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GRAPHIC REPRESENTATION OF GENE ACTION IN SOME QUANTITATIVE TRAITS OF UPLAND COTTON (G. HIRSUTUM L.)

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ABSTRACT

A 4 x 4 diallel cross experiment was conducted to study the gene action controlling different characters of upland cottoh Gossypium hirsutum L. The characters studied viz. plant height, number of boll/ plant, boll weight and yield of seed cotton/ plant were found to be governed by overdominance type of gene action for thier inheritance. Non-allelic interaction was also important for the expression of all the characters studied. AU 59 was assessed to possess maximum dominant genes for the characters studied except boll weight in which B 284 proved to have more dominant genes. Moreover, both of these cultivars proved to be the best general as well as specific combiners. Hence their utilization in breeding programmes could bear very fruitful results.

INTRODUCTION

Biometrical techniques dealing with the genetic analysis of different breeding materials of various field crops have led to the development of specific procedures, which have enabled the synthesis of superior cultivars, by plant breeders. Hayman [2]