



# Permanent Fertilizer Programs in Corn (17-715)

## Experiment Info:

Planted:	5/18/2017
Harvest:	10/21/2017
Yield Goal:	170 bu/A
Target Fert.:	187-13-58
Variety:	DKC 46-36 RIB
Population:	32,500
Row Width:	30"
Prev. Crop:	Soybeans
Plot Size:	15 x 210
Replications:	4

## Soil Test Values (ppm):

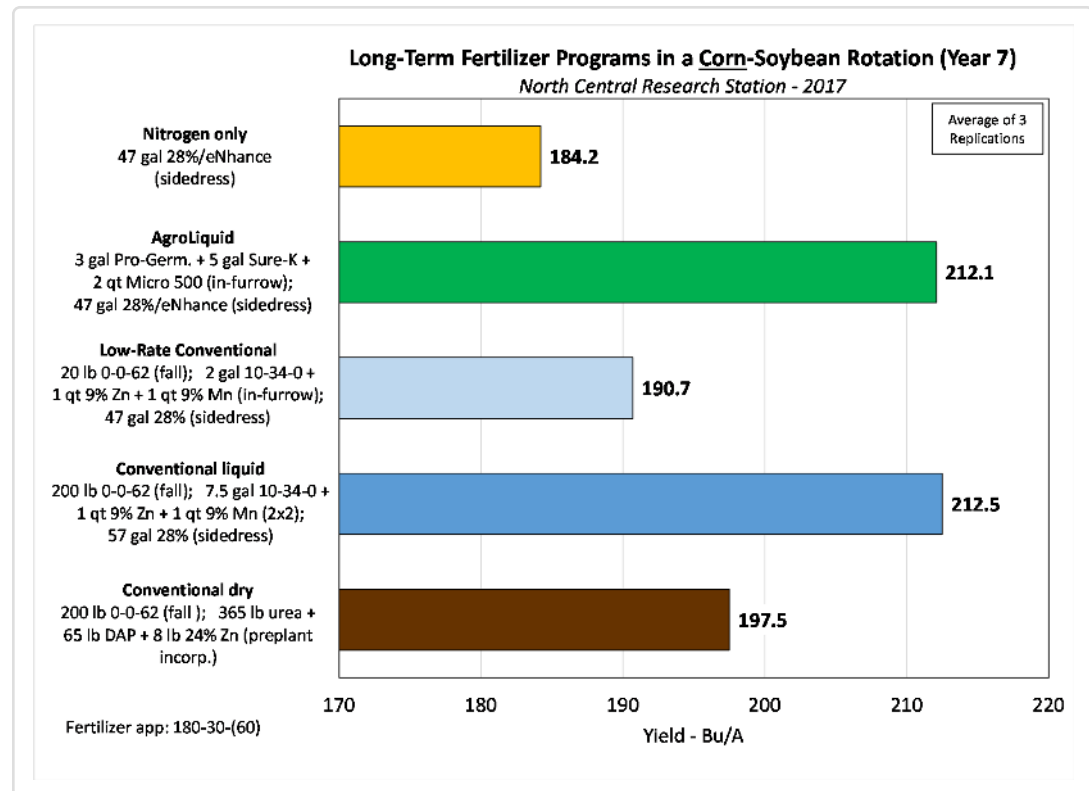
pH:	7
CEC:	12.4
%OM:	3.4
Bray P1:	25
Bicarb P:	17
K:	111
S:	5
%K:	2.3
%Mg:	21.4
%Ca:	75.9
%H:	0
Zn:	1.5
Mn:	4
B:	0.7

## Objective:

Compare fertilizer programs of different nutrient sources and rates for effects on corn yield.

AgroLiquid nutrients are promoted as being considerably more efficient than conventional fertilizers, and thereby being able to be applied at substantially reduced rates with the same outcome.

In this experiment, now in its seventh year of placing the same fertilizer programs in the same plots in a corn-soybean rotation, an AgroLiquid fertilizer program is compared to three different "conventional" fertilizer programs. A "Low-Rate Conventional" program applies the same number of pounds of nutrients as the AgroLiquid program, but uses conventional sources of muriate of potash, 10-34-0, zinc and manganese and 28% UAN. The "Conventional liquid" program uses the same sources, but applied at the full recommended rate for 180-30-60. The "Conventional dry" program utilizes a 180-30-60 recommendation with all dry fertilizers: muriate of potash, DAP, zinc (oxy-sulfate) and urea. Note: the dry potash is applied in the fall after soybeans at a rate of 200 lb/A which theoretically is for the two following crops of corn and then the next soybean crop. Program results for 2017 are in the following chart.



LSD(0.2): 11.6; CV+ 8.8

## Conclusions:

- As has been the trend over the years, the full programs all had substantially increased yields over that of N only.
- The dry program yielded lower than the other two programs, likely due to drier conditions early in the season.
- The Low-Rate conventional program yielded 21.4 bushels less than that of the AgroLiquid program even though the same amount of nutrients were applied. This, plus the equal yields of AgroLiquid and Conventional liquid, indicates that the unique nutrient formulations of AgroLiquid are effective even at substantially lower application rates this year and over the past years of this experiment.