



# Response of DEKALB<sup>®</sup> Brand Corn Products to Row Configuration and Population

2014 Learning Center Demo Report  
Monsanto Learning Center at Scott, MS



# Study Guidelines



- A corn demonstration trial was conducted at the Monsanto Learning Center at Scott, MS comparing 30-inch rows to 38-inch rows.
- Four DEKALB<sup>®</sup> corn brands (DKC64-69, DKC65-19, DKC66-97, and DKC67-58) were chosen for this demonstration. Corn products were 114 RM, 115 RM, 116 RM, and 117 RM respectively.
- Each product was planted in each row configuration at three populations (32,000, 35,000, and 38,000 seeds/ acre).
- The demonstration was planted on May 5, 2014.
- Standard agronomic practices for the area were implemented with irrigation provided as needed.

# Study Guidelines



- The demonstration was designed to:
  - Determine how different corn products respond to different row widths and populations.
  - Evaluate how row configuration can affect corn yield in the mid-southern production environment.
  - Determine whether some corn products are better adapted to 30-inch rows than others.
  - This demonstration is similar to demonstrations conducted at the Monsanto Learning Center at Scott, MS in previous years.

# Results and Conclusions



- When averaged across all corn products and planting populations, the 30-inch row configuration out-yielded the 38-inch row configuration by 45.07 bu/acre.
- Thirty-inch rows have traditionally been one of the higher yielding systems, where drainage is not a factor.

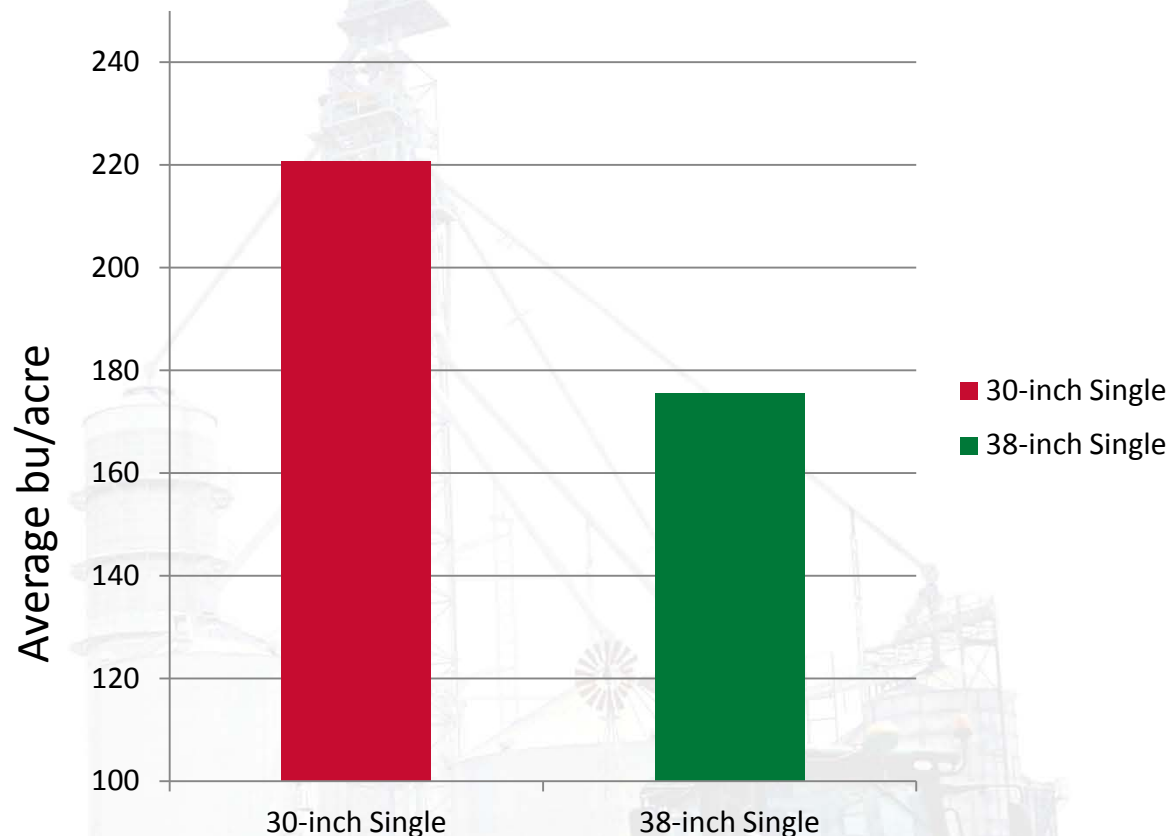


Figure 1. Average yield of four corn products in two row configurations.

