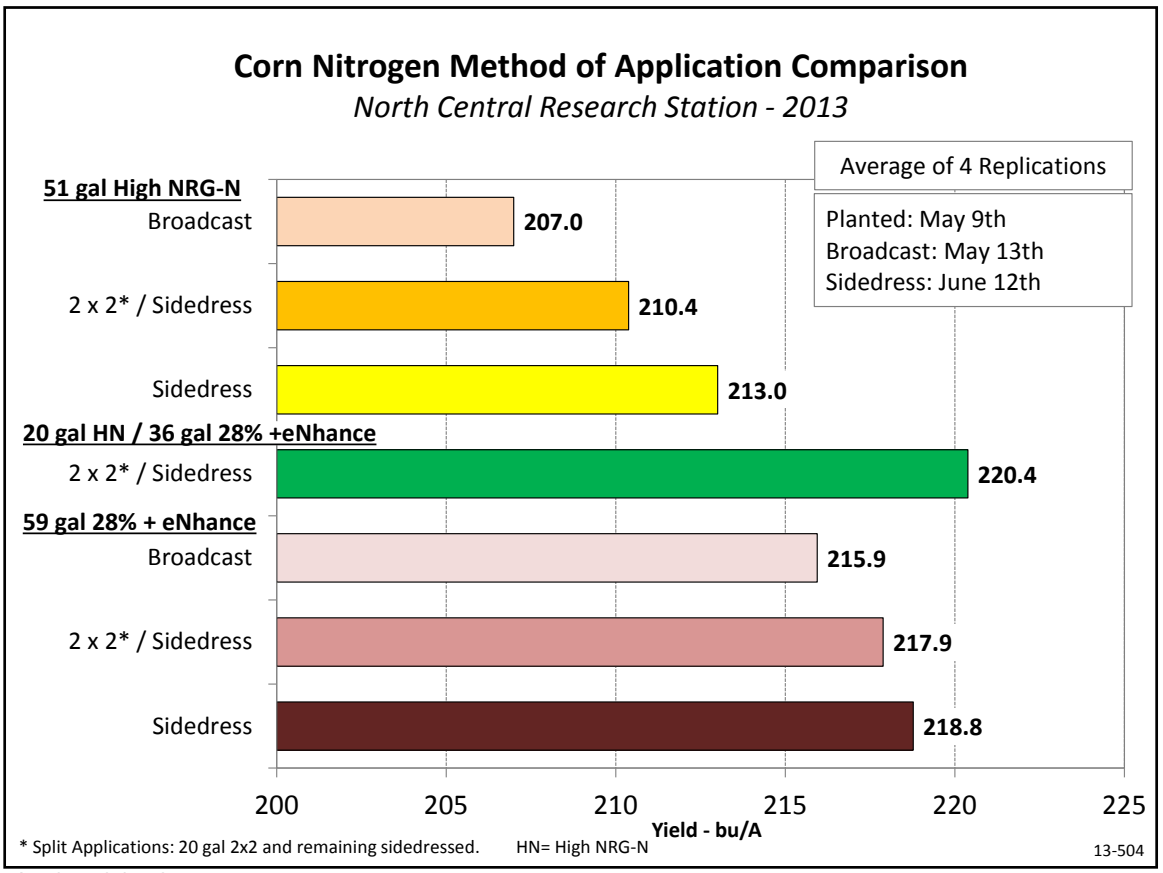
pH:	7.2
CEC:	8.3
% OM:	1.9
Bicarb P:	25
K:	67
S:	8
% K:	2.1
% Mg:	23.3
% Ca:	73.3
% H:	0
% Na:	1.3
Zn:	2
Mn:	12
B:	0.6

Yield Goal:	200 bu
Target Fertilizer Rate:	210-0-105

Objective:

To compare different nitrogen sources and methods of application for effects on corn yield.

There are many ways to apply nitrogen on a corn crop. This experiment compared a broadcast application applied after planting and before emergence, a mid-row sidedress application coulter injected 30 days after planting and a split application where 20 gal/A were applied 2x2 at planting with the remaining gallons applied sidedress. Two products, High NRG-N and 28% + eNhance were compared at each method of application. A final treatment looked at the split application using High NRG-N 2x2 at planting, followed by 28% + eNhance at sidedress. Broadcast applications were made 4 days after planting on May 9th. Sidedress applications were made 34 days after planting on June 12th. An application of 220 lbs of equivalent nitrogen per acre was applied for a yield goal of 200 bu/A of irrigated corn. Yield results appear on the chart below.



LSD (0.1): 9.3 CV: 4.4%

Conclusions:

- Of the three methods of application for the two products, sidedress produced the highest yield.
- For the second year of this experiment, highest yield was achieved with the split application that applied High NRG-N 2x2 at planting followed by 28% + eNhance at sidedress.
- In years of high rainfall, there is a risk of nitrogen loss with early broadcast applications. Likewise, sidedress applications are risky as it is critical to have nitrogen available by 30-40 days after planting or deficiencies could occur.
- To even risks, a split application provides some early nitrogen without risk of losing too much if a rain event occurs and give additional time to make sidedress applications.