



Response of DEKALB[®] Brand Corn Products to Planting Population and Nitrogen Fertility

2017 Learning Center Demo Report
Monsanto Learning Center at Scott, MS



BACKGROUND

- This trial was conducted to measure responses of DEKALB[®] brand corn products to both population and nitrogen (N) applications.
- As corn products enter the marketplace, knowledge of these responses is critical for proper management of the products.
- With lower grain prices, some growers are attempting to save on input costs by reducing N fertility.
- We evaluated a range of N fertility rates and planting populations across 4 DEKALB[®] brand corn products.



BACKGROUND

OBJECTIVE:

- The primary goal was to investigate the response of DEKALB[®] brand corn products to planting population and rates of N fertility.



STUDY GUIDELINES

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield	Planting Rate
Scott, MS	Clay Loam	Cotton	Conventional	3/21/17	8/3/2017	300 bu/acre	Various



STUDY GUIDELINES

- **4 DEKALB® brand corn products were planted:**

- DKC67-44 brand
- DKC67-72 brand
- DKC68-26 brand
- DKC70-27 brand

- **2 Fertility regimes:**

- Full nitrogen fertility (240 lbs/acre actual N applied as 28-0-0-5)
- 60% of the full N rate (144 lbs/acre actual N applied as 28-0-0-5)



STUDY GUIDELINES

- **4 planting populations:**
 - 23,000 kernels/acre
 - 28,000 kernels/acre
 - 33,000 kernels/acre
 - 38,000 kernels/acre
- All agronomic inputs were applied per local standards.
- 2 replications.
- Plots were 8 rows by 160 feet or 0.10 acres/plot.
- Plots were intended to be irrigated but no irrigation was applied due to adequate rainfall.



RESULTS & DISCUSSION

- Exceptionally high yield potential was seen in this trial due to the moderate weather conditions at Scott, MS during 2017 pollination and grain fill. DKC67-44 brand and DKC70-27 brand produced particularly high yields.
- Within the commercially acceptable range of populations, all populations and corn products responded positively to the full fertility regime. Only DKC67-44 brand at 38,000 kernels/acre and DKC67-72 brand at 23,000 kernels/acre were neutral and these populations are outside of the typical recommendation or general agronomic practice for this region and environment.



RESULTS & DISCUSSION

- Population can have a significant influence on the yield potential of a corn product.
Know the products you plant!!
- Population/yield responses were similar to previous demonstrations at the Monsanto Learning Center at Scott, MS.
- Growers should be very cautious when considering cutting fertility inputs.
- The tested DEKALB[®] brand corn products have exceptionally high yield potential.



