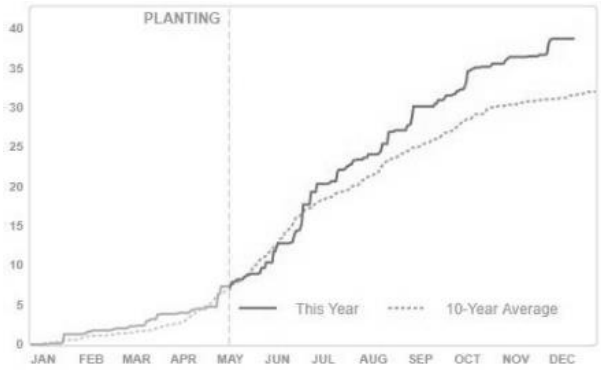
Ag Concepts® EnVigor at Two Rates on Irrigated Soybeans

Study ID: 0085141201802
County: Platte
Soil Type: Gibbon silt loam occasionally flooded
Planting Date: 5/9/18
Harvest Date: 9/27/18
Population: 130,000
Row Spacing (in): 30
Variety: Asgrow® 27X8
Reps: 4
Previous Crop: Corn
Tillage: Two passes with rolling stalk chopper
Herbicides: ***Pre:*** 3 oz/ac Fierce® and 32 oz/ac Roundup® on 5/11/18 ***Post:*** 6 oz/ac Section® 3, 32 oz/ac Roundup®, and 12 oz/ac Flexstar® on 6/5/18
Seed Treatment: Acceleron® Basic 500
Foliar Insecticides: 1 pt/ac manganese on 6/5/18
Foliar Fungicides: Trivapro® on 8/1/18

Fertilizer: 100 lb/ac MicroEssentials® SZ™ on 04/10/18; 8 gal/ac 8-20-5-5S-0.5Zn with planter on 5/9/18
Note: Hailed 6/6/18 with 30% node loss uniform across field (adjuster estimated 10-20% yield loss)
Irrigation: Gravity, Total: 6"
Rainfall (in):



Introduction: Ag Concepts® EnVigor is a foliar product for soybeans. The goal of EnVigor is to increase pod set and therefore yield. EnVigor contains nitrogen, potash, manganese, and zinc (product information is at right). EnVigor was applied on July 8, 2018. Two application rates were evaluated: a low rate of 1 qt/ac and a high rate of 2 qt/ac. Both rates were applied with 10 gal water/qt product. These two rates were compared to an untreated check.

Pod counts were collected for the study by evaluating number of pods on 10 consecutive plants. This was repeated in four locations in each treatment strip, for a total of 40 plants counted per treatment strip. Harvest stand counts, yield, grain moisture, and test weight were also evaluated.

Guaranteed Analysis:
Total Nitrogen (N) 5.00%
4.90% Urea Nitrogen
0.10% Other Water Soluble Nitrogen
Soluble Potash (K_2O) 0.50%
Manganese (Mn)..... 0.10%
0.10% Chelated Manganese
Zinc (Zn)..... 0.10%
0.10% Chelated Zinc
Derived From:
Urea, Marine plant extract (Ascophyllum nodosum), Manganese Ethylenediaminetetraacetate, and Zinc (EDTA).
This product has no added microbes.
9.3 lbs/gal @ 68 Degrees F

Product information from: Ag Concepts®

Results:

	Harvest Stand Count (plant/ac)	Pods/ plant	Moisture (%)	Test Weight	Yield† (bu/ac)	Marginal Net Return‡ ($/ac)
Check	96,989 A*	43 AB	13.5 A	55 A	76 A	563.44 A
Ag Concepts® EnVigor Low Rate	98,948 A	38 B	13.5 A	55 A	78 A	558.26 A
Ag Concepts® EnVigor High Rate	97,207 A	45 A	13.3 A	55 A	76 A	534.18 B
P-Value	0.867	0.109	0.861	0.759	0.116	0.007

*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 corrected to 13% moisture.
‡Marginal net return based on $7.40/bu soybean, $9/qt EnVigor, and $6.84/ac product application cost.

Summary:

- There were no differences in moisture, test weight, harvest stand counts, or yield between the low rate, high rate, and untreated check. This is consistent with the findings of this study in 2017; however, in 2017 the field received severe hail damage.
- There were differences noted in pods per plant. The high rate of EnVigor had a greater number of pods per plant than the low rate of EnVigor. Neither the high rate nor the low rate had a significantly different number of pods than the untreated check.
- The marginal net return was lower for the high rate of EnVigor due to increased production costs.

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