

**EFFECTS OF DELAYED HARVEST ON LINT YIELD FIBER
PROPERTIES AND PROFITABILITY OF COTTON**

**Craig W. Bednarz
University of Georgia
Tifton, GA**

Abstract

Cotton and peanuts are a commonly produced by many growers in South Georgia. Unfortunately, cotton and peanuts both require approximately 150 days to mature. As a result, cotton harvest is generally initiated following the completion of peanut harvest. Due to excessive weathering, this delay in cotton harvest may cause significant losses in lint yield, fiber quality and profitability. If 20 percent of the cotton produced in Georgia were discounted 3 cents per pound for quality, this alone would result in a loss of more than 6 million dollars to Georgia growers. The objectives of this investigation were to determine how delayed harvest effects cotton lint yield, fiber quality and net returns.

Cotton was planted in 1998 and 1999 at the University of Georgia Ponder Farm in Tift County Georgia. Harvest-aid applications were initiated when the crop was approximately 10% open and continued every week for the next thirteen weeks. Each plot was machine picked two weeks after each harvest aid application. The resulting seed cotton samples were then ginned and HVI and AFIS fiber properties were determined.

In 1998, fiber micronaire tended to increase for the first four to five weeks of the study. Fiber strength and the color grade, however, declined throughout the thirteen-week period. Color grades during weeks 6 and 7 were also "light spotted", which may have resulted from the 6.4 inches of rainfall received from Hurricane Earl immediately prior to this time period. The highest lint yields were obtained at week 6 (100% open boll). However, due to the color grade, price discounts would have been received from week 4 to week 13. As a result, maximum net returns occurred when harvest aids were applied at 60% open boll in 1998.

In 1999, fiber micronaire again tended to increase for the first four to five weeks of the study. Also, fiber strength and the color grade again declined throughout the thirteen-week period. Fiber uniformity was greatest when harvest aids were applied at approximately 80% open boll. The AFIS data also show fiber length was greatest and short fiber content was lowest when harvest aids were applied at approximately 80% open boll. Finally, the highest lint yields and adjusted gross income were also obtained when harvest aids were applied at approximately 80% open boll in 1999.