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Performance of improved four test rice entries of short duration (2 ½ months) in the Eastern region of Sri Lanka

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An experiment was conducted to evaluate the performance of four test entries (new rice varieties) of short duration at the Eastern University farm in the Eastern Province, Sri Lanka during the Maha season of 2002/2003 and 2003/2004.

The new entries *Early*, S_{10}, S_7 and S_{12} were compared with Check varieties, namely Bg 300, Bg 750 and Bg 304. They planted in a Randomized Complete Block Design with four replicates. All agronomic practices were carried out in accordance with the recommendation of the Department of agriculture.

Bg 750 was found tallest variety. Test entries Bg300 and Bg750 had taken more days to reach 50% heading and 85% maturity than other varieties. No lodging was observed in any of the varieties at dough stage during the Maha season 2002/2003. But Bg 750 had the highest percentage of plants lodged at harvest in the Maha 2003/2004.

Among the yield components, highest number of spikelet /panicle at harvest was observed in S_7 in both seasons, which did not significantly different from entry S_{12} and check variety Bg 300. Highest number of panicles/m^2 was observed in *Early* in season 2002/03. However it was similar to *Early* and S_{12} during the season 2003/2004. Highest percentage of filled spikelet was observed in S_7 and *Early*, which was not significantly different from check variety Bg 300. Higher 1000 grain weight was recorded in S_{12} in both season.

Highest grain yield was obtained from test entry S_{12}(16.85 mt/ha) which differed significantly from the check variety Bg 300 and Bg 750 in the season 2002/2003. In 2003/2004 also highest yield was obtained from entry S_{12}(15.34 mt/ha), which was 15% higher than the check variety Bg 300, 22.5% higher than Bg 304 and 22.5% higher than the Bg 750. The highest yield in S_{12} was attributed to high number of spikelet/panicle, number of panicle /m^2 and 1000 grain weight.