# Results and Conclusions



- When averaged across all planting populations in this demonstration, all corn products produced the highest yields in 30-inch rows.

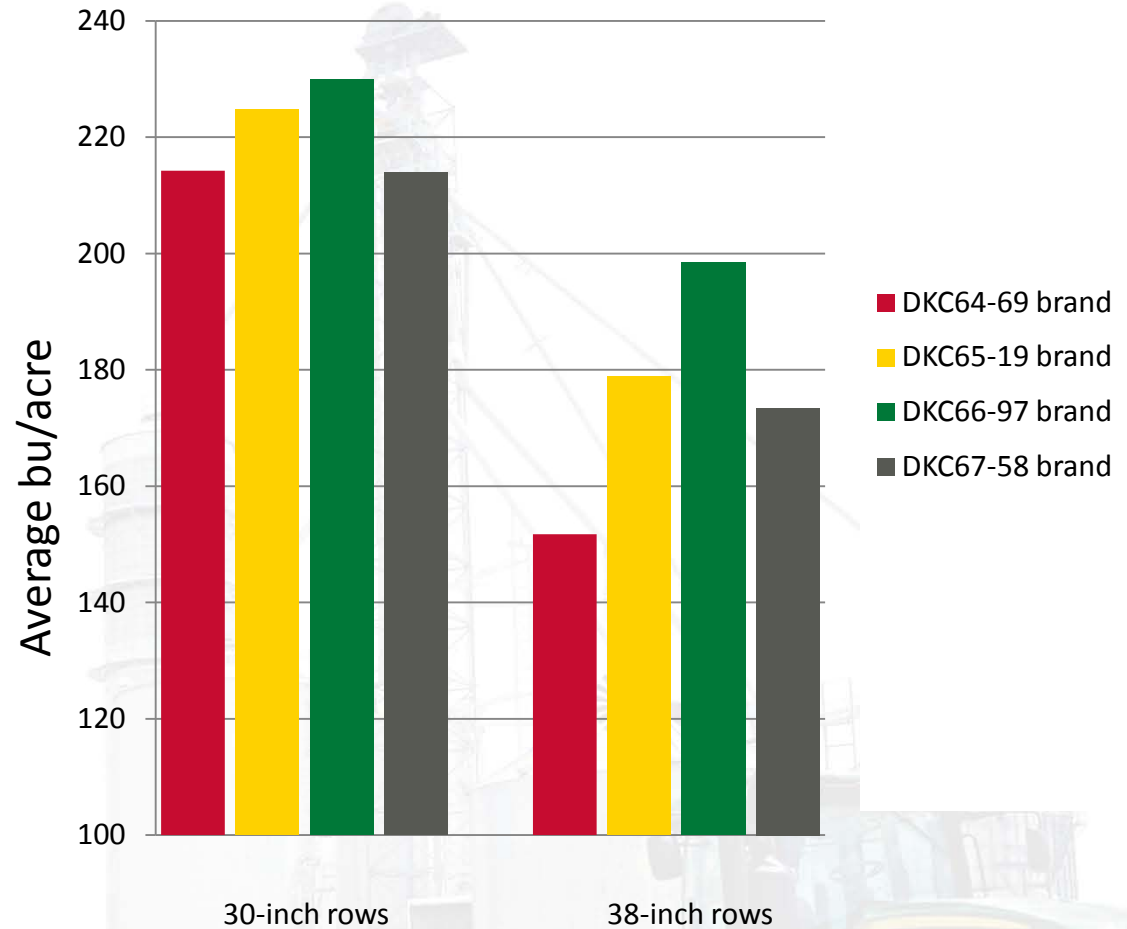


Figure 2. Effect of row configuration on corn yield across four corn products.

