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Heterosis and combining ability studies for sugar content in selected sweet corn hybrids and their parental lines

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The present investigation was undertaken in sweet corn to carry out the combining ability analysis for sugar content in the kernel. Eight divergent parents were selected and crossed in diallel fashion (Griffing's Method-II, Model-I) excluding reciprocals during Kharif, 2010. The resulting 28 crosses along with parents and standard checks Sugar 75 and Madhuri were evaluated in Randomized Block Design replicated thrice, during Rabi, 2010-11 at Agricultural Research Institute, Rajendranagar, Hyderabad. The combining ability analysis revealed importance of both additive and non-additive gene actions in governing this particular trait. The parental lines 6072-3 and 6069 were good general combiners for sugar content and the hybrid combinations 6072-3 x 6100-2, 6104 x 6082 and 6127 x 6100 were considered as good specific combiners for sugar content. The hybrid combinations 6072-3 x 6069, 6072-3 x 6100-2 and 6069 x 6122-1 performed well over standard checks Madhuri and Sugar 75 for sugar content in kernel.

Biography

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