

Optimizing plant spacing for modern rice varieties

ABSTRACT

The experiment was performed under sub-tropical condition (24.75 N and 90.50 E) during the period of December 2011 to May 2012 to evaluate the effect of spacing on assimilate availability, yield attributes and yield of modern rice varieties. Four modern rice cultivars BINAdhan5, BINAdhan6, Iratom and BRRIdhan29 were sown with three spacing viz., 20 cm×20 cm, 20 cm×15 cm and 20 cm×10 cm. The experiment was laid out in a split-plot design with four replicates. Wider spacing of 20 cm×20 cm had shown superior performance in respect of all morpho-physiological and yield components, which resulted in the highest grain yield (8.53 t ha⁻¹). In contrast, closer spacing of 20 cm×10 cm showed inferior performance in respect of above studied parameters and produced the lowest grain yield (6.47 t ha⁻¹). Among the cultivars, BRRdhan29 and BINAdhan6 performed the best regarding yield attributes and produced the highest grain yields (7.53 and 7.72 t ha⁻¹, respectively). The spacing of 20 cm×20 cm may be recommended for cultivation of high yielding modern rice instead of recommended spacing of 20 cm×15 cm after few more trials in farmers' field.

Keyword: Growth; Rice; Spacing; Variety; Yield