RESEARCH ARTICLE

EFFECT OF NITROGEN LEVELS AND WEED CONTROL METHODS ON GROWTH, YIELD AND ECONOMICS OF RICE (*ORYZA SATIVA* L.)

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Abstract: A field experiment was carried out during rainy seasons of 2015 at the Rajaula Agriculture Farm, MGCGVV, Satna (M.P.) to study the effect of N-levels and weed control methods on growth, yield and economics of rice. The application of 125 kg N/ha was found the best which produced maximum grain yield (22.58 q/ha) and net return (Rs.24889/ha) from transplanted rice var. PS-5. The weed control treatment W_6 (HW 20 & 40 DAS) proved the best which produced highest grain yield (25.44 q/ha) and net return (Rs.29470/ha) from rice. Among the treatment interactions, N_{125} with 2 HW performed the best by producing highest grain yield (27.78 q/ha) and net return (Rs.33018/ha) from transplanted rice var. PS-5. Butachlor 0.75 kg/ha + 2 HW stood the second best (rice grain yield 23.86 q/ha, income Rs.24963/ha). The best substitute of 2 HW with or without butachlor was butachlor + 2, 4-D 0.80 kg/ha or butachlor + bispyribac sodium (20 g/ha) which equally yielded 20.57 to 21.82 q/ha rice grain and gave net income from Rs.22531 to Rs.25334/ha.

Keywords: Nitrogen levels, Weed control methods, Growth, Yield, Economics, Rice

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