

RESEARCH ARTICLE

Study of heterosis for seed cotton yield, yield contributing traits in *Desi* cotton (*Gossypium arboreum* L.)

■ K.S. Thombre, V.N. Chinchane, D.B. Deosarkar and S.B. Borgaonkar

SUMMARY

Cotton crop is mainly cultivated for its fibre and hence yield is important in cotton. Cotton crop is highly amenable to both heterosis and recombination breeding as it is often cross pollinated. The present investigation on heterosis studies for yield and yield contributing traits in *desi* cotton (*Gossypium arboreum* L.) was undertaken with the objectives to study the extent of heterosis over mid parent (Average heterosis), better parent (Heterobeltiosis) and standard checks (Standard heterosis). In present investigation four lines were crossed with six testers to obtain 24 hybrids in line x tester design. Data were recorded on yield and yield contributing traits. Analysis of variance for means revealed significant differences for all the characters studied. The magnitude of heterosis, heterobeltiosis and standard/economic heterosis for all the characters in the present study were highly appreciable. Among all the characters, the magnitude of heterosis was highest for number of sympodia per plant measuring to the extent of 55.56 %, 47.37 % and 43.59 % over standard check PKVDH 1, PKV Suvarna and NACH 12 in the cross PA 734 x CNA 1016. It was followed by seed cotton yield per plant (48.77 %, 47.44 % and 33.49 %) in the cross PA 734 x ARBAS 1301 over standard check PKVDH 1, PKV Suvarna and NACH 12, respectively.

Key Words : Heterosis, Standard heterosis, Micronaire, Staple length, Heterobeltiosis

How to cite this article : Thombre, K.S., Chinchane, V.N., Deosarkar, D.B. and Borgaonkar, S.B. (2018). Study of heterosis for seed cotton yield, yield contributing traits in *Desi* cotton (*Gossypium arboreum* L.). *Internat. J. Plant Sci.*, **13** (1): 60-66, DOI: 10.15740/HAS/IJPS/13.1/60-66.

Article chronicle : Received : 28.08.2017; Revised : 17.11.2017; Accepted : 01.12.2017

MEMBERS OF THE RESEARCH FORUM

Author to be contacted :

K.S. Thombre, Department of Agriculture Botany, College of Agriculture, Vasant Rao Naik Marathwada Krishi Vidyapeeth, Parbhani (M.S.) India

Address of the Co-authors:

V.N. Chinchane, D.B. Deosarkar and S.B. Borgaonkar, Department of Agriculture Botany, College of Agriculture, Vasant Rao Naik Marathwada Krishi Vidyapeeth, Parbhani (M.S.) India