

1503 Comparison of BC₁ and F₂ maps of an interspecific hybrid (*G. darwinii* x *G. hirsutum*)

Ms. Juliana Osorio , University of Arkansas, Fayetteville, AR
Dr. James McD Stewart , Department of Crop, Soil, and Environmental Sciences, University of Arkansas, Fayetteville, AR

The availability of genetic diversity in cultivated plants for breeding programs is sometimes limited, especially when there is not accessibility to genepools. Crosses between wild and cultivated cotton have been done in order to introduce traits of interest. This task is usually an objective of pre-breeding programs, where, useful traits are moved from exotic to cultivated species while eliminating most of the undesirable traits. Maps have been developed for crosses between cotton species. However, few maps have been constructed from crosses of cultivated with exotic cotton. A cross between *G. darwinii* and *G. hirsutum* is the starting material in this report. This cross offers the possibility of introducing drought tolerance traits into cultivated cotton from the exotic species. Comparison of maps developed from different populations (e.g. F₂ and BC₁) is valuable in the establishment of map distances and alignments. The purpose of comparing the F₂ and BC₁ maps of this specific cross is to determine which gives a better understanding of the genetic arrangement and which population generates a better map for future reference.