

Study of Heterosis in Aromatic Rice (*Oryza Sativa* L.) for Quality Characters

Rajendar Reddy M, Surendar Raju Ch, Narender Reddy S, Sravani D

Department of Genetics and Plant Breeding, College of Agriculture, Rajendranagar, Hyderabad-

30

ABSTRACT

A field experiment was conducted during *kharif*, 2010 using 7 parents and 7 F₁s to study the heterosis for 6 quality characters i.e. milling recovery, hulling recovery, head rice recovery, kernel length, kernel length after cooking and volume expansion ratio. Significant positive heterosis and heterobeltiosis was observed for kernel length after cooking in the cross combination PUSA1121× MTU1010, volume expansion ratio in the cross combinations PUSA1121×SYE632002, PUSA1121×MTU1081 and RNR2354×MTU1081 and head rice recovery in the cross PUSA1121×MTU1081. Significant negative heterosis was recorded for milling recovery, hulling recovery and kernel length. Heterosis in negative direction for kernel length indicated reduction in kernel length of crosses, which is useful for the selecting short grain type aromatic genotypes. Based on the results, the crosses, PUSA1121×MTU1081 for head rice recovery, PUSA1121×MTU1010 for kernel length after cooking, RNR 2354 × MTU 1081, PUSA1121×SYE63002 and PUSA1121×MTU1081 for volume expansion ratio and PUSA 1121× MTU 1010 and RNR2354 × MTU1010 for kernel length were identified as better crosses for further advancement to develop pure lines with high quality.

Key words : Aromatic rice, Quality characters, Heterosis, Heterobeltiosis.