

In-furrow Nitrogen Applications in Corn (13-712)

Experiment Info:

Planted:	5/8
Variety:	DKC48-12
Population:	4
Row Spacing:	30″
Previous Crop:	Soybeans
Plot Size:	15′ x 255′
Replications:	4
Sidedress:	6/15
Harvested:	10/2

Soil Test Values (ppm):		
pH:	6.6	
CEC:	21.5	
% OM :	5.1	
Bray P1:	16	
К:	108	
S:	12	
% K :	1.3	
% Mg:	17.5	
% Ca:	80.9	
% H :	0	
% Na:	0.3	
Zn:	1.1	
Mn:	2	
B:	0.8	

Yield Goal:	175 bu
Target Fertilizer Rate:	195-60-110

Objective:

To compare the effects of placing a planter applied nitrogen source, High NRG-N, in-furrow on corn yield.

In-furrow applications of High NRG-N can cause stand reductions and lower yields based on data from previous years of research at the North Central Research Station. This comparison was planted no-till into soybean stubble under ideal soil conditions and a soil temperature of 62 degrees Fahrenheit. Emergence occurred under favorable conditions. The soil test for this field has a 5.1% organic matter and a CEC of 21.5. In-furrow nutrition of 4 gal/A of Pro-Germinator + 6 gal/A of Sure-K and 2 qt/A of Micro 500 were applied with the planter row unit in-furrow tube for both treatments. A partial amount of the total recommended nitrogen, 3 gal/A, was added to the second treatment to make the comparison. The remaining recommended nitrogen needs were sidedressed 36 days after planting. Yield results of this test appear in the chart below.



LSD (0.2): 4.3 CV: 7.6%

Conclusions:

- A planter applied in-furrow application of Pro-Germinator, Sure-K and Micro 500 with High NRG-N sidedressed provided the highest yield.
- The addition of High NRG-N in-furrow at 3 gal/A caused over a 3 bu/A decrease in yield.
- The application of nitrogen in-furrow carries a high risk of stand reduction and is not recommended by Agro-Culture Liquid Fertilizer.
- The application of low rates of nitrogen solution to high rates of in-furrow fertilizer did not result in increased yield.

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