Fall/Spring Strip-Till Fertilizer Program Comparisons on Corn (16-309)

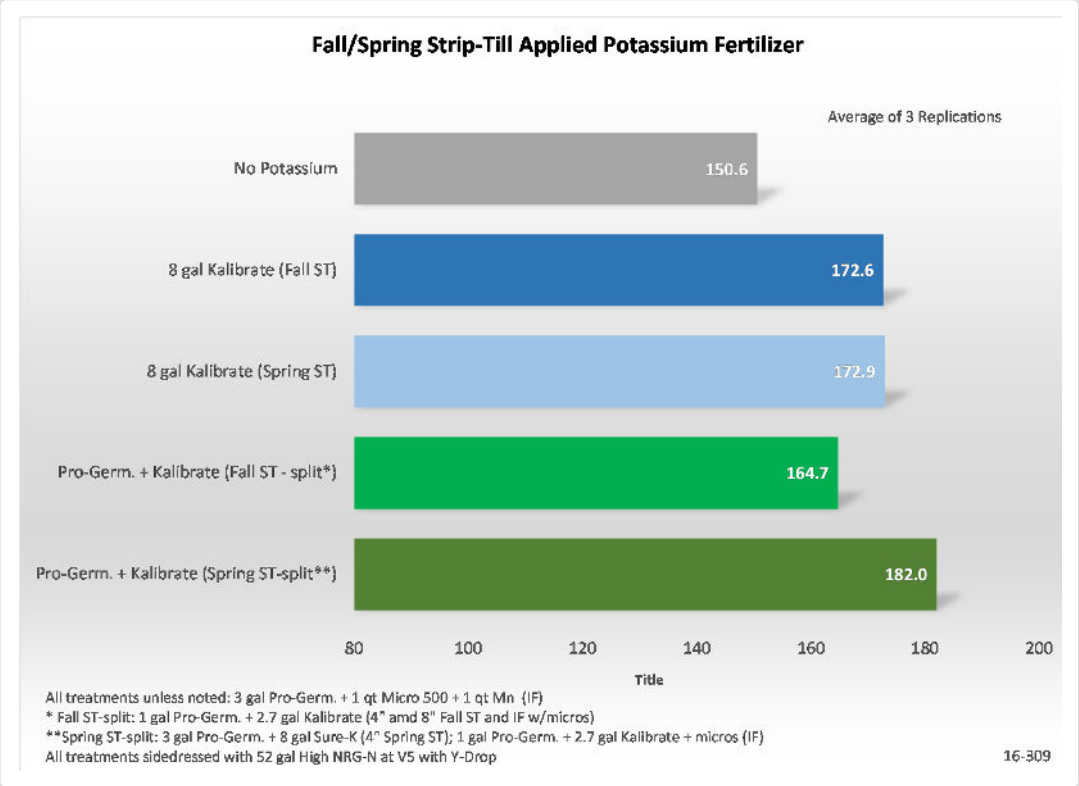
Experiment Info:	
Planted:	5/6/2016
Harvest:	10/6/2016
Yield Goal:	200 bu/A
Target Fert.:	220-39-143
Variety:	DKC 53-68 RIB
Population:	38,000
Row Width:	30"
Prev. Crop:	Wheat
Plot Size:	15 X 180/210/130
Replications:	5
ST (Fall 4)	11/13/2015
ST (Spring	04/19/2016
SD (V5)	06/10/2016

Soil Test Values (ppm):	
pH:	7.2
CEC:	7.4
%OM:	1.2
Bray P1:	22
Bicarb P:	8
K:	43
S:	10
%K:	1.5
%Mg:	15.1
%Ca:	82.2
%H:	0
Zn:	0.9
Mn:	6
B:	0.5

Objective:

To compare fall versus spring applications of Kalibrate in a strip till applied tillage system.

Corn requires large amounts of potassium for energy metabolism and photosynthesis. Providing that potassium in a band under the developing corn roots is an excellent way to provide for its needs all season long. The fall is usually a good time to complete strip tillage and apply nutrients for next season. If soil conditions allow for deep tillage in the spring then strip tillage and nutrient applications are also a good choice. A comparison of an all fall or all spring application of 8 gal/A of Kalibrate in a band at a 4" depth was made at the time of tillage. The fall split applications were made with 1/3 of the phosphorus and potassium needs each placed at 4" and 8" within the strip and the final 1/3 placed in-furrow with the planter. The spring split received the full rate of phosphorus and potassium in the strip at 4" and an additional 1/3 rate applied in-furrow with the planter. All treatments were sidedressed with 52 gal of High NRG-N at V5.



LSD(0.2)7.4, CV:10.4%

Conclusions:

- Spring or fall applications of Kalibrate provided at least a 22 bu/A significant advantage over the no potassium check.
- A fall application of 8 gal/A of Kalibrate showed a nearly identical yield as a spring application of the same amount. This shows that no potassium was lost to soil tie up and was still in a very efficient and useable form for the corn.
- The spring split application of the phosphorus and potassium provided a significant yield advantage over the fall split. However this application also had more total nutrients applied.