

Effect of brown manuring on growth and yield of rice (*Oryza sativa* L.) in rice-wheat cropping system in east Champaran, Bihar

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ABSTRACT : An On Farm Trial (OFT) were conducted during the *kharif* session of 2011-12 and 2012-13 on ten farmers' fields as a replication under supervision of Krishi Vigyan Kendra, East Champarn, Bihar to assess the effect of green manuring and brown manuring on growth and yield of rice (*Oryza sativa* L.) in rice-wheat cropping system. Brown manuring + 2,4-D @ 0.50 a.i. kg/ha at 40 days after sowing recorded significantly higher values of growth, yield attributes (effective tillers/hill and 1,000-grain weight) and grain yield (41.60 and 42.27 q/ha) compared to the Green Manuring (38.60 and 39.94 q/ha) and Farmers' Practice (34.50 and 37.64 q/ha). The highest net return (Rs. 22114 and Rs. 21825/ha) and benefit: Cost ratios (1.80 and 1.76) were also recorded in the treatment Brown Manuring during both the years of experimentation.

Key Words : Brown manuring, effective tiller, green manuring, grain yield.