Heterosis and Combining Ability Studies for Grain Yield and its Component traits in Maize (Zea Mays L.)

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ABSTRACT

Combining ability and heterosis for grain yield and its component traits were studied in maize through line x tester mating design using sixty three lines and two testers along with check DHM 117. The studies on combining ability in maize provide information to identity potential parents of hybrids and single cross hybrids. The results revealed that the existence of non-additive gene action for all the characters studied. The lines RSK-5, RSK-6, RSK-16 and RSK-47 and the tester BML-7 had recorded significant *gca* for yield and most of the yield component traits studied. The hybrid, RSK-105 x BML-6 recorded significant values for earliness while considering days to 50 percent tasselling and days to 50 percent silking. Three superior hybrids *viz*., RSK 5 x BML-7, RSK-109 x BML-6 and RSK-19 x BML-7 were identified for higher grain yield based on *per se* performance, *sca* effects and standard heterosis and will be proposed for multilocation testing across locations under AICRP.

Key words : Combining ability, Heterosis, Linex tester analysis, Maize.