# Results and Conclusions



- In the 2014 demonstration, corn yields were relatively unaffected by plant population.
- DKC67-97 brand had the highest yield when planted at 32,000 seeds/acre.

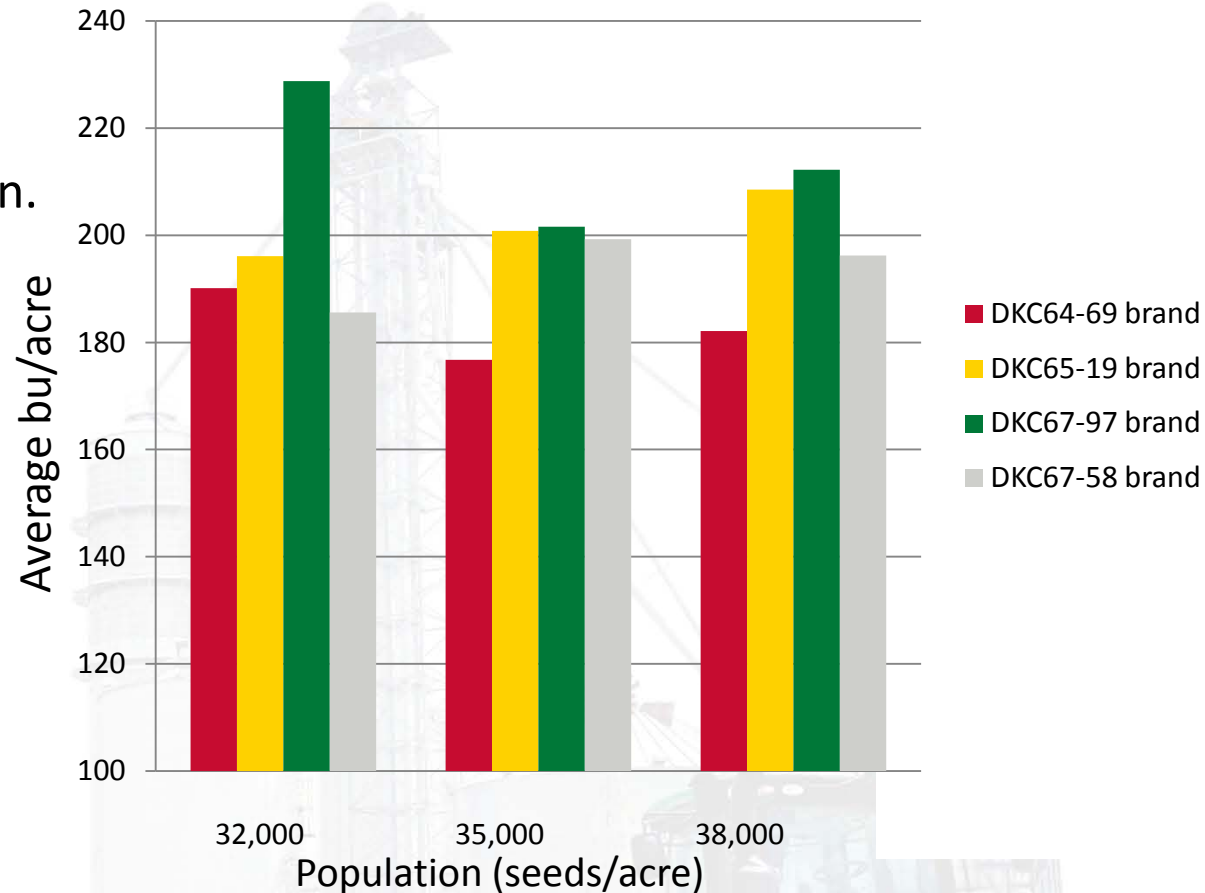


Figure 3. Effect of population on corn yield across four corn products.

# Results and Conclusions



- Another look at the yield results based on planting population when averaged across row configurations.

