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Specific combining ability effects for grain yield and its components in *rabi* sorghum

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Three male sterile lines were crossed with eighteen testers in line x tester design and produced 54 hybrids. The study was undertaken to estimate the estimates of specific combining ability effects in *rabi* sorghum hybrids which in turn helped in identification of the potential cross combinations for yield and its components in *rabi* sorghum. In the present investigation sixteen cross combinations exhibited positive sca effects for grain yield per plant along with some of the component characters. The highest sca effects for grain yield per plant was noted in the cross AKRMS-68-1A x AKSV-219R (34.81**). This cross also showed significant sca effects for six other component characters like number of primaries per panicle, panicle length, panicle breath, number of grains per panicle thousand grain weight and fodder yield per plant. Another cross, AKRMS-80-1A x Rb-369-1 exhibited significant sca effects for yield per plant (21.45**) and two component characters viz., number of grains per panicle and thousand grain weight. Third cross AKRMS-66-2A x Rb local 3 showed the significant sca effects for grain yield per plant (19.93**) along with four other component characters i.e. panicle length, panicle breadth, number of grains per panicle and thousand grain weights. Out of the total sixteen crosses showing positive significant sca effects for grain yield per plant, fourteen cross combinations exhibited positive significant sca effects along with positive significant standard heterosis for grain yield per plant. So these fourteen cross combinations need to exploited in future programme taking in to consideration the positive significant sca effects along with the positive significant standard heterosis for grain yield per plant in *rabi* sorghum.

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