

Experiment Info:

Planted:	5/7
Variety:	DKC53-78
Population:	4
Row Spacing:	30"
Previous Crop:	Soybeans
Plot Size:	15' x 210'
Replications:	4
Potash:	Fall 2012
PPI:	5/2, 5/6
Sidedress:	63/8
Harvested:	10/15

**Soil Test Values
(ppm):**

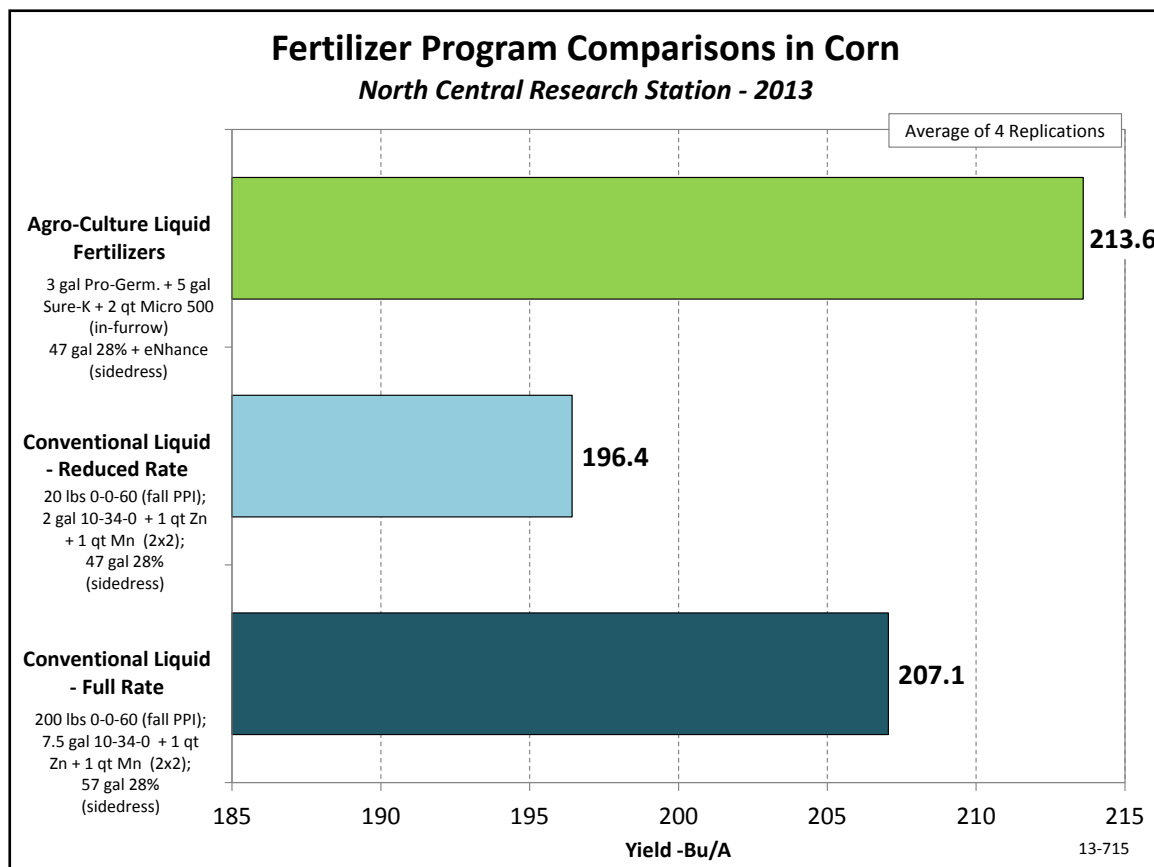
pH:	7
CEC:	12.4
% OM:	3.4
Bicarb P:	17
K:	111
S:	5
% K:	2.3
% Mg:	21.4
% Ca:	75.9
% H:	0
% Na:	0.4
Zn:	1.5
Mn:	4
B:	0.7

Yield Goal:	175 bu
Target Fertilizer Rate:	175-30-60

Objective:

Compare a corn nutrient program for AgroLiquid fertilizer against a conventional fertilizer program, both with equal application rates of N-P-K.

AgroLiquid fertility recommendations are applied at rates substantially lower than those of conventional programs, and yet are able to produce similar if not higher yields. This is due to enhanced nutrient formulations that enable nutrient preservation in the soil and increased uptake and usability. Additionally, they are typically less harmful to developing roots and subsequently plants have a larger root system that further enables more nutrient uptake. However, the question is sometimes asked about the effects of an equally reduced application rate of conventional fertilizers and the subsequent effect on yield compared to that of a full rate. An experiment was established to answer this question by applying reduced rates of potash, 10-34-0 and 28% UAN to compare to an AgroLiquid program. Both of the low-rate programs applied approximately 144 lb/A of N and 8 lb/A of phosphate. The potash was fall-applied after the soybean crop at a double rate to last for the corn and next soybean crop, hopefully. So the conventional program had 12 lb/A of K₂O compared to 4 lb/A for AgroLiquid. A slightly higher rate was applied in the conventional to account for broadcast vs band. This is the third year of this comparison. The 2013 results appear below.



Conclusions:

- The low-rate AgroLiquid treatment produced a yield that was 17 bu/A greater than that produced with an equal nutrient rate of conventional fertilizers.
- The full rate of the conventional fertilizers resulted in an increased corn yield compared to that of the low rate, but was still lower than the yield with the AgroLiquid nutrition.
- Therefore, yield is affected by fertilizer type and not just rate.