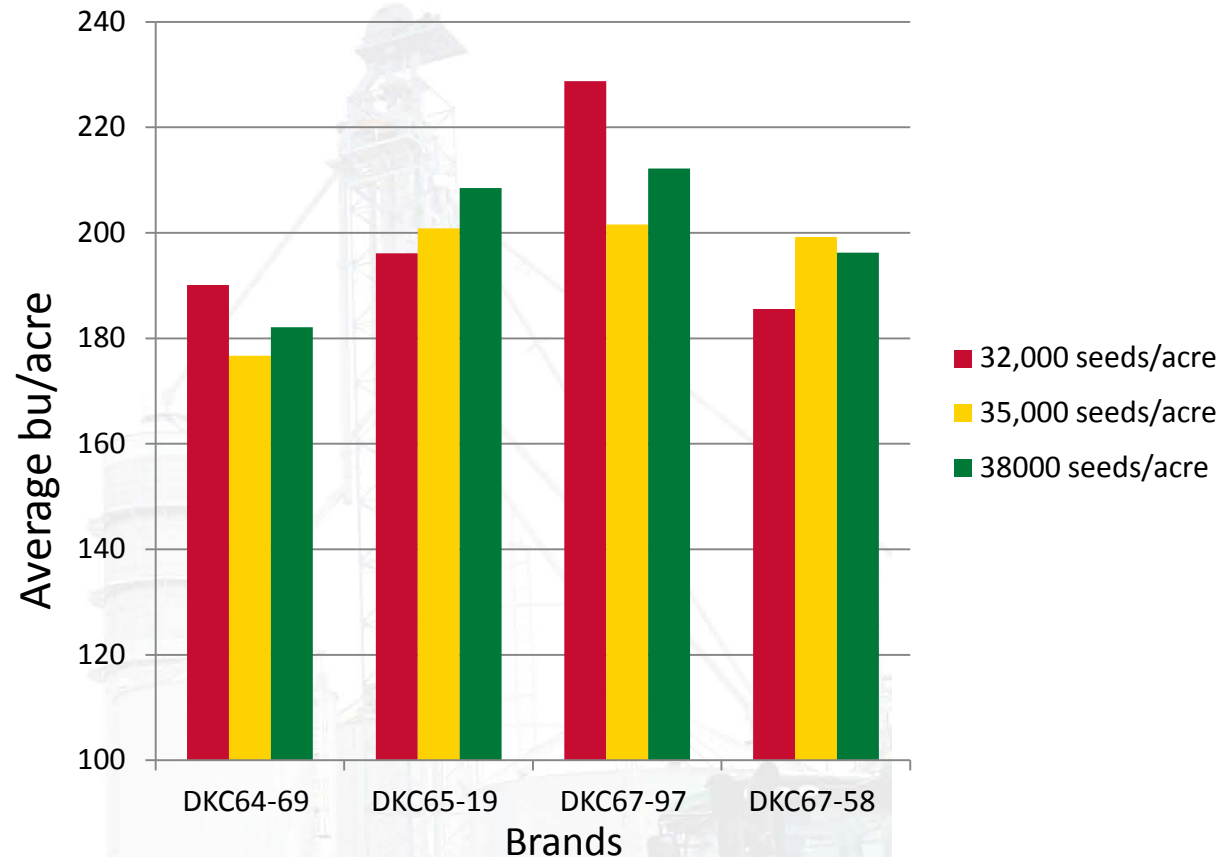


Figure 4. Effect of population on corn yield across four corn products.

# 2013 Results



- When averaged across all corn products and planting populations in this demonstration, the 38-inch TR configuration out-yielded both the 38-inch SR and 30-inch SR configurations by 3.95 bu/acre and 22.55 bu/acre respectively.
- When averaged, yields for all three row configurations in this demonstration increased as planting population increased.