RESULTS & DISCUSSION

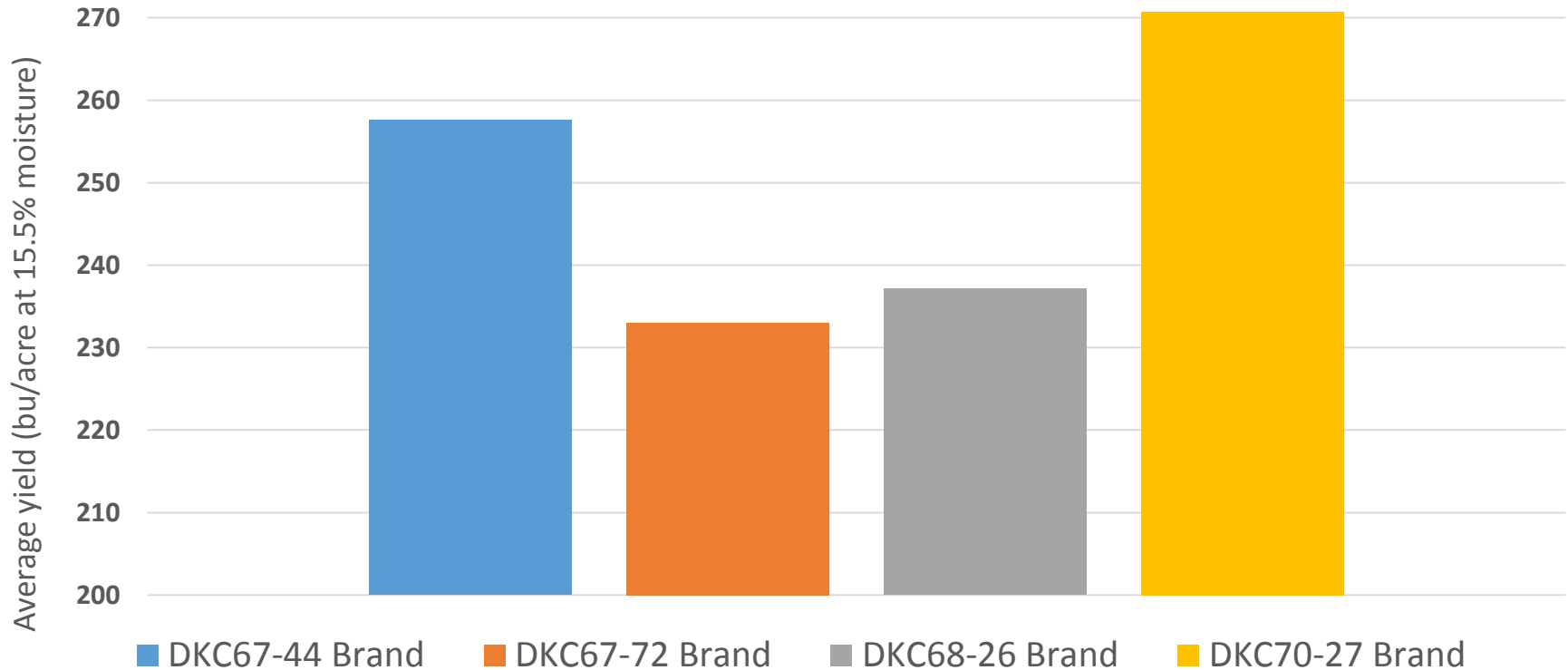


Figure 1. Average yield response of DEKALB® brand corn products to planting population and fertility.



