



Seeding Rates for DEKALB® Brand Roundup Ready® Corn 2 Products for Refuge Acres

Trial Objective

- Seeding or planting rate is one of the most important decisions to make when planting corn and it can only be made prior to or during planting.
- For this reason, the Bayer Learning Center at Scott, Mississippi conducts an evaluation of planting rates each season for the DEKALB® Brand Roundup Ready® Corn 2 products that can be used for the required refuge acres in B.t. transgenic corn.
- Growers ask several primary questions, including:
 - » Is the potential yield increased if the planting rate is increased?
 - » Does the potential for lodging increase as planting rates increase?
 - » Does the increase in planting rate provide an increase in return-on-investment potential?

Research Site Details

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	8/18/2023	250	28,000 32,000 36,000 40,000

- All field work, tillage, and herbicides were per local standards.
- 240 units of nitrogen was applied in a split application as 30-0-0-2.5 (N-P-K-S).
- DEKALB® Brand Products planted:
 - » DKC62-05 Brand, Roundup Ready® Corn 2, 112 RM
 - » DKC63-56 Brand, Roundup Ready® Corn 2, 113 RM
 - » DKC65-93 Brand, Roundup Ready® Corn 2, 115 RM
 - » DKC66-94 Brand, Roundup Ready® Corn 2, 116 RM
 - » DKC68-67 Brand, Roundup Ready® Corn 2, 118 RM
 - » DKC70-25 Brand, Roundup Ready® Corn 2, 120 RM
- Planting Rates (seeds/acre):
 - » 28,000
 - » 32,000
 - » 36,000
 - » 40,000

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- Trial Design:
 - » Non-replication strip plot
 - » Each corn product planted in 12 rows per strip
 - » About 0.75 acre planted per corn product
- Harvest Parameters:
 - » Plots were harvested with a commercial combine.
 - » Yields were corrected to 15.5% moisture content.
- Return on Investment Potential Calculations:
 - » Grain price of \$5.05 on 9/13/23 was used.
 - » \$340/80,000 seed bag or \$4.25/1000 seeds planted was used for seed cost.

Understanding the Results

- Survival/established plants was about 92% across the trial.
- Data indicates that many of the DEKALB® Brand, Roundup Ready® Corn 2 refuge products should be planted at mid to high planting rates to help maximize yield potential (Figure 1) and net returns (Table 1).
- A planting rate of 32,000 seeds/acre increased net returns by over \$10.00 per acre compared to a planting rate of 28,000 seeds/acre in 5 of the 6 corn products tested (Table 1).
- A planting rate of 36,000 seeds/acre increased net returns by over \$10.00 per acre compared to a planting rate of 32,000 seeds/acre in 3 of the 6 corn products tested (Table 1).
- A planting rate of 40,000 seeds/acre increased net returns by over \$10.00 per acre compared to a planting rate of 36,000 seeds/acre in 2 of the 6 corn products tested (Table 1).
- No lodging was observed in any of the seeding rate treatments.



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**Seeding Rate (seeds/acre) Trial for Six DEKALB® Brand Roundup Ready® Corn 2 Refuge Products for Bt Transgenic Corn
Bayer Learning Center at Scott, Mississippi (2023)
Single-Replicate Strip Trial**

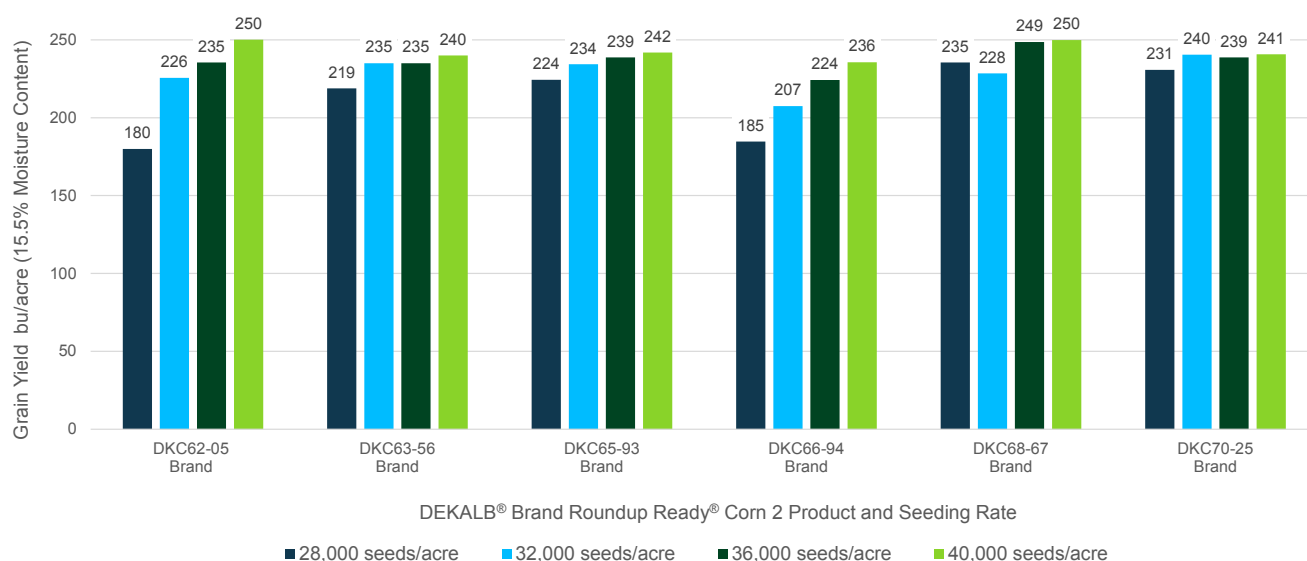


Figure 1. Yields of six DEKALB® Brand Roundup Ready® Corn 2 products at four planting rates at the Bayer Learning Center, Scott, Mississippi in 2023.

Table 1. Net return for increasing seeding rate based on 2023 seed cost and grain price of \$5.05 on 9/13/23.			
DEKALB® Brand Roundup Ready® Corn 2 Product	Change in Net Return in Dollars per Acre		
	32,000 vs 28,000 seeds per acre	36,000 vs 32,000 seeds per acre	40,000 vs 36,000 seeds per acre
DKC62-05 Brand	213.86	32.48	57.33
DKC63-56 Brand	64.72	-16.83	8.21
DKC65-93 Brand	33.42	5.46	-1.53
DKC66-94 Brand	97.88	67.46	40.84
DKC68-67 Brand	-52.80	84.71	-10.43
DKC70-25 Brand	32.10	-25.97	-6.80

Key Learnings

- Growers should study and understand the recommended seeding rate for any corn product they choose to plant.
- Planting the recommended seeding rate can help maximize the yield potential of each product.
- Most of the DEKALB® Brand refuge corn products respond positively to planting rates in the mid-30,000 seeds/acre range.
- Please contact your local DEKALB® Brand seed representative for more information.



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Legal Statements

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ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. 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.

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