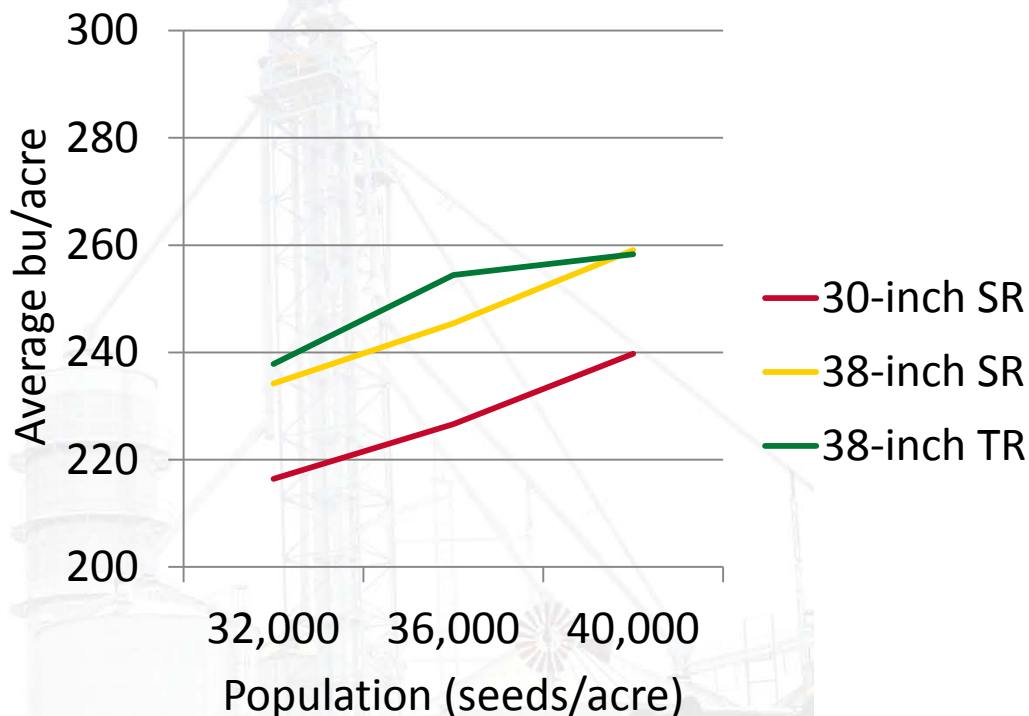


Figure 5. Effect of row configuration and planting population on corn yield when averaged across four DEKALB® corn products in 2013.

SR = Single Row

TR = Twin Row



# 2012 Results



- In 2012, when averaged across the three planting populations, all corn brands yielded more when planted in the 30-inch single row configuration (Figures 6 and 7). The 30-inch single row configuration out-yielded the 38-inch twin row configuration by an average of 6.4% or 13.6 bu/acre.
- Yields for both row configurations were not significantly influenced by planting population when averaged across corn brands.

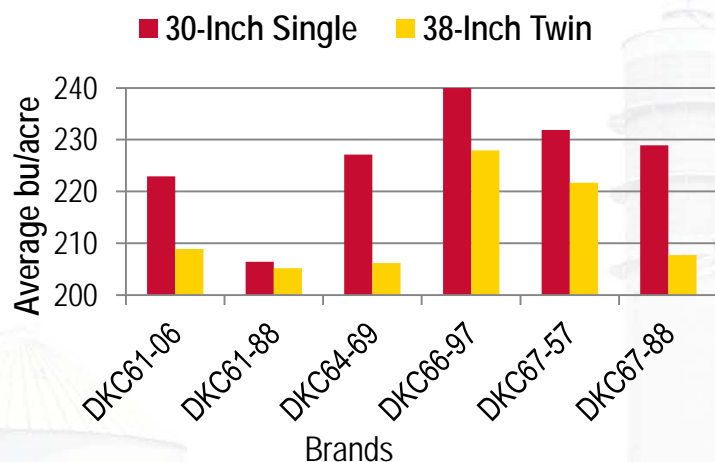


Figure 6. Effect of row configuration and DEKALB® brands on corn yield when averaged across three planting populations in 2012.

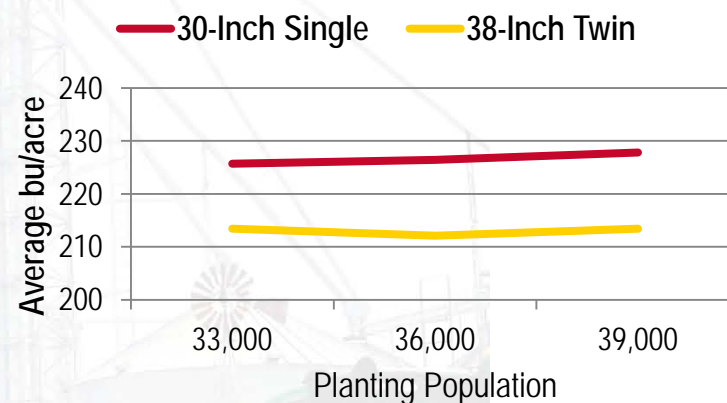


Figure 7. Effect of row configuration and planting population on corn yield averaged across six DEKALB® brands in 2012.

