

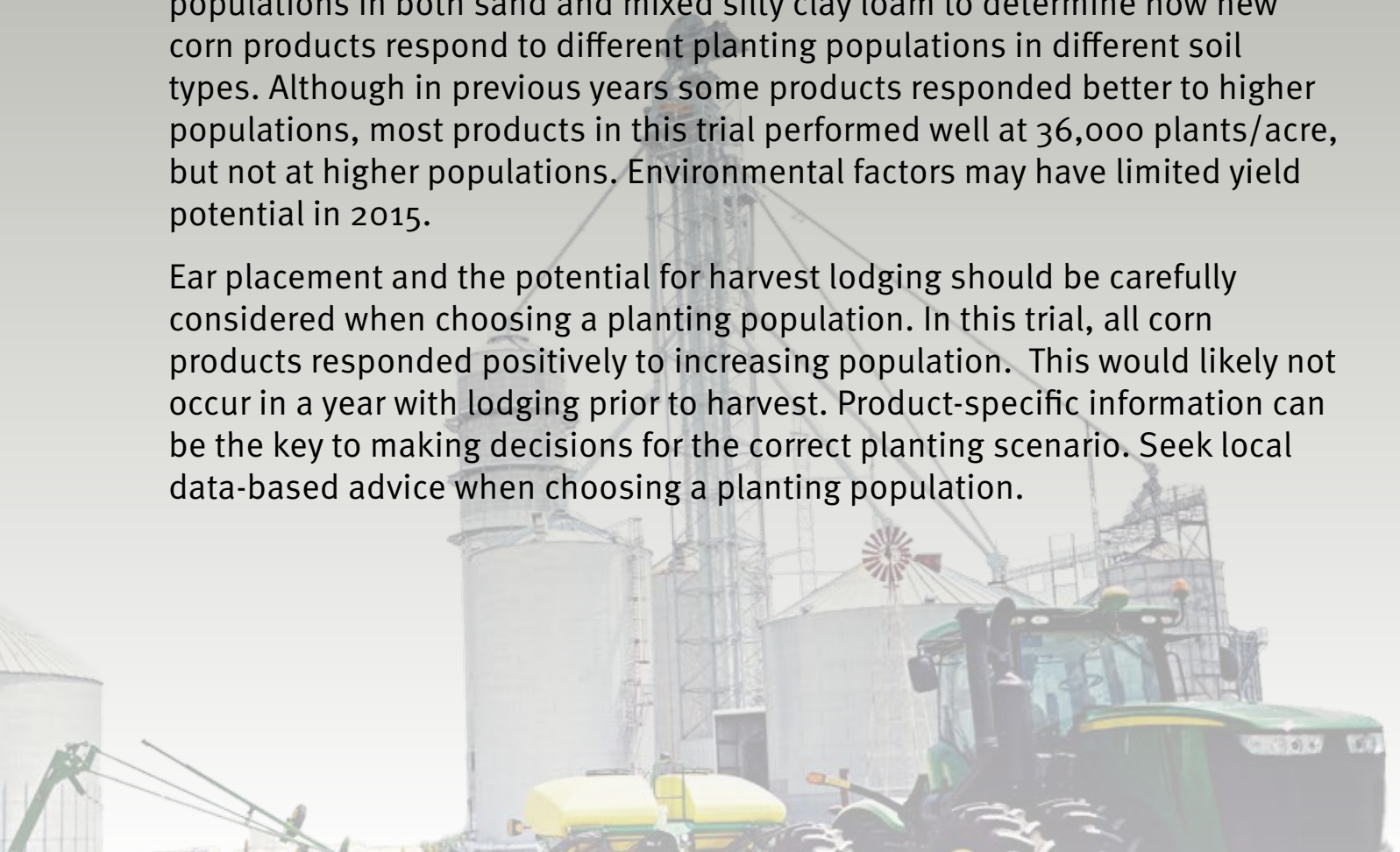


RESPONSE OF NEW DEKALB® BRAND CORN PRODUCTS TO PLANTING POPULATION

Many new corn products are responsive to population, making planting rate decisions even more important than before. Recently adopted corn products are often of the “fixed” ear type, meaning that they are not able to compensate greatly for either a reduction in stands or planting populations that are not optimized for the genetics planted. Past evaluations at the Monsanto Learning Center at Scott, MS have shown that planting population is an essential decision in planning and planting a corn crop. Generally speaking, when planting a product with fixed ear type into fields and/or systems with higher yield potential, the highest population should be used.

