

INHERITANCE OF YIELD AND YIELD COMPONENTS IN COTTON (*Gossypium hirsutum* L.)

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ABSTRACT

This study was conducted to investigate the inheritance of yield and yield components in cotton. Crosses between Sure Grow 125 and PAUM 401 (*Gossypium hirsutum* L.) in 2000, and backcrosses between F₁ and parents (Sure Grow 125 and PAUM 401) in 2001 were made under field conditions at Çukurova University, Cotton Research and Application Center, Adana. Four generations (F₁, F₂, B₁, and B₂, in which B₁ represents a backcross between F₁ and Sure Grow 125 and B₂ represents a backcross between F₁ and PAUM 401), and parents were tested at the same center in 2002. Generation mean analysis was used to estimate the type of gene action determining yield and yield components. It was concluded that additive, dominance and epistatic gene effects were responsible for the inheritance of lint yield, boll number per plant and lint percentage whereas only dominance effects were involved in inheritance of seed cotton weight per boll and 100 seed weight.

Key words: Gossypium hirsutum L. – inheritance – yield – yield components