# 2011 Results



- In 2011, when averaged across three corn products and planting populations, the twin row configuration yielded more than the 38-inch single row configuration (Figure 8).
- When averaged across the three corn products and row configurations, planting at the 30,000 and 36,000 seeds/acre population had the highest yield in 2011 (Figure 9).

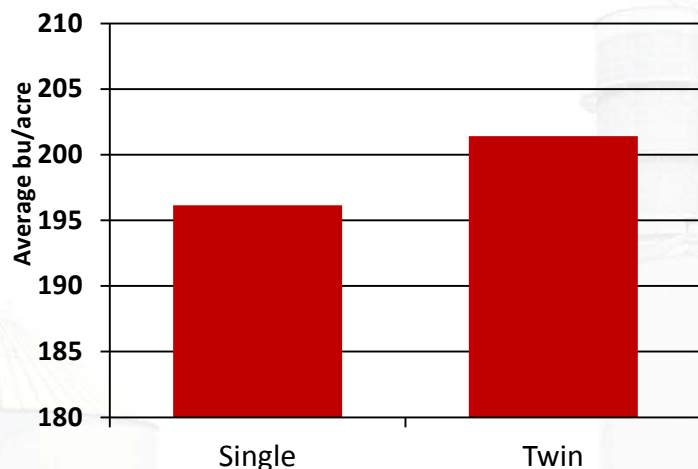


Figure 8. Yield results by row configuration when averaged across three corn products in 2011.

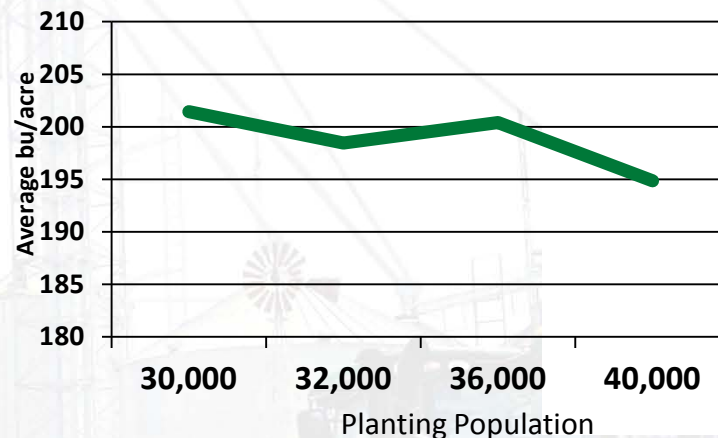


Figure 9. Yield results by planting populations when averaged across three corn products in 2011.

# 2014 Summary Comments



- In the 2014 demonstration, 30-inch row configurations out-yielded 38-inch row configurations, when averaged across corn products and populations.
- Each corn product produced the highest yields in 30-inch rows.
- Thirty-inch rows have traditionally been one of the higher yielding systems, *where drainage is not a factor*.
- Corn yields were relatively unaffected by plant population.
- With proper field preparation and management, different row spacing configurations can work well in Southern corn production systems.
- After product selection, understanding how the individual products respond to different populations, row spacings, and configurations can help maximize corn yield potential.

**Sources:** <sup>1</sup> Corn response to population, row configuration, and soil type. Learning Center Summary, Technology Development and Agronomy, 12192011EJP. <sup>2</sup> Evaluation of new corn brands x population. Learning Center Summary, Technology Development and Agronomy, 132012EJP. <sup>3</sup> Corn yield response to row spacing configuration and population. Learning Center Report, Technology Development and Agronomy, 10152012TED. <sup>4</sup>The response of corn products to row configuration and population. Learning Center Summary, Technology Development and Agronomy, 10152013CRB.

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# THANK YOU

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