



# Nitrogen Methods of Application on Corn (17-710)

## Experiment Info:

Planted:	5/16/2017
Harvest:	11/8/2017
Yield Goal:	170 bu/A
Target Fert.:	191-48-48
Variety:	DKC 52-68
Population:	33,000
Row Width:	30"
Prev. Crop:	Soybeans
Plot Size:	15 x 255
Replications:	4

## Soil Test Values (ppm):

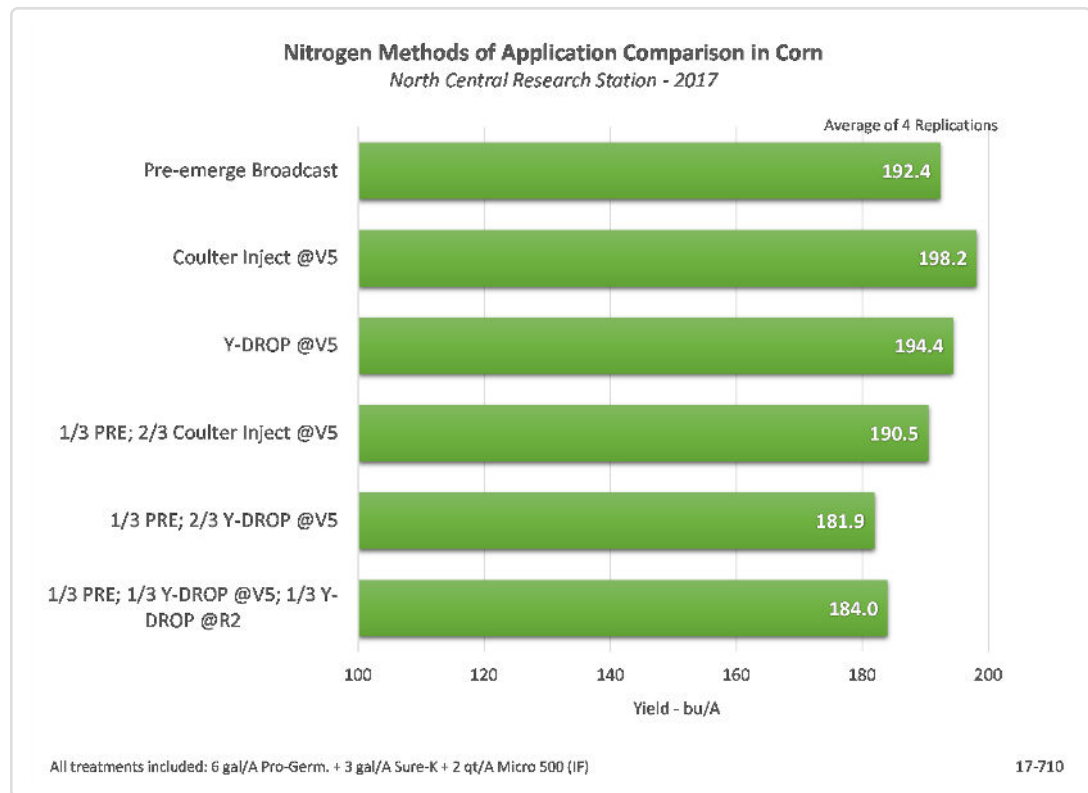
pH:	6
CEC:	11.9
%OM:	2.6
Bray P1:	18
Bicarb P:	
K:	116
S:	7
%K:	2.5
%Mg:	16.5
%Ca:	65.8
%H:	14.9
Zn:	1.3
Mn:	7
B:	.5

## Objective:

To compare different application methods and timing for nitrogen fertilizer on corn.

This trial was established to compare different methods of application of nitrogen including: PRE (pre-emergence) broadcast, coulter inject at V5 growth stage, Y-DROP at V5, or split applications PRE/coulter inject, PRE/Y-DROP V5 and PRE/Y-Drop at V5/Y-DROP at R2. High NRG-N at a total volume of 45 gal/A was applied for all treatments to provide 192 lbs of equivalent nitrogen per acre (130 lb/A of actual N).

Yield results appear on the chart below.



LSD(0.2)7.3, CV:9.4%

## Conclusions:

- Unlike past results, the V5 application of nitrogen coulter injected yielded about 4 bu/A higher than the Y-DROP treatment. This is the first time this has been observed in 3 years of testing Y-DROPS at the NCRS. This may be due in part to the warm dry summer from June through July. The surface application with Y-DROP may have been at risk for more environmental loss than the coulter injection.
- Highest yield was achieved with the full nitrogen program being coulter injected at V5, followed by the broadcast application and Y-DROP application at V5. Note: There was 0.97" of rain 12 days following the PRE application.
- Splitting the nitrogen applications with Y-DROP did not show yield increases as seen in the past two years of testing.