RESULTS & DISCUSSION

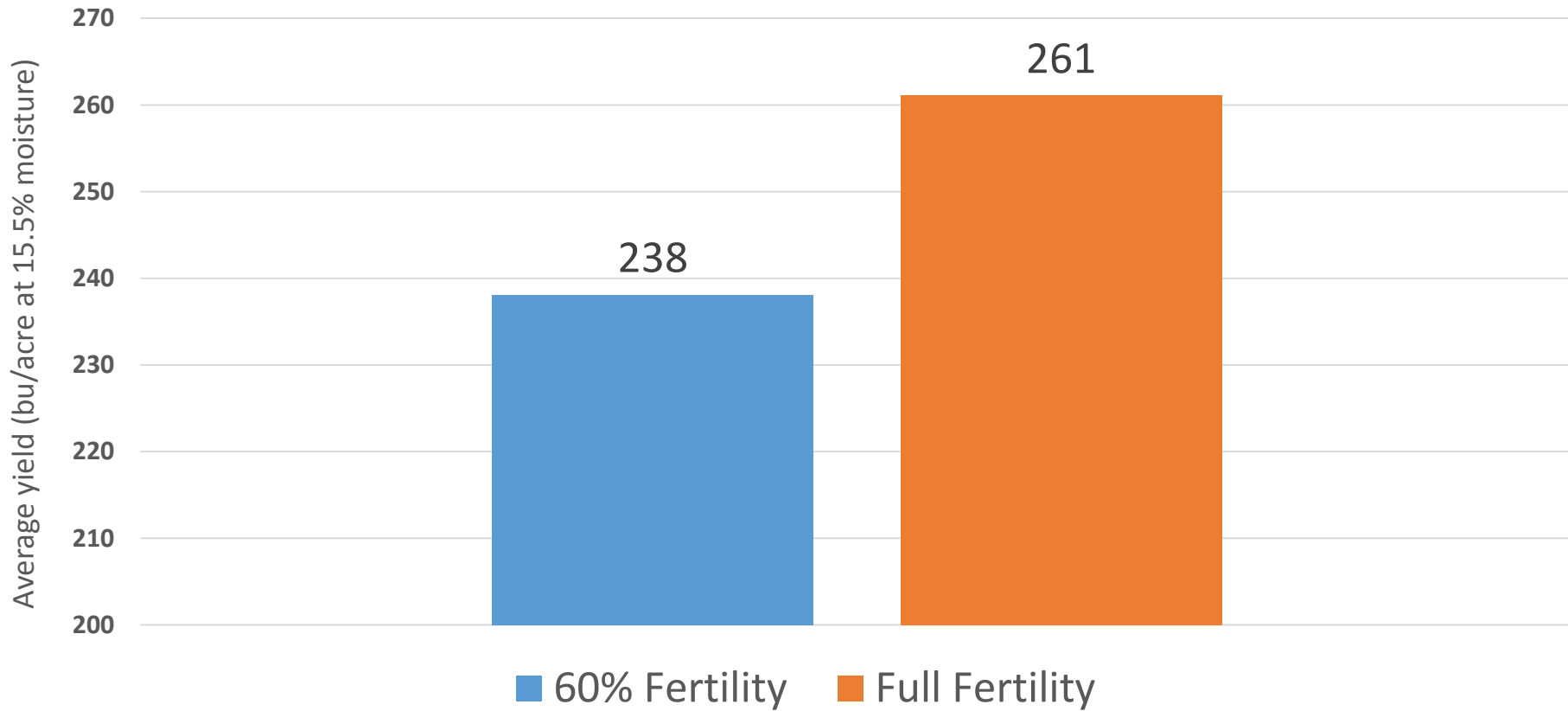


Figure 2. Average response of DEKALB® brand corn products to nitrogen fertility across corn products and population.



