



How Much do 1,000 Corn Plants Contribute to Corn Yield?

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



Background



- Many new corn products are responsive to population, making planting rate decisions even more important than before.
 - This demonstration was designed to show how reducing population by 1,000 seeds/acre can affect corn products differently.

Materials and Methods



- A corn demonstration trial was conducted at the Monsanto Learning Center at Scott, MS to illustrate how reducing the planting rate by 1,000 seeds/acre can affect yield potential of two corn products.
- Corn products selected for the demonstration:
 - DKC66-97 Brand, Genuity[®] VT Double PRO[®] with 116 RM
 - DKC64-69 Brand, Genuity[®] VT Triple PRO[®] with 114 RM
- Both corn products were planted in 1,000 seed increments from 28,000 to 39,000 seeds/acre.
- Two 1,000th of an acre samples were taken within each plot.

Study Guidelines



- Planting date: April 1, 2014
- Harvest data collected: September 2, 2014
- Plots were kept weed free.
- A regression of final plant stand to final yield adjusted to 15.5% moisture was performed.

Observations



- Both corn products produced yields greater than 200 bu/acre.
 - DKC66-97 Brand = 1,000 plants were worth about 3.84 bu/acre.
 - DKC64-69 Brand = 1,000 plants were worth about 5.54 bu/acre.
- The average across the two corn products was 4.7 bu/acre.
 - Consistent with 2013 data.

Data

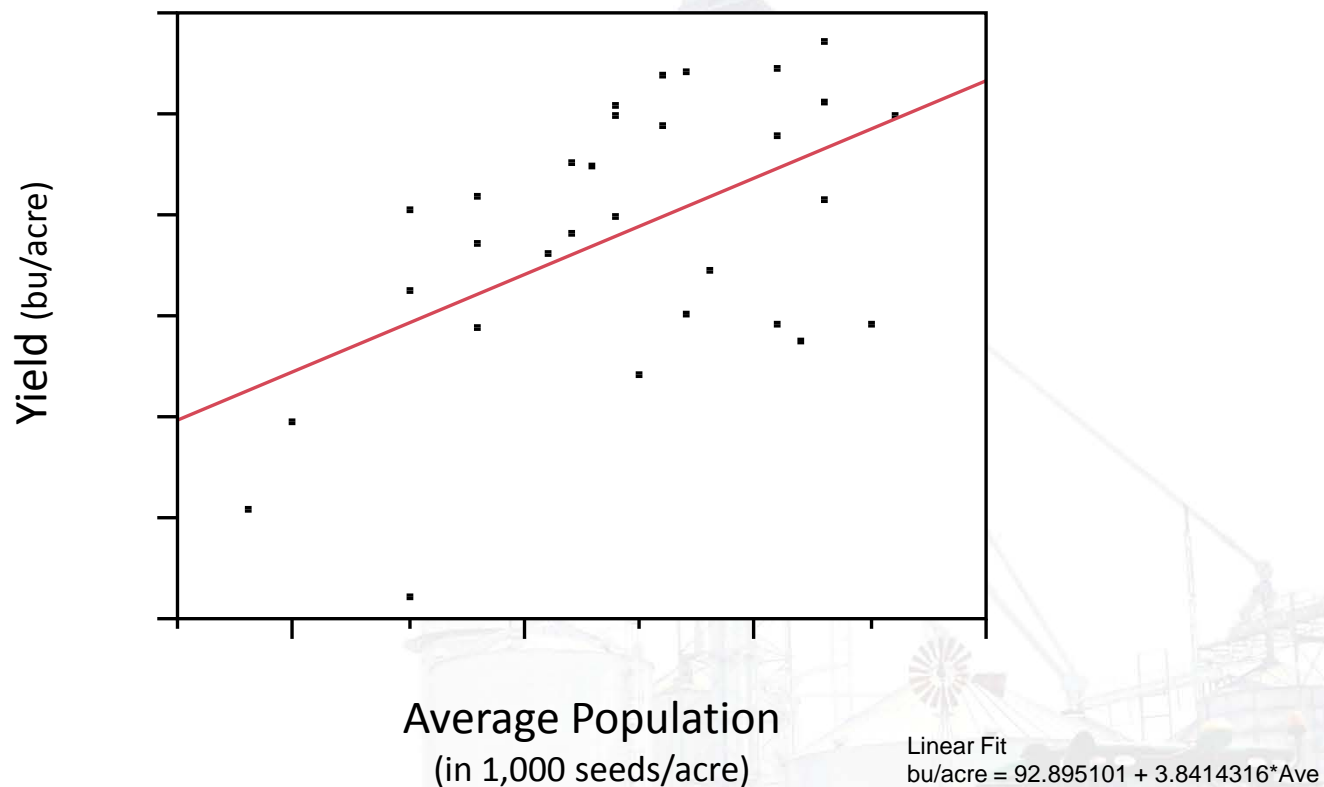


Figure 1. DKC66-97 Brand, Bivariate fit of average yield (bu/acre) by average population.

