

COMBINING ABILITY FOR YIELD AND COMPONENT CHARACTERS IN RICE (*Oryza sativa* L.)

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ABSTRACT

Combining ability for ten quantitative and physical characters in rice was studied through Line × Tester analysis involving eight lines and four testers. The mean squares of variance for Line × Tester interaction was significant for all the characters except grain length and grain breadth. The combining ability analysis revealed non-additive gene action governing the characters viz., days to first flower, plant height, panicles plant⁻¹, grain yield plant⁻¹ and grain L/B ratio. GCA variance predominance over SCA was recorded for days to first flower, plant height, grains panicle⁻¹ and grain yield plant⁻¹. Among the parents, the lines L₃ (AD 95137), L₄ (AD 95157) and L₈ (MDU 5) and testers T₂ (ADT 36), T₃ (ADT 43) and T₄ (IR 50) were good combiners for grain yield and most of the yield component characters studied. Hence, crosses involving these parents were identified as suitable for recombination breeding.

Keywords: Line X tester, General combining ability, Specific combining ability

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