



Corn Hybrid Interactions with Planting Populations

Trial Objective

- Determining planting population is one of the most important decisions made when planting corn.
- This decision can only be made prior to or during planting.
- For this reason, the Learning Center near Scott, Mississippi evaluates and compares the effects of several planting populations each season.
- We investigate common variables when deciding planting populations:
 - » Does planting more seed result in yield gains?
 - » Does planting more seed cause crop standability to suffer and increase lodging?
 - » Does the increase in population provide return on the seed investment?

Research Site Details

Table 1. DEKALB® brand corn products evaluated in four planting populations.

DEKALB® Brand/Brand Blend	Traits	Relative Maturity (days)
DKC110-41	Trecepta® Technology	110
DKC113-83	Trecepta® Technology	113
DKC117-78	VT Double PRO® RIB Complete® corn blend	117
DKC62-70	VT Double PRO® RIB Complete® corn blend	112
DKC64-22	VT Double PRO® RIB Complete® corn blend	114
DKC66-06	Trecepta® Technology	116
DKC68-35	VT Double PRO® RIB Complete® corn blend	118
DKC70-45	VT Double PRO® RIB Complete® corn blend	120

- Planting Populations (seeds per acre)
 - » 28,000
 - » 32,000
 - » 36,000
 - » 40,000
- This demonstration was set up as a non-replicated strip plot.
- Nitrogen (N) was surface applied as liquid 30-0-0-2.5 (N-P-K-S) at a rate of 240 units of N/acre.
- Yield data was collected using commercial harvest machinery and corrected to 15.5% moisture for presentation.

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield (bu/acre)	Seeding Rate (seeds/acre)
Scott, MS	Commerce Silt Loam	Cotton	Conventional	3/22/2023	8/20/2023	285	Various – See Below

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- Plot size approximately 0.15 acre with 6 rows.
- Potential return on investment (ROI) calculation with the price parameters:
 - » \$5.05 used for grain price (taken September 13, 2023)
 - » \$415/80,000 seed bag or \$5.19/1,000 seeds planted used for seed cost

Understanding the Results

- A planting population of 32,000 seeds/acre increased net returns by \$10.00 or more per acre compared to a planting population of 28,000 seeds/acre in 7 of 8 tested products, and decreased net returns by over \$10.00 per acre in 1 tested hybrid (Table 2).
- A planting population of 36,000 seeds/acre increased net returns by over \$10.00 per acre compared to a planting population of 32,000 seeds/acre in 1 of 8, and decreased net returns by over \$10.00 per acre in 3 of 8 tested products (Table 2).
- Lodging was not observed in any of the planting populations tested in this trial.
- Data indicates many newer DEKALB® brand products have considerable amounts of ear flex (Figure 1).

Table 2. Potential net return for increasing seeding rate

DEKALB® Brand	Change in Net Return in Dollars/Acre		
	28,000 vs. 32,000 seeds/acre	32,000 vs. 36,000 seeds/acre	36,000 vs. 40,000 seeds/acre
DKC110-41	-\$14.51	-\$57.51	\$78.25
DKC113-83	\$40.18	-\$6.23	\$42.46
DKC117-78	\$66.73	-\$6.41	\$23.10
DKC62-70	\$11.43	\$27.37	\$17.45
DKC64-22	\$52.98	-\$9.12	\$50.68
DKC66-06	\$28.28	-\$18.38	\$41.74
DKC68-35	\$57.75	-\$28.28	\$29.59
DKC70-45	\$51.40	\$6.48	\$9.71



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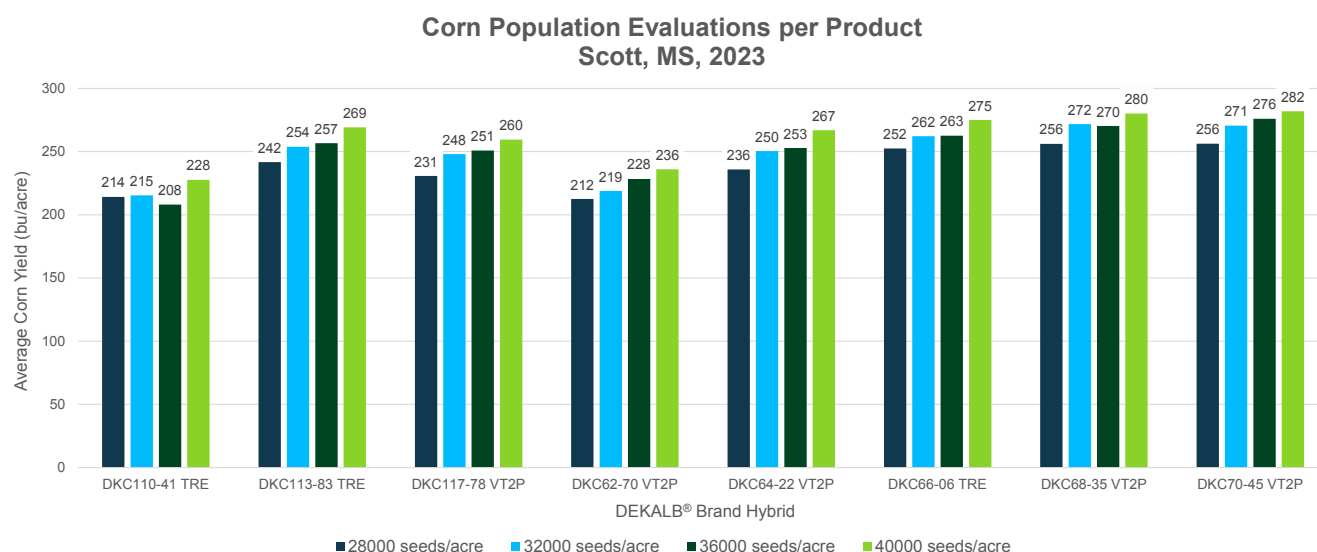


Figure 1. Yield response to four planting populations from eight DEKALB® brand products positioned for southern growers.

Key Learnings

- Growers should study and understand planting populations for new corn products in their operation. The correct population can help growers reach the best outcome for corn crop yield and return on investment.
- Many newer products have shown a positive response to planting populations in the mid 30,000 seeds/acre range compared to the high 20,000 seeds/acre range planted.
- Please contact your local DEKALB® brand representative for more information on local product performance in this region.

Legal Statements

The information discussed in this report is from a single site, non-replicated demonstration. This informational piece is designed to report the results of this demonstration and is not intended to infer any confirmed trends. Please use this information accordingly.

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Performance may vary, from location to location and from year to year, as local growing, soil and environmental conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on their growing environment.

The recommendations in this material are based upon trial observations and feedback received from a limited number of growers and growing environments. These recommendations should be considered as one reference point and should not be substituted for the professional opinion of agronomists, entomologists or other relevant experts evaluating specific conditions.

IMPORTANT IRM INFORMATION: Certain products are sold as RIB Complete® corn blend products, and do not require the planting of a structured refuge except in the Cotton-Growing Area where corn earworm is a significant pest. Products sold without refuge in the bag (non-RIB Complete) require the planting of a structured refuge. **See the IRM/Grower Guide for additional information. Always read and follow IRM requirements.**

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