



COTTON DOUBLE CROPPED BEHIND WHEAT

With the increased pest protection provided by Genuity® Bollgard II® technology, the eradication of the boll weevil, and early maturing varieties, cotton planted following wheat harvest has become an interesting proposition for growers in the Mid-South. This demonstration was established to evaluate the effect of plant growth regulator (PGR) application, planting density, and variety selection on the success of double cropped cotton behind wheat.

STUDY GUIDELINES

Six Deltapine® varieties were planted on May 31, 2011, at 42,000 and 52,000 plants per acre (ppa). Three PGR regimes were evaluated; untreated check (UTC), passive, and aggressive (Figure 1). Plots were irrigated once with 0.75 inches of water to supplement the 3.5 inches of rainfall that was received throughout the season.

Figure 1. Application rates and dates for various PGR regimes.

	Dates and Rate of PGR (oz/acre) Applied		
	June 30	July 21	July 28
UTC	0	0	0
Passive	0	12	12
Aggressive	8	16	24

RESULTS

Variety.

Several varieties showed promise of very high yield in this system including DP 0912 B2RF, DP 1133 B2RF, and possibly DP 1044 B2RF (Figure 2).

Population x PGR Regime.

At lower populations, the less aggressively PGR managed plots yielded more than the more aggressively managed plots (Figure 3). At higher populations, aggressively managed plots yielded more than passively managed plots and were able to generate yield in excess of 2 bales despite being planted on May 31st.

Variety x Population x PGR Regime.

The individual results for each combination of variety, PGR regime and population treatment are provided in Figure 4.

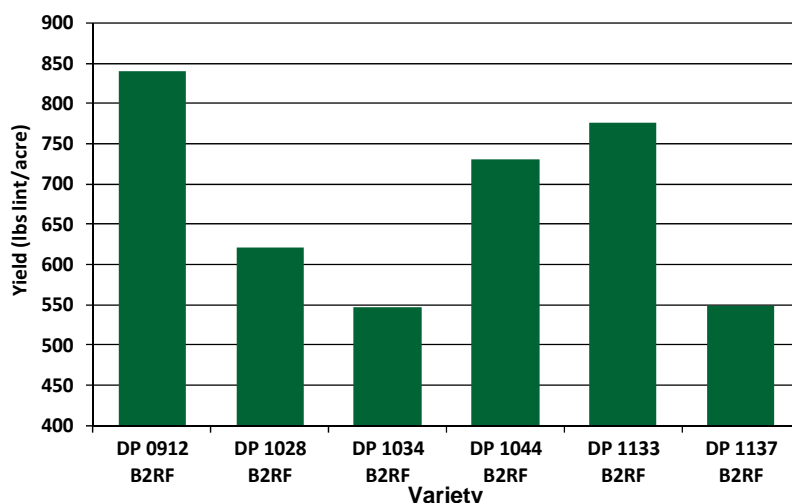


Figure 2. Yield of various cotton varieties averaged across populations and PGR regimes.

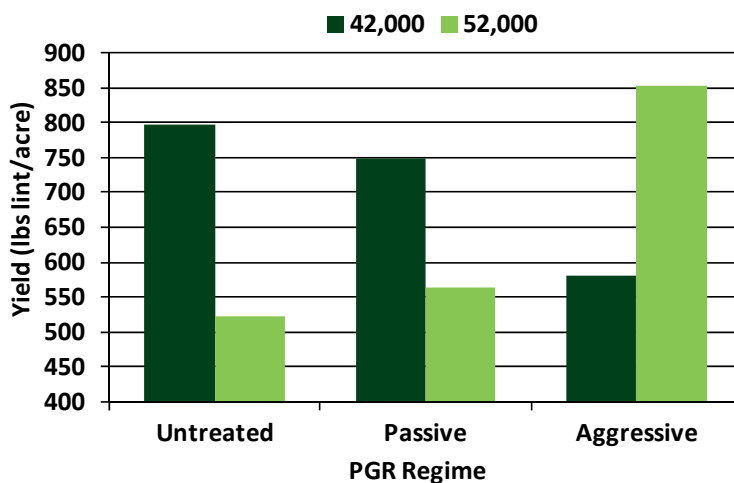


Figure 3. Effect of population and PGR regime on cotton yield when averaged across varieties.

