

Impact of Generate® In-Furrow at Planting on Corn Yield

Study ID: 0718185201801

County: York

Soil Type: Hastings silt loam 0-1% slope; Uly-Hobbs silt loam 11-30% slopes; Hastings silt loam 3-7% slopes

Planting Date: 4/26/18

Harvest Date: 10/6/18

Population: 32,000

Row Spacing (in): 30

Hybrid: Pioneer® P1197AM

Reps: 6

Previous Crop: Soybean

Tillage: Ridge-Till

Herbicides: **Pre:** 3 pt/ac Weedmaster® in December 2017; 1 qt/ac Staunch® II and 1 qt/ac Atrazine at planting in April 2018 **Post:** 32 oz/ac Durango®, 1 oz/ac Impact®, and 1 pt/ac Atrazine in June 2018

Seed Treatment: None

Insecticides: 1 oz/ac Perm-Up® on top of the soil for cutworm control at planting

Foliar Fungicides: 6 oz/ac Aframe™ and 3 oz/ac Onset® on July 31

Fertilizer: 150 lb/ac 11-52-0, 100 lb/ac AMS, and 175 lb/ac N as anhydrous in November 2017; 3 gal/ac 10-34-0 as starter at planting

Note: Light hail and wind

Irrigation: Pivot, Total: 1.5"

Rainfall (in):



Soil Test (November 2017) – 2 samples were taken in the study area:

Soil pH	Soluble Salts 1:1 mmho/cm	Excess Lime Rating	Organic Matter LOI %	Nitrate – N ppm N	Nitrate lb N/A 0-10"	Mehlich P-III ppm P	Ca-P Sulfate ppm S	Zn (ppm)	Ammonium Acetate (ppm)				CEC me/100g	% Base Saturation				
1:1									K	Ca	Mg	Na		H	K	Ca	Mg	Na
7.0	0.18	NONE	3.0	7.3	22	6	10.1	1.76	421	2311	326	52	15.6	0	7	74	17	1
6.6	0.23	NONE	2.5	6.5	20	24	10	0.98	485	2635	575	53	19.4	0	6	68	25	1

Introduction: This study looked at Generate® applied in-furrow at corn planting. The product was applied at a rate of 1 pt/ac. Both treatments had 3 gal/ac 10-34-0 starter fertilizer in-furrow. Product information is at right. Plant health was assessed with stalk rot ratings and yield was recorded using a yield monitor.

Generate®

GUARANTEED ANALYSIS

Cobalt (Co)..... 1.04%
Copper (Cu) 0.28%
Iron (Fe) 0.56%
Manganese (Mn)..... 0.26%
Zinc (Zn) 0.22%

DERIVED FROM: Cobalt Carbonate, Cobalt Sulfate, Copper (II) Carbonate, Iron (III) Oxide, Manganese (II) Oxide, Zinc Carbonate, Zinc Sulfate

Product information from: *Ralco Nutrition, Inc.*

Results:

	Harvest Stand Count (plants/ac)	Moisture (%)	Stalk Rot (%)	Yield† (bu/acre)	Marginal Net Return‡ (\$/ac)
Check	27,833 A*	17.7 A	15.83 A	273 A	882.72 A
Generate® In-Furrow	27,167 A	17.7 A	13.75 A	271 A	864.39 B
P-Value	0.249	0.530	0.669	0.306	0.059

*Values with the same letter are not significantly different at a 90% confidence level.

†Bushels per acre adjusted to 15.5% moisture.

‡Marginal net return based on \$3.23/bu corn and \$9.75/ac Generate.

Summary:

- There were no differences in moisture, stand counts, stalk rot, or yield between the Generate® treatment and the check.
- Due to no increase in yield and the higher production cost for using Generate®, the check had a higher marginal net return.

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