



# RESPONSE OF DEKALB® CORN PRODUCTS TO POPULATION

2016 Learning Center Demo Report  
Monsanto Learning Center at Scott, MS



## BACKGROUND

- A demonstration was established to evaluate the response of new DEKALB® brand corn products to different plant populations.
- The objective of this demonstration was to provide information about new DEKALB® brand corn products to help growers with the following questions:
  - If I increase the plant population, will the yield potential increase?
  - Do higher plant populations lead to an increase in lodging?



## STUDY GUIDELINES

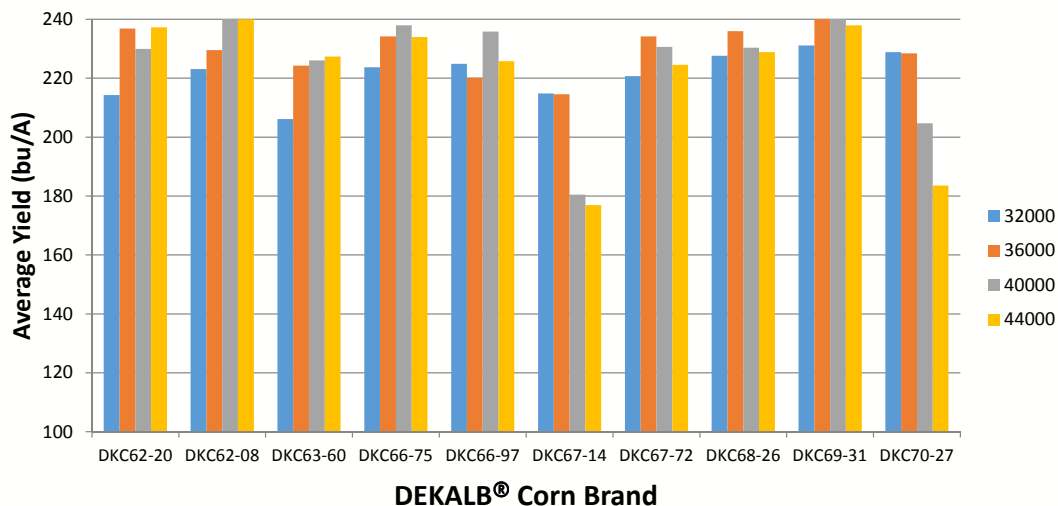
- 10 DEKALB® brand corn products were planted on March 29, 2016 with the following conditions:
  - Soil Type: Commerce silt loam
  - Previous Crop: Cotton
  - Tillage: Conventional
  - Nitrogen: 240 lbs N/acre
  - All other agronomic practices were standard for local conditions.
- Each product was planted at populations of 32,000, 36,000, 40,000, and 44,000 seeds/acre.
- Ear samples were harvested to help understand the flex characteristics of five different corn products.
  - Ears from 10 row feet of each plot were harvested.

Response of DEKALB® Corn Products to Population



## RESULTS & DISCUSSION

Response of DEKALB® Corn Products to Different Plant Populations



Response of DEKALB® Corn Products to Population



## RESULTS & DISCUSSION

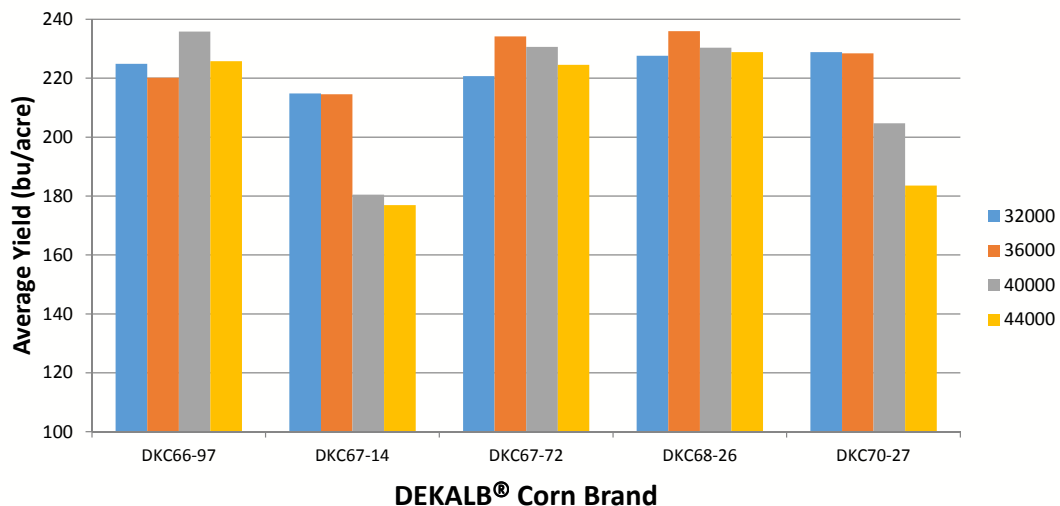
- Most DEKALB<sup>®</sup> corn products responded favorably to plant populations in the range of 36,000 seeds/acre.
- Two DEKALB<sup>®</sup> corn brands, DKC70-27 and DKC67-14, demonstrated a significant lodging risk when planted at higher populations.
  - Recommend not planting above 36,000 seeds/acre.
- The remaining eight DEKALB<sup>®</sup> corn products appear to have the ability to stand at higher populations and may be safely planted in high input systems at higher populations.