RESULTS & DISCUSSION

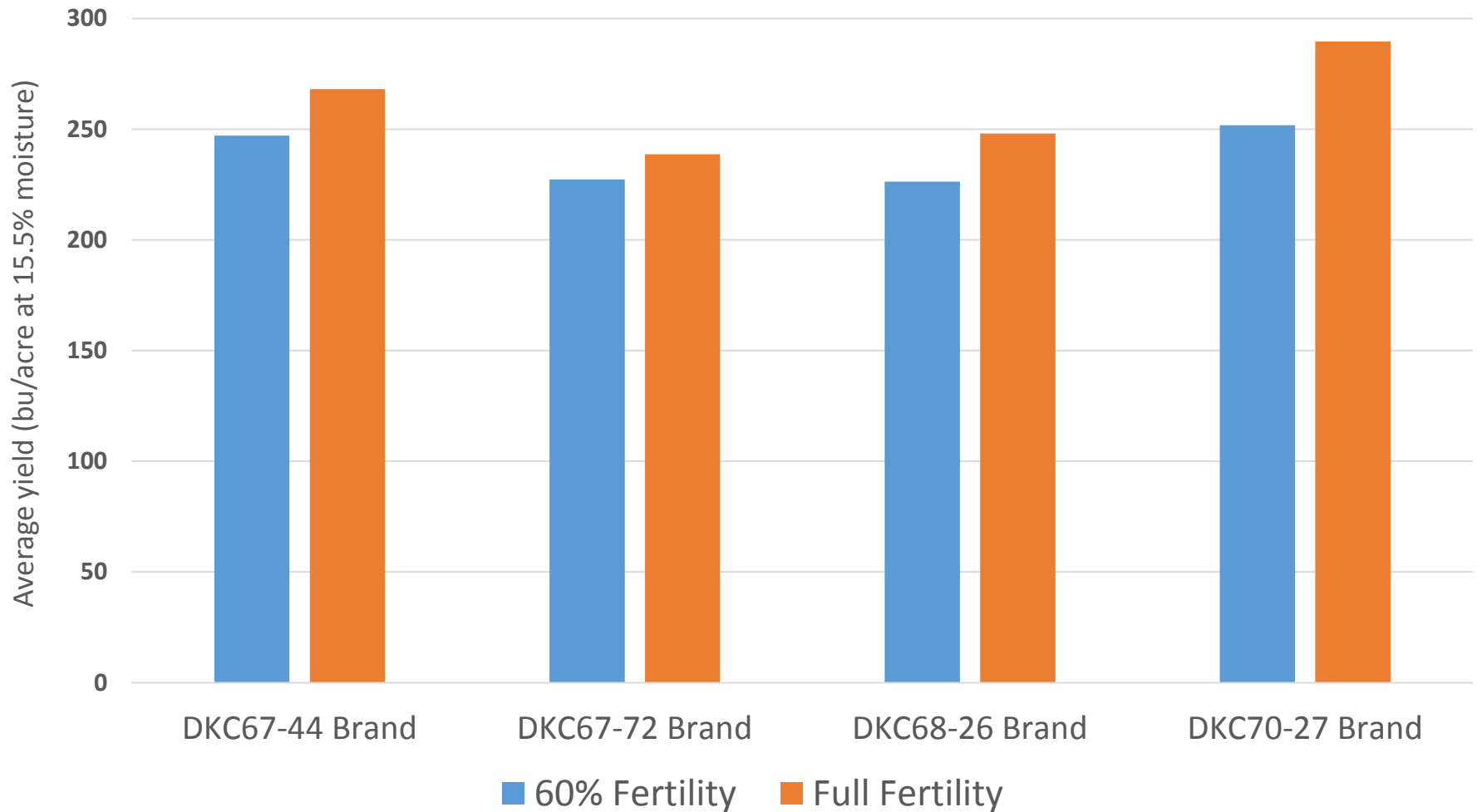


Figure 3. Average yield response of DEKALB® brand corn products to nitrogen fertility across populations.