Data

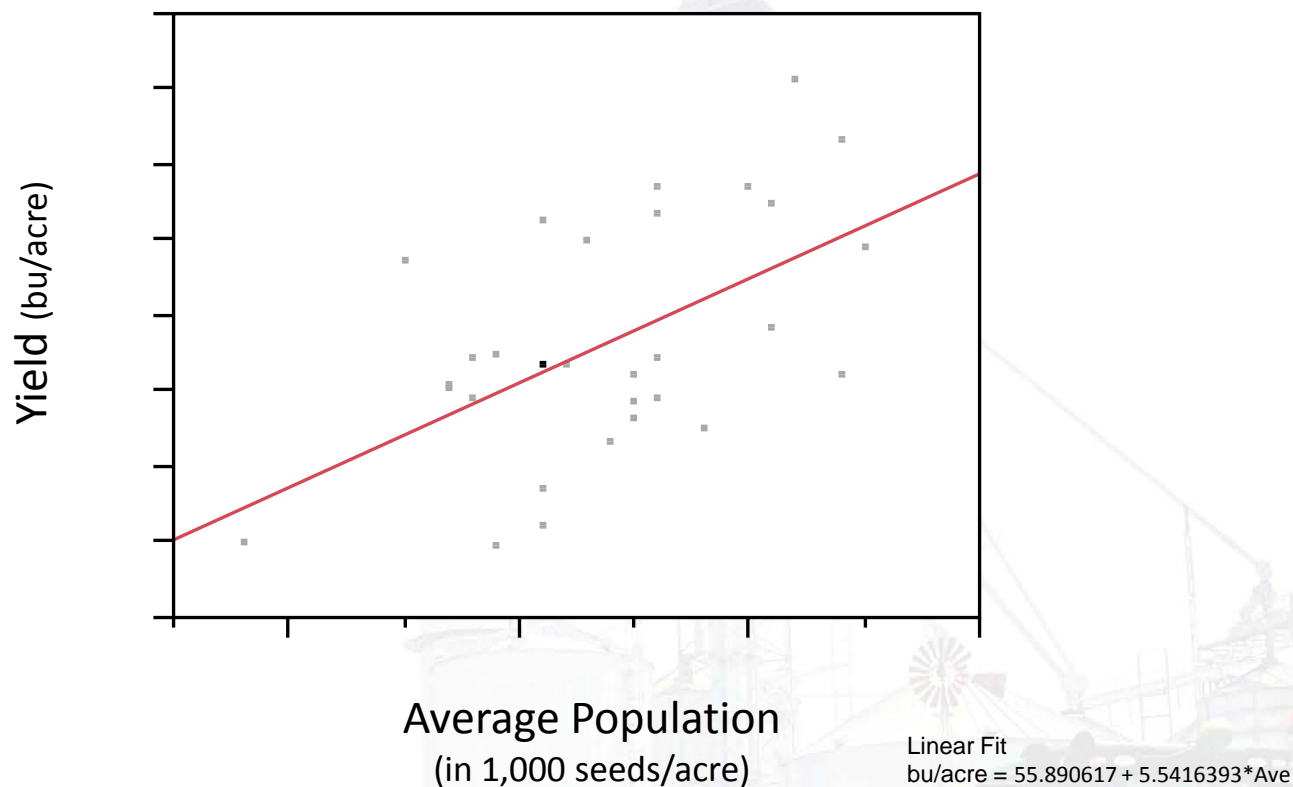


Figure 2. DKC64-69 Brand, Bivariate fit of average yield (bu/acre) by average population.

Photo



Figure 3. Corn plant spacing.

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Key Messages



- The difference in the worth of 1,000 corn plants (1.7 bu/acre) points out the need for proper decision making when planning a crop.
- Traditional corn populations in the South are around 28,000 seeds/acre.
- Possible population modifications:
 - DKC66-97 Brand –
 - Product may benefit from increasing population.
 - Increasing from 28,000 to 37,000 seeds/acre may result in a potential yield increase of 35 bu/acre.
 - DKC64-69 Brand –
 - Results indicate that this product should not be planted higher than 34,000 seeds/acre due to lodging concern.
 - Limiting this product to 34,000 seeds/acre may be limiting yield potential; therefore, in high yield environments another product may be a better choice.
- Proper planning is key to optimize yield potential of the specific corn product planted.

Legal Statements



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THANK YOU

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