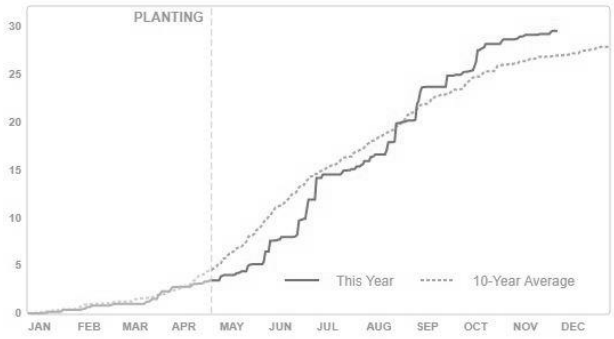
Evaluation of Commence®, Generate®, and Bio-Sure Grow in Corn

Study ID: 0011035201801
County: Clay
Soil Type: Crete silt loam 1-3% slope; Hastings silty clay loam 3-7% slopes; Fillmore silt loam frequently ponded
Planting Date: 4/26/18
Harvest Date: 10/28/18
Population: 33,000
Row Spacing (in): 30
Hybrid: Dekalb® DKC 64-34
Reps: 5
Previous Crop: Soybean
Tillage: No-Till
Herbicides: ***Pre:*** TripleFLEX® II, Roundup PowerMAX®, Locktite® ***Post:*** Resicore®, Roundup PowerMAX®, Atrazine, Premier 90®, and Actamaster®

Foliar Fungicides: Headline AMP®
Fertilizer: 125 lb/ac N, 1 pt/ac Agrotain® Ultra; 3 gal/ac 6-24-6 with 1 qt/ac Zn at planting
Irrigation: Pivot, Total: unknown
Rainfall (in):



Introduction: This study evaluated the impact of several microbial and nutrient products on corn yield and stalk quality. All treatments including the check received a starter fertilizer of 6-24-6 non-salt starter + 9% Zn. Three microbial and nutrient products were evaluated. Products were applied additively, not separately. Commence was applied to the seed prior to planting. Bio-Sure Grow was applied at a rate of 1 gal/ac in-furrow at planting. Generate was applied at a rate of 1 pt/ac in-furrow at planting. Product information is below.

Commence®

GUARANTEED ANALYSIS
Cobalt (Co)..... 1.58%
Copper (Cu) 0.33%
Iron (Fe)..... 0.85%
Manganese (Mn)..... 0.49%
Zinc (Zn)..... 0.27%

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

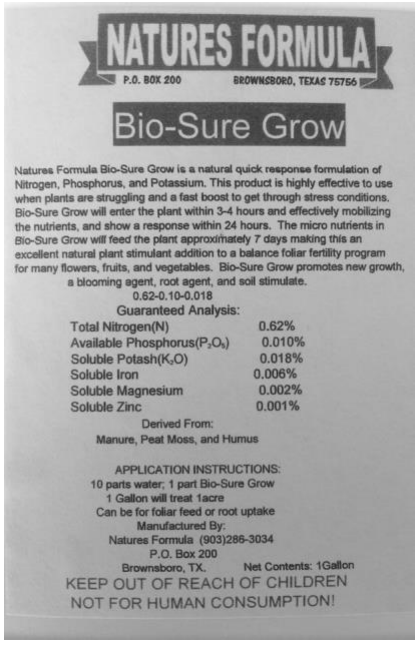
Product information from: *Agnition®*

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: *Agnition®*


NATURES FORMULA
P.O. BOX 200 BROWNSBORO, TEXAS 75756

Bio-Sure Grow

Natures Formula Bio-Sure Grow is a natural quick response formulation of Nitrogen, Phosphorus, and Potassium. This product is highly effective to use when plants are struggling and a fast boost to get through stress conditions. Bio-Sure Grow will enter the plant within 3-4 hours and effectively mobilizing the nutrients, and show a response within 24 hours. The micro nutrients in Bio-Sure Grow will feed the plant approximately 7 days making this an excellent natural plant stimulant addition to a balance foliar fertility program for many flowers, fruits, and vegetables. Bio-Sure Grow promotes new growth, a blooming agent, root agent, and soil stimulate.

0.62-0.10-0.018

Guaranteed Analysis:

Total Nitrogen(N)	0.62%
Available Phosphorus(P_2O_5)	0.010%
Soluble Potash(K_2O)	0.018%
Soluble Iron	0.006%
Soluble Magnesium	0.002%
Soluble Zinc	0.001%

Derived From:
Manure, Peat Moss, and Humus

APPLICATION INSTRUCTIONS:
10 parts water; 1 part Bio-Sure Grow
1 Gallon will treat 1acre
Can be for foliar feed or root uptake
Manufactured By:
Natures Formula (903)286-3034
P.O. Box 200
Brownsboro, TX. Net Contents: 1Gallon

KEEP OUT OF REACH OF CHILDREN
NOT FOR HUMAN CONSUMPTION!

Results:

	Harvest Stand Count (plants/ac)	Stalk Rot (%)	Snapped Below Ear (%)	Moisture (%)	Yield† (bu/ac)	Marginal Net Return‡ ($/ac)
Check	24,200 A*	3.00 A	23 A	15.1 A	208 A	673.07 A
Commence®	23,200 A	6.00 A	22 A	15.3 A	204 AB	651.21 B
Commence® + BioSureGrow	23,000 A	2.00 A	39 A	15.2 A	199 BC	619.48 C
Commence® + BioSureGrow + Generate®	21,800 A	2.00 A	33 A	15.2 A	198 C	607.93 C
P-Value	0.823	0.408	0.394	0.196	0.001	<0.0001

*Values with the same letter are not significantly different at a 90% confidence level.
†Bushels per acre corrected to 15.5% moisture.
‡Marginal net return based on $3.23/bu corn, $7/ac Commence seed treatment, $2/ac seed treatment application, $8/ac Generate, and $15/ac Bio-Sure Grow.

Summary:

- The field experienced 35% loss from green snap on June 30. Stand counts, stalk rot ratings, and percent of plants snapped below the ear measured on October 4 showed no differences between any of the treatments.
- Moisture was not significantly different among treatments.
- Yield was significantly lower for the treatments with Bio-Sure Grow and Generate® compared to the check. Yields of the check and Commence® treatment were not significantly different.
- Marginal net return was $21.86/ac to $65.14/ac greater for the check.

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