RESULTS & DISCUSSION

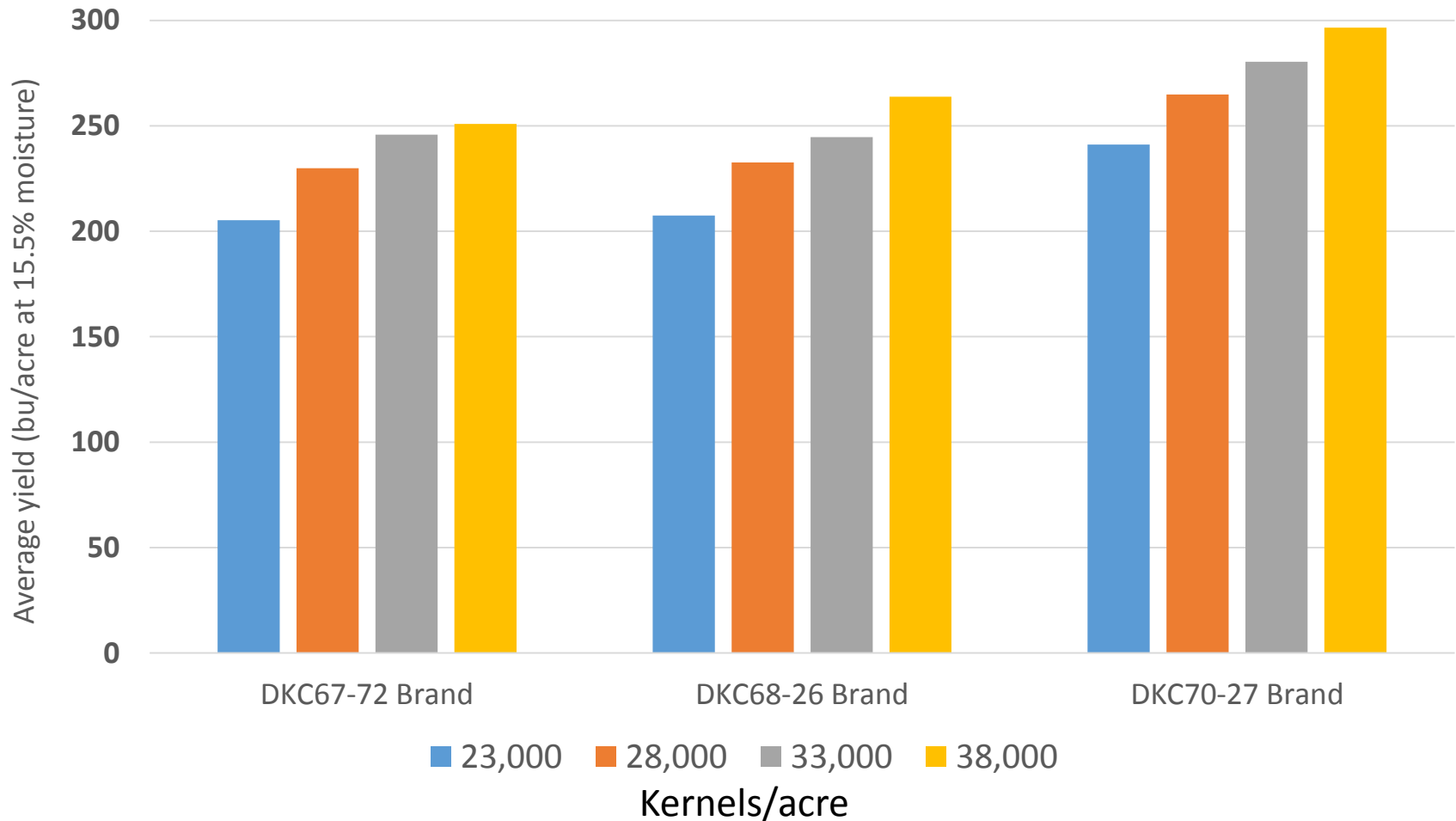


Figure 4. Average yield response of DEKALB® brand corn products to planting population across fertility.



RESULTS & DISCUSSION

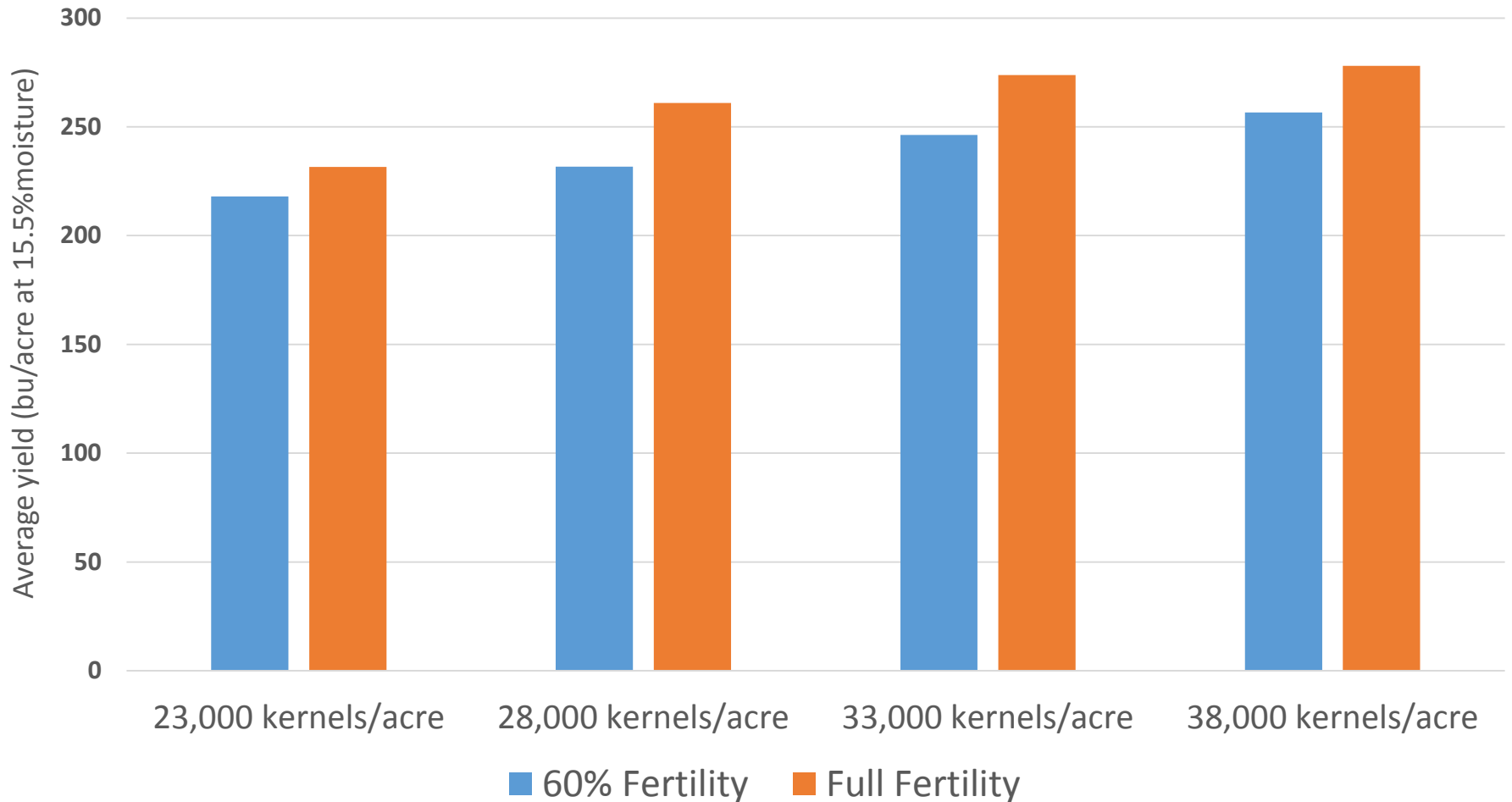


Figure 5. Average yield response of DEKALB® corn products to planting population and fertility.



