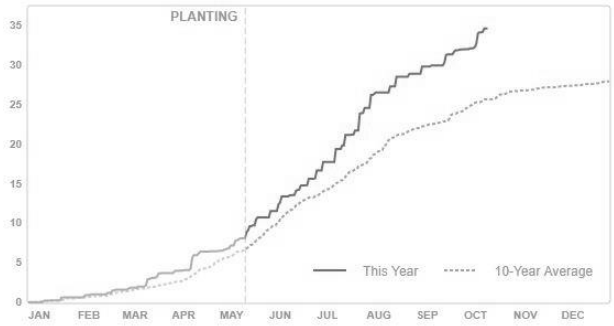
Non-Irrigated Corn Planting Population Study

Study ID: 0803015201803
County: Boyd
Soil Type: Onita silt loam 0-2% slope; Reliance silt loam 2-6% slopes
Planting Date: 5/17/18
Harvest Date: 10/31/18
Row Spacing (in): 30
Hybrid: Dekalb® DKC52-61RIB
Reps: 4
Previous Crop: Soybean
Tillage: No-Till
Herbicides: ***Pre:*** 1.5 qt/ac Harness® Xtra and 32 oz/ac Roundup® ***Post:*** 0.5 fl oz/ac Armezon®, 3 pt/ac Warrant®, and 26 oz/ac Roundup®
Seed Treatment: Acceleron® Standard (fungicide and insecticide)
Foliar Insecticides: None
Foliar Fungicides: None

Fertilizer: 18.2 gal/ac 18-16-0-5S-0.5Zn starter (equal to 35 lb/ac N, 31 lb/ac P, 10 lb/ac S, and 1 lb/ac Zn); dry sidedress application, actual pounds are 130 lb/ac N, 20.5 lb/ac P, 40 lb/ac K, 10 lb/ac S, and 0.5 lb/ac Zn on 6/16/18
Irrigation: None
Rainfall (in):



Introduction: The purpose of this study was to determine what planting population is most profitable for corn production. Seeding rates of 18,000, 22,000, 26,000, and 30,000 seeds/ac were evaluated.

Results:

	Moisture (%)	Yield† (bu/ac)	Marginal Net Return‡ ($/ac)
18,000 seeds/acre	15.2 B*	191 D	560.59 C
22,000 seeds/acre	15.6 A	195 C	560.00 C
26,000 seeds/acre	14.9 D	207 B	586.98 B
30,000 seeds/acre	15.0 C	223 A	627.45 A
P-Value	<0.0001	<0.0001	<0.0001

*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 $250/bag of seed.

Summary: Above average rainfall occurred at this study location in 2018. Yield increased with each seeding rate increase. The highest seeding rate of 30,000 seeds/ac resulted in the highest yield and net return.

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