

Studies on Heterosis for Grain Yield, Yield Components and Quality Characters in Rice (*Oryza Sativa* L.)

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ABSTRACT

The manifestation of hybrid vigour in 50 rice hybrids for grain yield, yield components and quality parameters were investigated during *Rabi* 2017-18. The results revealed hybrids to be high yielding, relatively early, dwarf with greater panicle length, more number of grains panicle⁻¹ and high head rice recovery percentage compared to the parents and checks. Existence of significant levels of relative heterosis, heterobeltiosis and commercial heterosis for all the traits, except milling percentage in the material studied was also noticed from the significant mean squares recorded for parents vs. hybrids components of variation in the ANOVA. Further, the expression of heterosis was maximum over mid-parent for grain yield plant⁻¹ and number grains panicle⁻¹ (>90%). Grain yield plant⁻¹ and number of grains panicle⁻¹ had also recorded high levels of heterosis over better parent (>70%). Standard heterosis more than 50 per cent was also recorded for grain yield plant⁻¹ and number of grains panicle⁻¹. Among the hybrids studied, APMS 8A x MTU 2247-55-2, APMS 8A x MTU 2331-216-1-1 and APMS 8A x MTU 2337-216-1-1 recorded significant and positive standard heterosis more than 50 per cent over both the checks studied for grain yield plant⁻¹ and hence, are identified as potential hybrids for commercial exploitation. The hybrid, APMS 6A x NLR 5815-10-1-1-1 was also identified as high yielding and quality hybrid in the present study.

Key words: *Rice, heterosis, grain yield, yield components, quality parameters.*