RESULTS & DISCUSSION

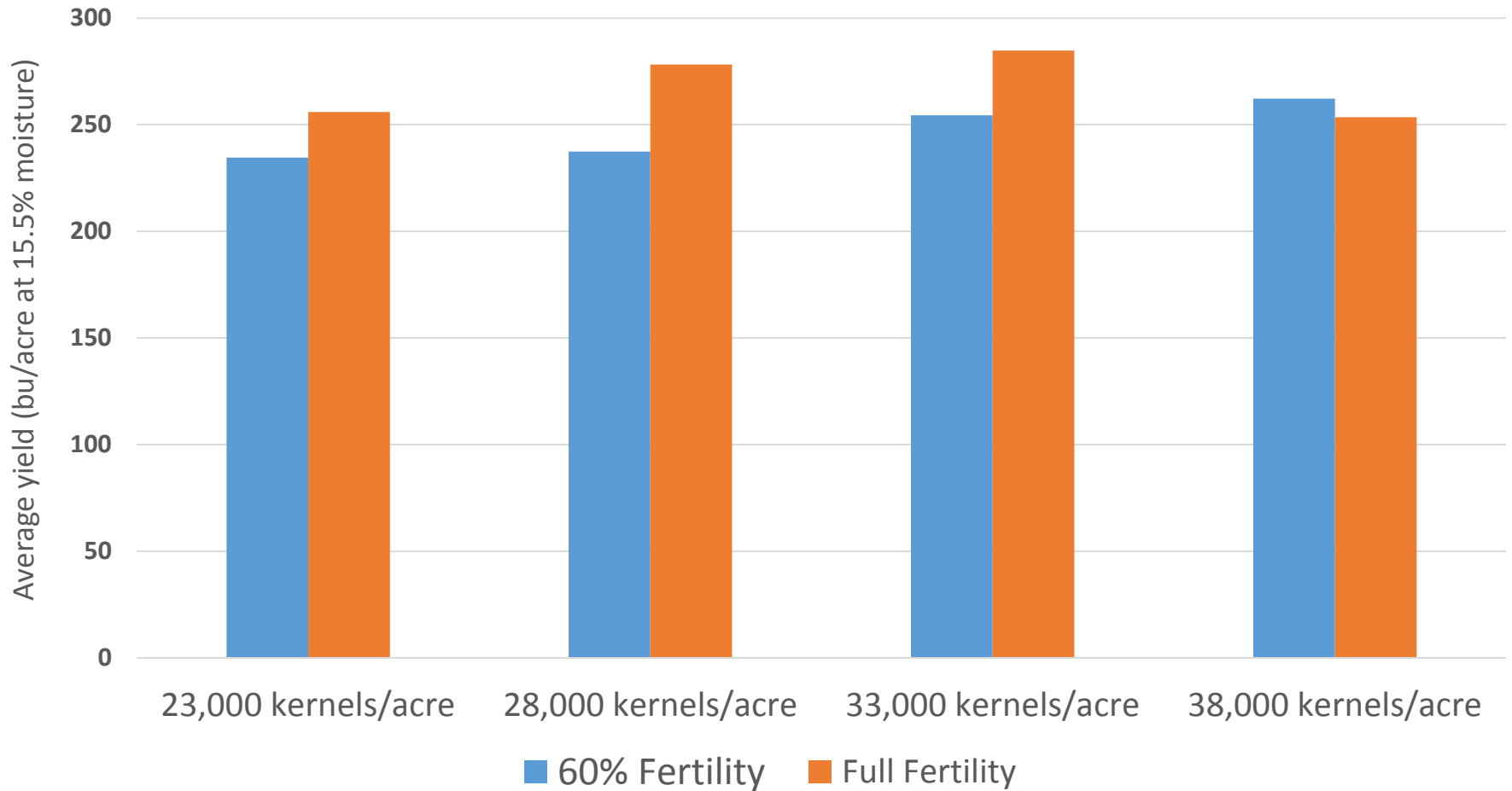


Figure 6. Average yield response of DEKALB® DKC76-44 brand to planting population and fertility.



