

Impact of Ethos® XB In-furrow Fungicide and Insecticide on Corn Yield

Study ID: 0102023201901

County: Butler

Soil Type: Butler silt loam 0-1% slope; Hastings silt loam 1-3% slope; Hastings silt loam 0-1% slope

Planting Date: 5/2/19

Harvest Date: 11/2/19

Seeding Rate: 32,800

Row Spacing (in): 30

Variety: Pioneer® P1366AM™ and P1563AM™

Reps: 27

Previous Crop: Soybean

Tillage: No-Till

Herbicides: Pre: 20 oz/ac PowerMAX®, 20 oz/ac TripleFLEX®, 7oz/ac Balance® Flexx on 4/19/19

Post: 2 oz/ac Laudis®, 1.5 pt/ac atrazine, and 32 oz/ac PowerMAX® with 0.5 g/ac crop oil and 24 oz/ac Class Act® on 6/16/19

Seed Treatment: LumiGEN™

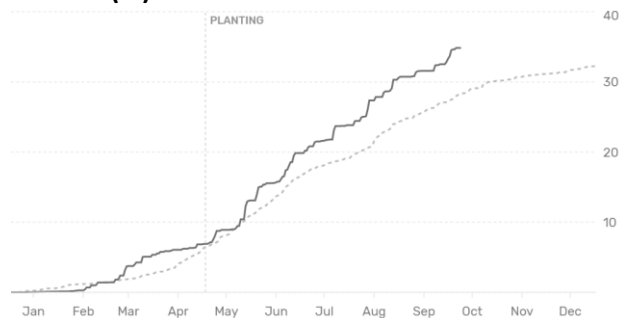
Foliar Insecticides and Fungicides: 4 oz/ac

Brigade® and 8 oz/ac Delaro® at VT on 7/21/19 as an aerial application

Fertilizer: 162 lb N/ac as anhydrous ammonia on 4/13/19; 35 lb N/ac as 32% UAN with burndown on 4/19/19; 5 gal/ac Kickoff 9-15-4-3-1 in-furrow with planting on 5/2/19; 103.8 lb/ac AMS on 6/12/19

Irrigation: Pivot, Total: 2.08"

Rainfall (in):



Soil Tests (Nov. 2018) – 4 samples were taken in the study area:

pH	Excess Lime	OM%	Nitrate ppm	Nitrogen lb. N/A	M-III P ppm P	K ppm P	S ppm	S lb. S/A	Ca ppm	Mg ppm	Na ppm	Zn ppm	Fe ppm	Mn ppm	Cu ppm	B ppm
6.9	NO	3.3	10.3	31	50	362	11	33	2680	264	27	3.3	89.9	66.3	2.4	.07
7.0	NO	3.3	10.3	31	45	387	10	30	2690	255	28	3.2	77.5	74.7	2.2	.07
7.0	NO	3.2	9.6	29	17	504	9	27	2570	242	26	2.4	94	72.6	1.4	.08
7.0	NO	3.6	12.9	39	25	404	10	30	2570	251	28	2.6	79.3	69.9	1.8	.07

Introduction: This study evaluated Ethos® XB in-furrow fungicide and insecticide added to starter fertilizer at 4 oz/ac. The study was evaluated for two corn hybrids, Pioneer® P1563AM™ (11 total replications, with 4 replications for stand counts) and Pioneer® P1366AM™ (16 total replications, with 4 replications for stand counts). Product information is at right.

EPA Reg. No. 279-3473

EPA Est. 279-NY-1

ACTIVE INGREDIENTS:	By Wt.
Bifenthrin *	15.67%
<i>Bacillus amyloliquefaciens</i> strain D747 **	5.00%
Other Ingredients	79.33%
Total:	100.00%

*Cis isomers 97% minimum, trans isomers 3% maximum
 ** Contains a minimum of 1x 10¹⁰ colony-forming units (cfu) per milliliter of product.
 This product contains 1.5 lbs bifenthrin per gallon.

Product information from:

<http://www.cdms.net/ldat/ldCGE005.pdf>

Results:

	Stand Count (plants/ac)	Moisture (%)	Yield (bu/ac)†	Marginal Net Return‡ (\$/ac)
Pioneer® P1366AM™ (16 replications)				
Check	29,750 A*	16.1 A	257 A	985.63 A
Ethos® XB	30,625 A	16.2 A	259 A	982.22 A
P-Value	0.109	0.508	0.398	0.549
Pioneer® P1563AM™ (11 replications)				
Check	29,000 A*	17.1 A	264 A	1,009.68 A
Ethos® XB	29,417 A	17.0 B	263 A	998.12 B
P-Value	0.320	0.057	0.563	0.063

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

†Yield values are from cleaned yield monitor data. Bushels per acre adjusted to 15.5% moisture.

‡Marginal net return based on \$3.83/bu corn and \$8.25/ac for Ethos XB.

Summary:

- For Pioneer® P1563AM™, the use of Ethos® XB did not result in different stand counts or grain yield. The net return was lower where Ethos® XB was used due to the additional treatment cost.
- For Pioneer® P1366AM™, the use of Ethos® XB did not result in different stand counts, grain moisture, grain yield, or net return.

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