



Combining ability analysis for drought tolerance and grain yield in *Rabi* sorghum

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Abstract : Combining ability analysis to study drought tolerance in *Rabi* sorghum using the line x tester design was conducted using five lines and 12 testers to generate total 60 hybrids. The estimates of gca effects revealed that among the five line, the line MS 104A showed positive and significant gca effect for grain yield per plant along with eight drought tolerance traits. Among the testers, M 35-1 was the best tester with significant gca effects for grain yield along with seven drought tolerance traits. Other promising testers showing significant gca effects for grain yield and some of the other drought tolerance parameters were SPV-504, CSV-216 R, Ringni, Parbhani Moti and AKSV-13 R. Among the hybrids, the crosses showing high mean performance for grain yield per plant and desirable significant sca effects for grain yield per plant along with some of the drought tolerance traits may be considered for further breeding programme.

Key Words : Combining ability analysis, GCA, Line x tester, SCA, Sorghum

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