Evaluation of Experimental Hybrids for Yield and Yield Component Traits in Rice *(Oryza sativa* L.*)*

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ABSTRACT

The study was carried out at Regional Agricultural Research Station, Maruteru with 30 experimental hybrids developed by crossing three male sterile lines (APMS 15 A, APMS 17 A and APMS 18 A) with 10 testers (RTCNP 2, RTCNP 23, RTCNP 33, RTCNP 37, RTCNP 38, RTCNP 66, RTCNP 73, RTCNP 90, RTCNP 120 and RTCNP 150) in Line × Tester mating design during *Kharif*, 2022. The resultant 30 hybrids were evaluated in Randomized Block Design with two replications along with the parents and hybrid check, HRI-174 during *Rabi*, 2022-23. Flowering behaviour studies of the CMS lines revealed maximum panicle exertion per cent for AMPS 18A (80.27%) and highest duration of floret opening for APMS 17A (153 min). Analysis of variance for yield and yield components revealed significant differences among the genotypes. In general, the hybrids had recorded higher grain yield per plant, compared to the lines. The hybrids were also observed to be early and relatively tall with more number of ear bearing tillers per plant and greater panicle length compared to the parents. The hybrids, APMS 15A × RTCNP 2, APMS 15A × RTCNP 150, APMS 17A × RTCNP 2 and APMS 17A × RTCNP 38 had recorded significantly higher grain yield per plant, compared to the hybrid check, HRI-174 and were identified as potential hybrids for commercial exploitation.

Keywords: *Rice, Hybrids, Grain Yield and Yield Components*