

Assessment of genetic variability, heritability and genetic advance in upland cotton (*Gossypium hirsutum* L.)

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ABSTRACT

The study was conducted during the *khari*f season 2024-25 at Regional Agricultural Research station, Lam Farm, Guntur. On present experiment 56 genotypes of cotton (*Gossypium hirsutum* L.) were evaluated for genetic variability, heritability and genetic advance as per cent of mean for 19 quantitative traits. Analysis of variance revealed significant differences for all the characters under study. High genotypic coefficient of variation (GCV) and phenotypic coefficient of variation (PCV) were observed for the characters viz., no. of monopodia per plant, seed cotton yield per plant (g) at 140 days after sowing, seed cotton yield per plant (g) at 165 days after sowing, total seed cotton yield per plant (g) and proline content whereas the characters plant height, no. of sympodia per plant, no. of bolls per plant, boll weight, seed index, lint index and micronaire recorded moderate PCV and GCV values. No. of monopodia per plant, seed cotton yield per plant (g) at 140 days after sowing, seed cotton yield per plant (g) at 165 days after sowing, total seed cotton yield per plant and proline content exhibited high heritability coupled with high GCV and high genetic advance as per cent of mean indicating direct selection could be effective for improvement of these characters.

Key words: *Cotton, Genetic advance, Heritability and Variability.*