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DISCUSSION

When considering double cropping cotton following wheat, aggressive management will likely be necessary. Higher populations allow the field to generate equivalent or higher yield potential in shorter amounts of time versus lower planting densities which force the plant to generate fruiting positions further up and out on the plant. However, higher densities demand more aggressive PGR applications to increase the odds for success. Cotton growth is heat driven. When accumulating heat quickly, as a late planted crop would, PGRs are diluted faster so applying them more often and in higher doses can help manage the

crop for higher yield potential. Risks associated with weather and insects are likely to be higher when planting late. . Additionally, any delay in planting double crop cotton will likely result in yield reductions, as indicated by yields in a different demonstration at the Scott Learning Center, where cotton was planted on June 13, 2011, and the highest yields were 150 lbs/acre lower than in this study. A comparison of variety performance in this demonstration and the one planted on June 13, suggests that variety selection becomes even more important as planting dates are delayed. Careful consideration of the above factors can help to mitigate some of the risks associated with delayed planting.

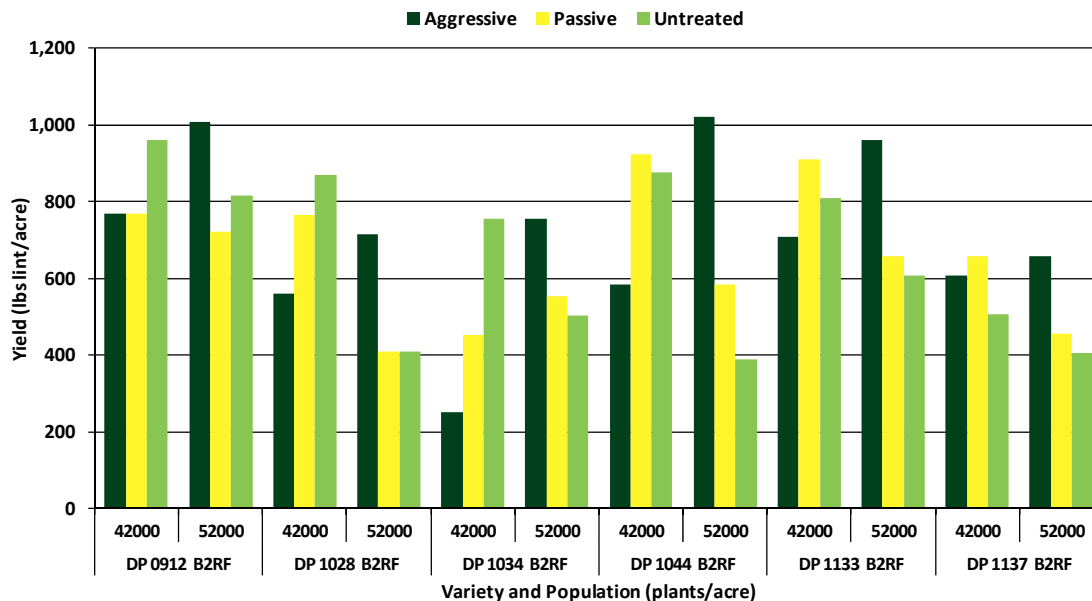


Figure 4. Effect of PGR regime and population on cotton yield for different varieties.

Note: These results are not intended to provide you with a blueprint on how to grow any specific variety but merely to give the benefit of some research with them. Your experience and knowledge will remain an invaluable component to the successful management of any variety. This information is being provided to you to aid you in making decisions and giving advice regarding the management of these varieties. The information is not intended to totally supplant your experience and knowledge base on the proper management of your individual crops.

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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