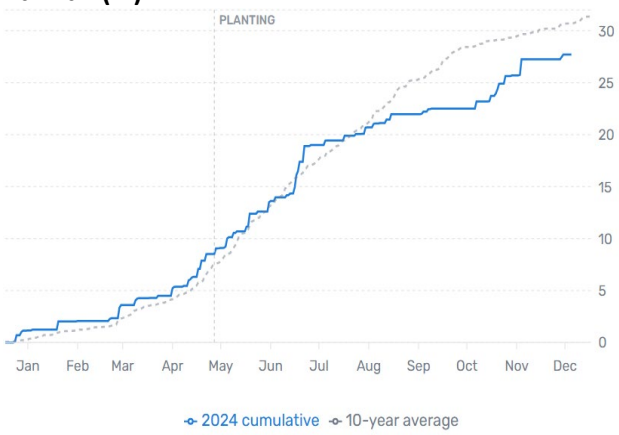
Corn Infurrow/Seed Treatment at Planting

Study ID: 1099185202402
County: York
Soil Type: Hastings silty clay loam
Planting Date: 5/11/24
Harvest Date: 8/21/24
Population: 33,000
Row Spacing (in): 30”
Hybrid: Channel® 214-22STX
Reps: 4
Previous Crop: Corn
Tillage: No-Till
Herbicides: ***Pre:*** 2 pt/ac Surestart® +1 pt/ac atrazine + 32 oz/ac glyphosate ***Post:*** 32 oz/ac Liberty® + 2 qt/ac Lexar® + 3 lb/ac sugar
Seed Treatment: Company standard
Foliar Insecticides: 6.4 oz/ac bifenthrin + 3.8 oz/ac LambdaCy®
Foliar Fungicides: 14 oz/ac Quilt XL® + 2 qt/ac Fulvic Maxx® + 2 qt/ac Sweetneez®

Fertilizer: 15 gal/ac UAN 32%-0-0 on 5/11/24. 35 gal/ac UAN 32%-0-0 on 5/16/24.
Note: Corn fired lower leaves, suggesting a potential N shortage
Irrigation: Pivot, 6”
Rainfall (in):



Introduction: Selecting the appropriate starter fertilizer in corn can be challenging due to both agronomic and net return questions. This study tested 4 different starter treatments in corn, including BW Fusion™ Environoc 401®, AgroLiquid® Pro-Germinator, mycorrhizae, and an untreated check. Environoc 401® is an all-natural starter made up of 24 different microbes that can benefit plant and soil symbiotic relationship. AgroLiquid® Pro-Germinator® includes nitrogen, potassium, iron and phosphate phosphorus that can provide essential nutrients early in the season. This study included 4 replications of these different starters to test efficacy and see if there was an overall yield difference.

Results:

Treatment	Moisture (%)	Yield (bu/ac)†	Marginal Net Return‡ ($/ac)
BW Fusion Environoc® 401 + Zinc	15.57 A*	248 A	1,061 AB
Agro Liquid Pro-Germinator® + Zinc	15.57 A	242 A	1,026 B
Untreated Check	14.48 A	246 A	1,070 A
Mycorrhizae	15.3 A	247 A	1,071 A

*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 $4.35/bu corn, $15.50 for BW Fusion Environoc® 401 + Zinc, $25.7/ac for AgroLiquid® Pro-Germinator®, and $4/ac for Mycorrhizae.

Summary:

- There were no differences in moisture or yield between the treatments.
- However, the highest marginal net return was found in the untreated check ($1,070/ac) and mycorrhizae treatment ($1,071/ac).
- Selecting the correct starter fertilizer may depend on yield goals and soil health.