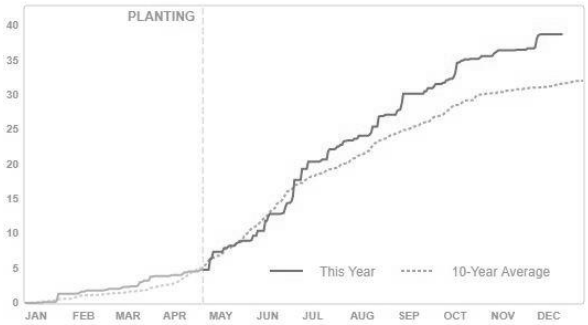
Impact of QuickRoots® on Corn

Study ID: 0085141201806
County: Platte
Soil Type: Grigston silt loam wet sub-stratum; Gibbon silt loam occasionally flooded
Planting Date: 4/27/18
Harvest Date: 10/30/18
Population: 37,080 (south 1/3 of field) and 41,200 (north 2/3 of field) and the treatments (QuickRoots® and check) were equally represented in each population area
Row Spacing (in): 30
Hybrid: Dekalb® DKC 63-21
Reps: 16 (only 4 reps for stand counts)
Previous Crop: Corn
Tillage: Ridge-Till
Herbicides: ***Pre:*** 2 qt/ac Degree Extra®, 40 oz/ac Roundup®, and 6 oz/ac Sterling Blue® in mid-May
Post: 56 oz/ac Halex®, 1 pt/ac Atrazine, and 16 oz/ac Roundup® in mid-June
Seed Treatment: Acceleron® Basic 500

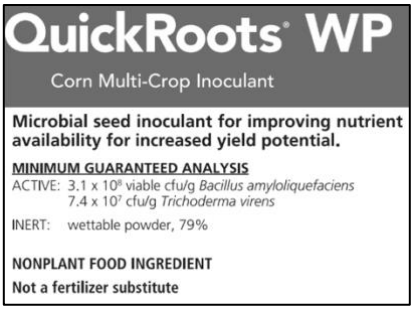
Foliar Insecticides: None
Foliar Fungicides: None
Fertilizer: 100 lb/ac Urea, 50 lb/ac K-Mag® and 25 lb/ac Potash on 4/10/18; 5 gal/ac Kugler 6-24-6-1S with 1 pt/ac Micro Max® in-furrow and 5 gal/ac ATS and 5 gal/ac 32% UAN on 4/27/18; 160 lb/ac N from NH3 sidedress on 6/4/18
Irrigation: Gravity, Total: 2”
Rainfall (in):



Introduction:

The objective of this study was to evaluate Acceleron® QuickRoots® microbial seed inoculant on corn. The product was applied to the seed at a rate of 16 grams per unit of seed. The minimum guaranteed analysis is at right.

Product information from: http://www.acceleronsas.com/Documents/Labels/114018S5-87_QuickRootsWPCornMC_Specimen_Post.pdf



Results:

	Early Season Stand Count (plants/ac)	Moisture (%)	Yield† (bu/ac)	Marginal Net Return‡ ($/ac)
Check	34,167 A*	14.9 A	258 B	834.47 A
QuickRoots®	32,125 B	14.9 A	262 A	839.43 A
P-Value	0.070	0.436	0.026	0.319

*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 15.5% moisture.
‡Marginal net return based on $3.23/bu corn and $15/unit of corn for QuickRoots (resulting in cost of $6.95/ac at a planting rate of 37,080 seed/ac).

Summary:

- The untreated check had a higher stand count than the QuickRoots® treatment.
- There was no difference in moisture between the two treatments.
- Yield was 4 bu/ac greater for the QuickRoots® treatment.
- There was no difference in net return.

Sponsored by: University of Nebraska Lincoln
In Partnership with: Nebraska Corn Board, Nebraska Soybean Checkoff, Nebraska Corn Growers Association, Nebraska Dry Bean Commission