

**PRODUCTIVITY AND COMPATIBILITY OF WHEAT (*TRITICUM AESTIVUM* L.)
AND INDIAN MUSTARD (*BRASSICA JUNCEA* L.) INTERCROPPING AS
INFLUENCED BY FARMYARD MANURE AND FERTILIZER LEVELS**

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Abstract: A field experiment was conducted during winter (*rabi*) seasons of 2010-11 and 2011-12 at Institute of Agricultural Sciences, Banaras Hindu University, Varanasi to evaluate the productivity, compatibility and economics of wheat and Indian mustard intercropping as influenced by row proportions, farmyard manure (FYM) and fertilizer levels under irrigated conditions. Among row proportions, 8:1 row proportion of wheat and Indian mustard intercropping recorded significantly the highest yield attributing characters *viz.*, grain spike⁻¹, spikelet length and yield in case of wheat, and number of siliqua plant⁻¹ and number of seed siliqua⁻¹ in case of Indian mustard. The seed yield and stover yield of mustard were higher in 6:2 row proportion which was remained at par with 8:2 and 10:2 row proportions. There was also recorded significantly higher land equivalent ratio, aggressivity index with 8:1 row proportion of wheat + Indian mustard intercropping over 10:2, 8:2 and 6:2 row proportions. Conversely, the highest net return as well as B: C ratio was recorded in 10:2 row proportion which was at par with 8:1 row proportion. To achieve higher yield advantage and efficient resource utilization in wheat + mustard intercropping, the application of 100% RDF along with 30 kg N through FYM observed significantly higher yield attributes, yield, competitive indices and economics of wheat and Indian mustard, but it was remained at par with 100% RDF plus 15 kg N through FYM.

Keywords: Farmyard manure, Fertilizer level, Intercropping, Mustard, Row proportion, Wheat

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