Strip-Till Application Timing Comparison in Corn (15-308)

Experiment Info:	
Planted:	5/13/2015
Harvest:	10/27/2015
Yield Goal:	200 bu/A
Target Fert.:	220-0-127
Variety:	DKC 53-56 RIB
Population:	36,700
Row Width:	30"
Prev. Crop:	Wheat
Plot Size:	15 x 180/210/130
Replications:	5
ST (Fall 4)	10/2/2014
ST (Sp 4)	5/13/2015
SD (V5)	6/4/2015

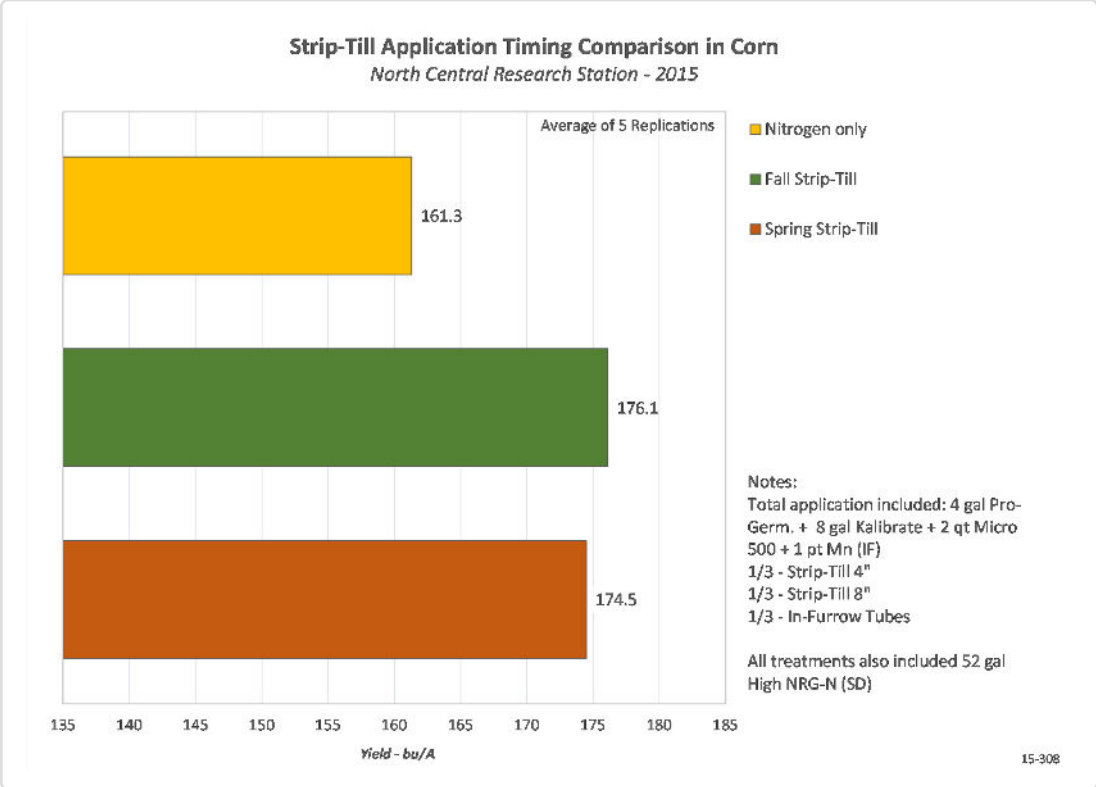
Soil Test Values (ppm):	
pH:	7.5
CEC:	8.3
%OM:	1.4
Bray P1:	30
Bicarb P:	10
K:	58
S:	11
%K:	1.8
%Mg:	17.8
%Ca:	79.4
%H:	0
Zn:	1.2
Mn:	5
B:	0.5

Objective:

To compare application timing of nutrients on corn yields in a strip tillage system.

There can be many reasons to complete strip-till tillage in the fall or spring. Soil types, geographic location and soil moisture levels will determine what is the best timing for this tillage system. Our research looked at splitting a total recommended program into thirds and apply one-third at the 4" soil depth and one-third at the 8" soil depth with a Orthman 1tRIPr running 9" deep in either the fall or spring. Spring strip-till and planting occurred on the same date. The remaining one-third of the recommended program was applied with in-furrow tubes at planting. Previous research has shown that splitting the program into these three zones provided a yield advantage. This could be attributed to the corn roots having the multiple zones of nutrition to feed the plant.

All treatments also included 52 gal/A of High NRG-N sidedressed at V5 with coulter injection. Yields for the fall vs spring comparison appear in the chart below.



LSD(0.2) 9.6, CV: 14.1%

Conclusions:

- Fall and spring strip-till applications showed similar yield results for this lighter soil type.
- The insignificant yield advantage of the fall strip-till application could be attributed to the worked strips having time to "settle" before planting.