In this trial, seven DEKALB corn products were planted at three different populations in both sand and mixed silty clay loam to determine how new corn products respond to different planting populations in different soil types. Although in previous years some products responded better to higher populations, most products in this trial performed well at 36,000 plants/acre, but not at higher populations. Environmental factors may have limited yield potential in 2015.

Ear placement and the potential for harvest lodging should be carefully considered when choosing a planting population. In this trial, all corn products responded positively to increasing population. This would likely not occur in a year with lodging prior to harvest. Product-specific information can be the key to making decisions for the correct planting scenario. Seek local data-based advice when choosing a planting population.



Background



- This demo is repeated each year to evaluate the response of new corn products to planting population.
- The basis for this study is that many new corn products should be planted at higher populations than traditional products.
 - Correct population decisions are very important to maximize the yield potential of new products as they become available.
- The switch to fixed versus flex type products has driven the need for this type of study.

Response of New DEKALB® Brand Corn Products to Planting Population

Study Guidelines



- A corn demonstration trial was conducted at the Monsanto Learning Center at Scott, MS to examine how new corn products respond to different planting populations.
- Corn was planted on two distinct soil types: deep sand and mixed silty clay loam.

Response of New DEKALB® Brand Corn Products to Planting Population

Study Guidelines



- Seven DEKALB[®] corn brands used for this demo:
 - DKC63-60 brand
 - DKC64-89 brand
 - DKC66-59 brand
 - DKC66-87 brand
 - DKC67-14 brand
 - DKC67-72 brand
 - DKC68-26 brand
- DKC27-55 brand – planted only in sandy site at 35,000 kernels/acre (not included with final data)



Response of New DEKALB[®] Brand Corn Products to Planting Population

Study Guidelines



- Three planting populations were used
 - Low: 33,000 seeds/acre
 - Medium: 36,000 seeds/acre
 - High: 39,000 seeds/acre
- Each product was planted at each population in each soil type.
- Emergence and stand establishment was similar in all products (in excess of 98.5%) so data is reported using planting populations.

Response of New DEKALB[®] Brand Corn Products to Planting Population

Study Guidelines



- All field/agronomic work was completed per local standards
- Demo was done under full irrigation
- 240 pounds of total nitrogen was applied as in-furrow liquid in a split application
- Demo was planted March 31, 2015



Response of New DEKALB® Brand Corn Products to Planting Population

Results and Discussion

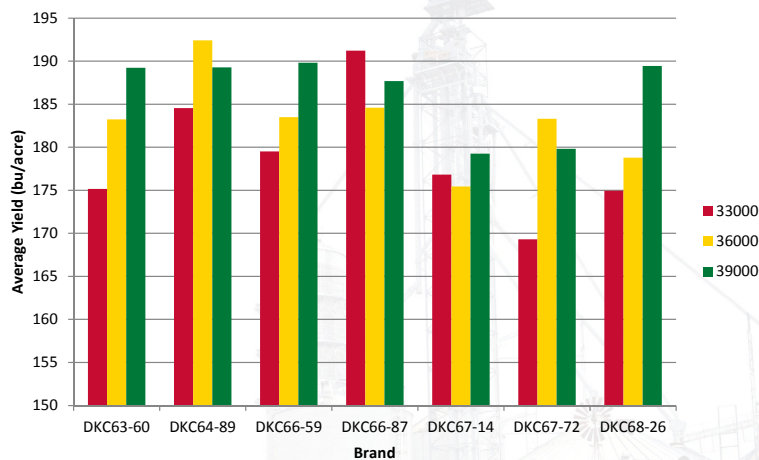


Figure 1. Average yield of seven corn products by planting population in deep sand planting site.

*DKC27-55 brand was planted in this site at 35,000 kernels/acre and yielded 74.8 bu/acre.

