

2011 LEARNING CENTER at Scott, Mississippi DEMONSTRATION REPORT



IMPACT OF STAGGERING ON TWIN ROW CORN

Twin row corn planting has become a viable system in the Mid-South. Twin row planting has been shown to have several potential benefits including optimizing light interception, allowing for increased plant populations, and helping to improve standability. In the past, demonstration plots have been conducted to compare single row and twin row systems, but questions still remain as to the yield potential of twin rows vs. single rows and the effect of the stagger.

STUDY GUIDELINES

In 2011, a study was conducted at the Scott Learning Center to compare a) properly staggered twin row systems (stagger = 100%), b) side by side planting in twin rows (stagger = 0), c) twin rows with plants intentionally staggered incorrectly (stagger = 40%), and d) single rows. DKC 61-06 brand (111 RM) and DKC 66-96 brand (116 RM) were planted on April 12, in plots (151 feet

long by four rows wide) with three replications. Single and twin row configurations were planted on 38-inch centers. Twin rows were planted 7.5 inches apart (Figure 1). Plant populations were 36,000 seeds per acre for both single and twin row plots (Figure 2). Agronomic practices were in alignment with local standards. Calculations were made to allow the Monesum® planter to be intentionally off by 40%. Plots were harvested on August 25.

to pg. 2 ▶



Figure 1. Single and twin row configurations planted on 38-inch centers.



Figure 2. Plant spacing for single and twin row plantings at 36,000 seeds per acre. Twin row planting is correctly staggered (stagger = 100%) with lines between plants creating an isosceles triangle.



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▶ from previous page

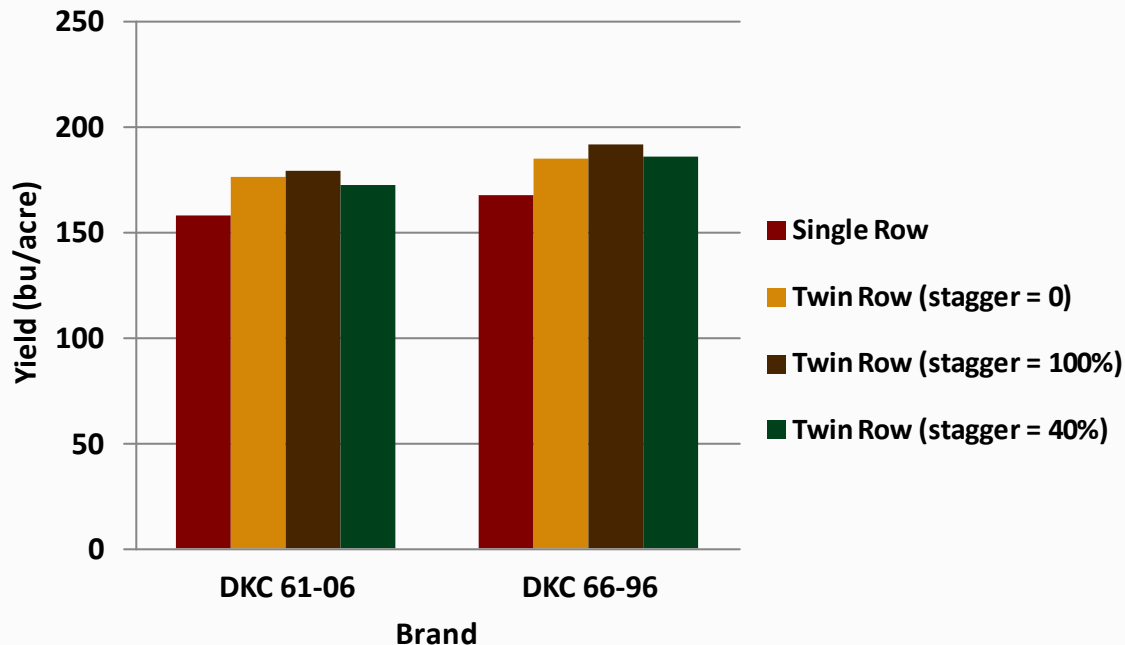


Figure 3. Average yield (bu/acre) of two DEKALB brands in single row, side-by-side (stagger = 0), correctly staggered (stagger = 100%), and incorrectly staggered (stagger = 40%) twin row systems.

RESULTS

In this study, single rows yielded an average of 163 bu/acre while the average of all twin row treatments was 182 bu/acre. Twin rows out-yielded single rows by close to 20 bu/acre, or about 12%. Historically yield responses with twin rows fall into a 3 to 8% increase. Properly staggered twin rows yielded the highest with an average of 186 bu/acre. Side by side twin rows and twin rows staggered at 40% of correct performed better than single rows with yields of 181 bu/acre and 179 bu/acre, respectively (Figure 3). Although the yield differences between correctly staggered twin rows and incorrectly staggered or side-by-side twin rows were slight, they were consistent across both brands.

SUMMARY COMMENTS

The twin system can help drive plant spacing uniformity both down a given row and across rows. Proper adjustment and setup of the twin row planter is essential to maximize the benefits of a twin row system. Optimal use of the twin row system requires proper seedbed preparation and establishing a wide, flat bed as well as proper planter adjustment.

The information discussed in this report is from a single site, non-replicated, one-year 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.

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