Response of DEKALB<sup>®</sup> Corn Products to Population



## RESULTS & DISCUSSION

Response of DEKALB<sup>®</sup> Corn Products to Different Plant Populations

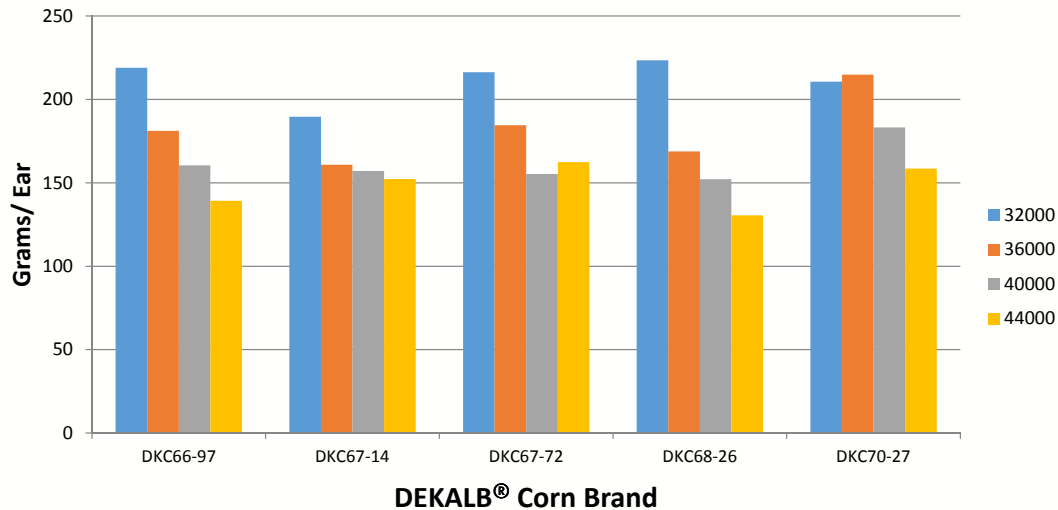


Response of DEKALB<sup>®</sup> Corn Products to Population



## RESULTS & DISCUSSION

### Response of DEKALB® Corn Product Ear Size to Different Plant Populations



Response of DEKALB® Corn Products to Population



## RESULTS & DISCUSSION

- In general, ear size decreased as population increased.
- DEKALB® corn brands DKC70-27 and DKC67-14 may have more ear flex in response to changes in growing environment and available resources, which can be an advantage as lower populations are recommended for these two corn brands.

Response of DEKALB® Corn Products to Population



## TAKE AWAYS

- It is important to consider local data based on individual corn products to help determine the most favorable plant population for your farm.
- In general, the corn products in this demonstration performed well at 36,000 seeds/acre.
- Corn ear size tends to decrease as population increases.
- It is recommended to plant higher populations of corn products with a more fixed ear. Corn products with more ear flex can be planted in lower populations due to the ability to produce larger ears. Both approaches have high yield potential and will depend on grower preferences and growing conditions.

Response of DEKALB® Corn Products to Population



## LEGAL STATEMENTS

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

**Individual results may vary**, and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible.

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