RESULTS & DISCUSSION

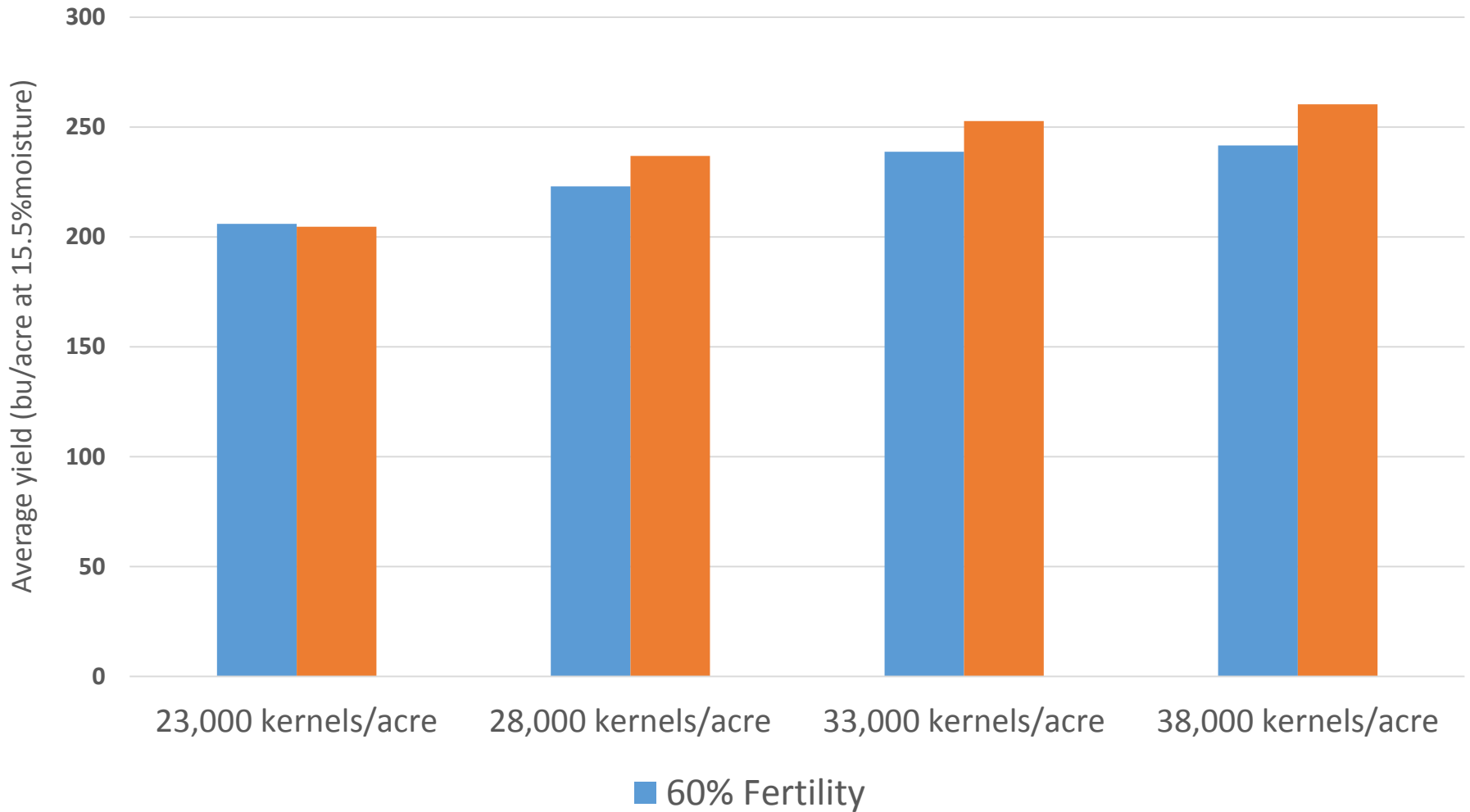


Figure 7. Average yield response of DEKALB DKC67-72 brand to planting population and fertility.



