RESEARCH PAPER

Heterosis studies over different environments in sorghum [*Sorghum bicolor* (L.) Moench]

■ B.H. KALE AND R.T. DESAI[1]

AUTHORS' INFO
Associated Co-author :
[1]Department of Genetics and Plant Breeding, N.M. College of Agriculture, Navsari Agricultural University, NAVSARI (GUJARAT) INDIA

Author for correspondence:
B.H. KALE
Department of Genetics and Plant Breeding, N.M. College of Agriculture, Navsari Agricultural University, NAVSARI (GUJARAT) INDIA
Email: bhushan.kale@nau.in

ABSTRACT : An experiment was conducted to estimate the heterosis in F_1 hybrids of sorghum with respect to grain yield and its components using 54 hybrids developed through line x tester mating design involving three females [Cytoplasmic-Genetic Male Sterile (CGMS) Lines] and 18 males (testers) and in three diverse environments. Result of analysis of variance for means revealed significant differences for all the twelve characters. The high standard heterosis was obtained for grain yield per plant and panicle weight; medium level of heterosis was found for plant height, leaves per plant, primaries per panicle, dry stover yield and harvest index and low for days to 50 per cent flowering, days to maturity, panicle length, 1000-grain weight and protein content. The highest positive heterobeltiosis and standard heterosis for grain yield per plant was 213.40 and 96.42 per cent, respectively.

KEY WORDS : Heterosis, Line x tester, Sorghum, *Sorghum bicolor*