



Effects of In-Furrow Applications of Pro-Germinator on Corn Emergence (15-306)

Experiment Info:

Planted:	5/6/2015
Harvest:	10/8/2015
Yield Goal:	200 bu/A
Target Fert.:	220-39-135
Variety:	DKC 49-72 RIB
Population:	36,400
Row Width:	30"
Prev. Crop:	Soybeans
Plot Size:	15 x 180/210/130
Replications:	5
SD (V5)	6/4/2015

Soil Test Values (ppm):

pH:	7.1
CEC:	5
%OM:	1.3
Bray P1:	22
Bicarb P:	7
K:	39
S:	6
%K:	2
%Mg:	17
%Ca:	79.7
%H:	0
Zn:	0.8
Mn:	3
B:	0.4

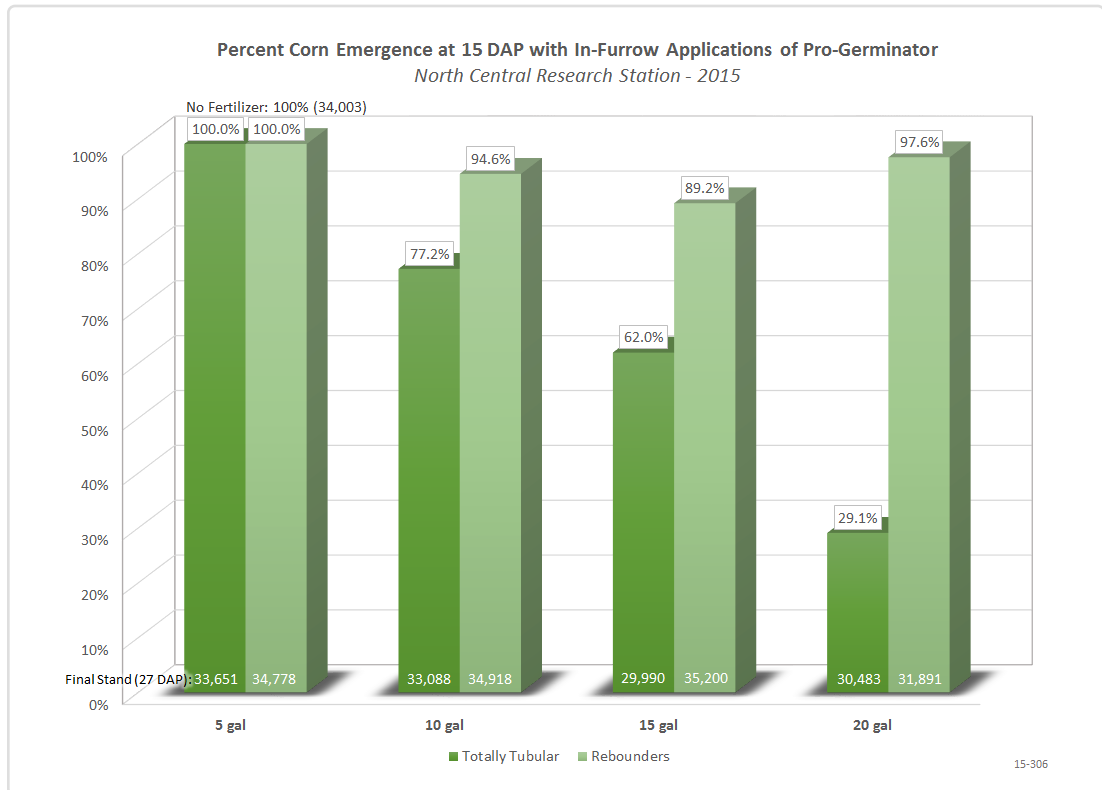
Objective:

To evaluate the effects in-furrow applications and fertilizer rates have on corn emergence.

This experiment was established focusing, not necessarily on the agronomic or economics of in-furrow programs, but rather seed safety. Pro-Germinator was applied at 4 different rates per acre: 5 gal, 10 gal, 15 gal and 20 gal/A. Each rate was applied using two different in-furrow methods of application. First, Totally Tubular where fertilizer is placed in the bottom of the seed trench and the seed is placed on top and second, with Rebounders where most of the fertilizer is placed to the side of the seed trench, keeping most contact away from the seed.

Plants were counted at 15 days after planting (DAP) and again at 27 days after planting. The chart below shows data that was collected. Final stand at 27 DAP is along the base of each of the treatment bars. The percent of that final stand that was emerged at 15 DAP is represented in each of the bars. These are compared to a no fertilizer check listed along the top of the chart.

Yield results can be reviewed in the report "Effects of In-Furrow Applications of Pro-Germinator on Corn Yield".



LSD(0.2) 13.1, CV 48.7%

Conclusions:

- Final stand at the 5, 10, and 15 gal/A rate using the Rebounders for applications were not lower than the no fertilizer treatment. There was a slight stand reduction seen with the 20 gal/A rate.
- The applications using Totally Tubular began showing stand loss at the 15 gal/A rate.
- Both in-furrow options at the 5 gal/A did not delay corn emergence.
- The 10 gal/A rate with the Totally Tubular did delay plant emergence but did not hurt overall stand.
- As fertilizer rates increased emergence was more delayed with the Totally Tubular applications. This provides valuable information on general seed safety and can be related to extreme cases such as dry soils, poor environmental conditions or more seed sensitive products such as nitrogen.