Estimation of heterosis for fibre quality with yield contributing characters in desi cotton (*Gossypium arboreum* L.)

Sham Chavan, H V Kalpande, D B Ravada, D B Deosarkar, J D Deshmukh and V S Patil
Vasantrao Naik Marathwada Agricultural University, India

Six lines were crossed with 4 testers to obtain 24 hybrids in Line x Testers design for evaluation of heterosis analysis. The crosses and parents with two checks were evaluated in a randomized block design with three replications during Kharif, 2013. Data were recorded on 18 character viz., days to 50 per cent flowering, days to 50 per cent boll bursting, number of sympodia plant-1, number of bolls plant-1, boll weight (g), number of seeds boll-1, plant height (cm), days to maturity, lint index, ginning outturn, seed index (g), 2.5 per cent span length (mm), fibre fineness/micronaire value (µg inch⁻¹), fibre strength (g tex⁻¹), uniformity ratio, short fibre index, seed cotton yield plant⁻¹ (g) and harvest index. Analysis of variance for means revealed significant differences for all the eighteen characters studied. Line x tester interaction mean square was significant for all the characters except number of sympodia plant-1, harvest index and uniformity ratio which indicated sufficient genetic diversity among them. The magnitude of heterosis and heterobeltosis for all the characters in the present study was highly appreciable. Among all the characters, the magnitude of mid parent and better parent heterosis was highest for Short fibre index (%) and standard heterosis for number of sympodia plant-1 to the extent of 90.14 and 71.88 per cent respectively, in the crosses PA 720 x PA 528 and PA 760 x PA 255.

anilgpb2011@gmail.com