RESULTS & DISCUSSION

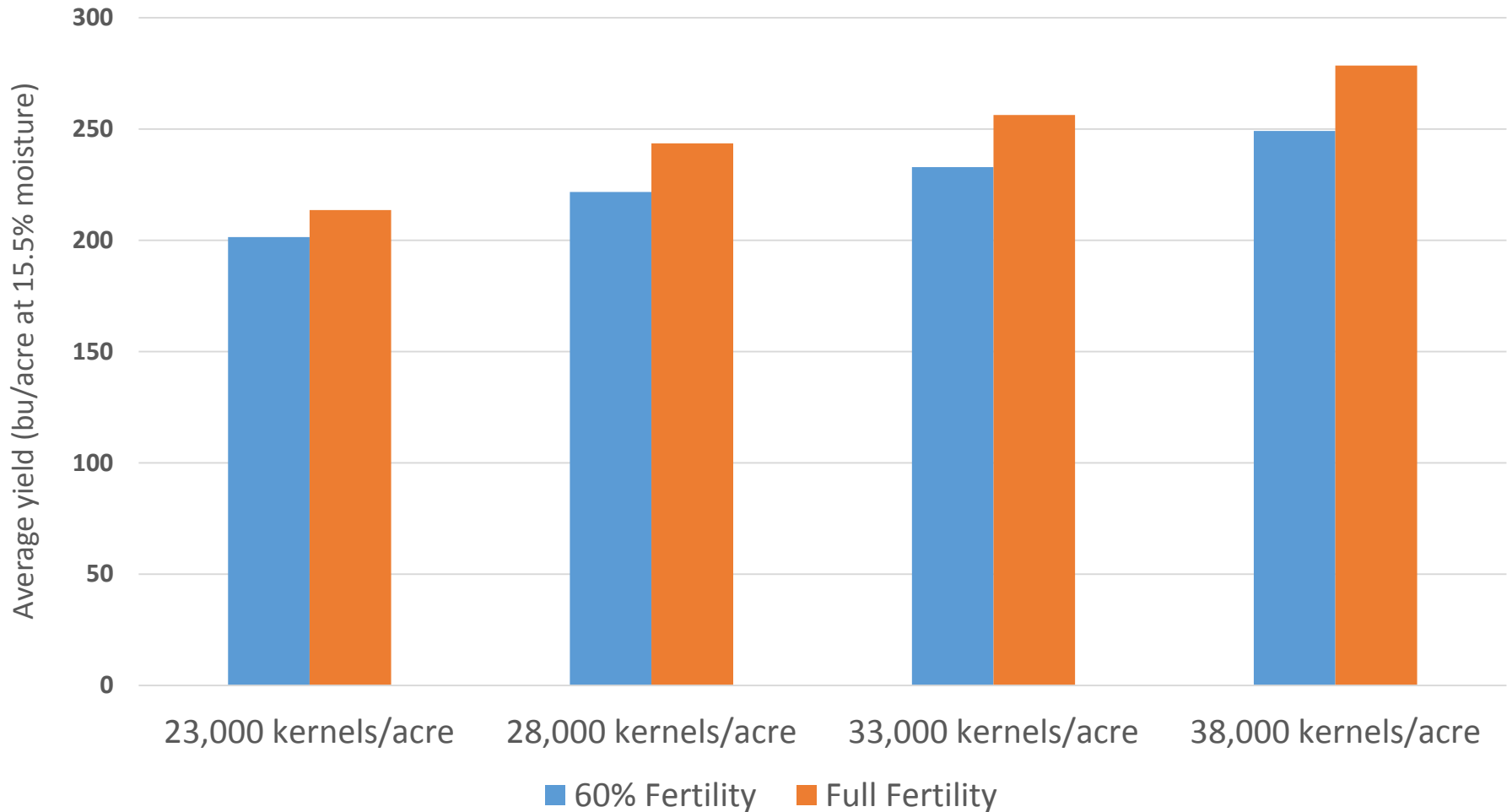


Figure 8. Average yield response of DEKALB® DKC68-26 brand to planting population and fertility.



LEGAL STATEMENTS

The information discussed in this report is from a single site, 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.

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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THANK YOU

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