Response of New DEKALB® Brand Corn Products to Planting Population

Results and Discussion

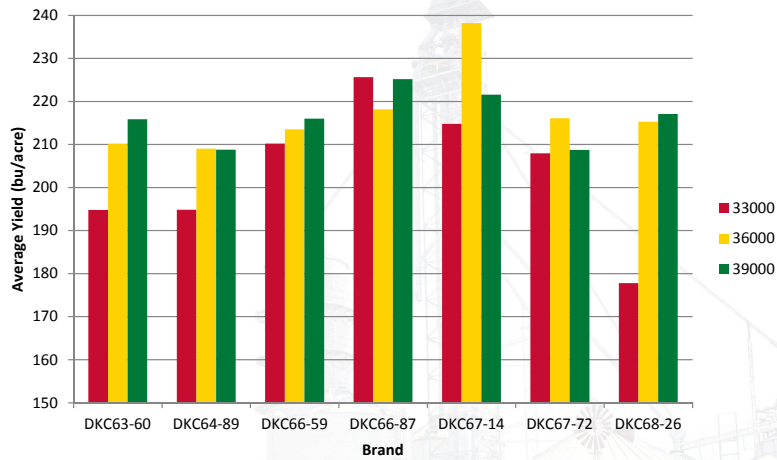


Figure 2. Average yield of seven corn products by planting population in mixed silty clay loam planting site.

Response of New DEKALB® Brand Corn Products to Planting Population

Results and Discussion

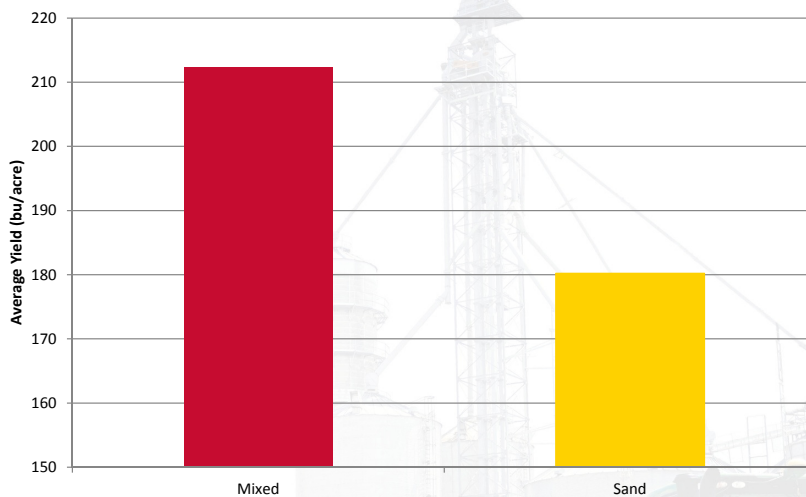


Figure 3. Average yield across corn products and planting populations by soil type.

Response of New DEKALB® Brand Corn Products to Planting Population

Take Aways



- In previous years of this study, some products responded better to higher populations, into the 45,000 kernel/acre range.
- During 2015, most products responded favorably to planting populations of 36,000 kernels/acre, but not to higher planting populations.
- It is likely that environmental factors (mainly humidity) limited yield during 2015.



Response of New DEKALB® Brand Corn Products to Planting Population

Take Aways



- When choosing a planting population, ear placement and the potential for harvest lodging should be carefully considered.
 - Lodging was not an issue in this trial and all corn products responded positively to increasing population. This would likely not occur in a year with lodging prior to harvest.
- Seek data-based local advice when choosing a planting population.

Response of New DEKALB® Brand Corn Products to Planting Population

Take Aways



- DKC27-55 brand was included in the sand location due to interest in short-season corn in the South.
 - Planted at 35,000 seeds/acre and yielded 74.8 bu/acre
- This study demonstrated that, for the most part, it was not well adapted to this region.

Response of New DEKALB® Brand Corn Products to Planting Population

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.

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. **Always read and follow IRM, where applicable, grain marketing and all other stewardship practices and pesticide label directions.** Asgrow and the A Design®, Asgrow®, DEKALB and Design®, and DEKALB® are registered trademarks of Monsanto Technology LLC. Deltapine® is a registered trademark of Monsanto Company. All other trademarks are the property of their respective owners. ©2015 Monsanto Company. 151019085637 102315JMG