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Title: STUDIES ON EFFECT OF AGE AND NUMBER OF SEEDLING/HILL AND NUTRIENT LEVEL ON GROWTH AND YIELD OF HYBRID RICE PHB-71

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Abstract: Rice is the most important crop of India and it occupies 23.3 per cent of gross cropped area of the country. Rice contributes 43 per cent of total food grain production and 46 per cent of total cereal production. It continues to play vital role in the national food grain supply. At the current rate of population growth of India, feeding the nation will require the great challenge, especially rice production, as this increase has to be attained with shrinking land, existing water resources and other inputs. In this context the hybrid rice has to play a vital role. Therefore, rice production technology has to be reoriented to face the future challenges. Keeping above points in view an experiment was conducted with objective to study the effect of age, number of seedlings/hill and fertility level on growth, yield attributes, yield, nutrient uptake and economics of hybrid rice. The experiment was carried out in split plot design with age of seedlings (10, 20 and 30 days old) in main plot and number of seedlings/hill (one, two and three) and fertility level (125, 100, 75 and 50% recommended level of NPK) in sub-plots at agronomical research farm of Birsa Agricultural University, Ranchi during rainy season of 2005 and 2006. 10 days old seedling being at par with 20 days old seedling recorded maximum total tillers (255.56/m²), effective tillers (239.40/m²), dry matter accumulation (1573.86 g/m²), grain yield (66.28 q/ha) and straw yield (90.24 q/ha), NPK uptake (127.27, 24.51 and 152.95 kg/ha, respectively), gross return (Rs.36462/ha), net return (Rs. 18357/ha) and benefit : cost ratio (2.01). 125% recommended level of NPK being at par with 100% recommended level of NPK recorded maximum total tiller (255.56/m²), dry matter accumulation (1573.86 g/m²), onset of maximum tillering stage (66 days), panicle stage (87days), 50% flowering stage (107 days), milk stage (118 days), dough stage (124 days) and maturity (132 days), effective tillers (239.40/m²), panicle length (28.86 cm), panicle weight (5.00g), total grains (189.51 /panicle), filled grains (158.07/panicle) and 1000 grain weight (24.32 g), maximum grain yield (73.84 q/ha), straw yield (99.65 q/ha) and harvest index (42.55), NPK% in rice grain (1.274, 0.260 and 0.634%, respectively) and in straw (0.492, 0.099 and 1.389 %, respectively), NPK uptake (143.35, 29.07 and 185.63 kg/ha, respectively), gross return (Rs.40534/ha), net return (Rs. 20752/ha) and benefit : cost ratio (2.05). 10 days old seedlings with two seedlings/hill recorded maximum total tillers (260.42/m²), dry matter accumulation (1638.65 g/m²), effective tillers (240.52/m²), grain yield (69.17 q/ha) and straw yield (93.85 q/ha), NPK uptake by rice plant (132.98, 25.72 and 160.18 kg/ha, respectively), maximum gross return (Rs.38001/ha), net return (Rs. 19914/ha) and benefit : cost ratio (2.09).

Description: STUDIES ON EFFECT OF AGE AND NUMBER OF SEEDLING/HILL AND NUTRIENT LEVEL ON GROWTH AND YIELD OF HYBRID RICE PHB-71

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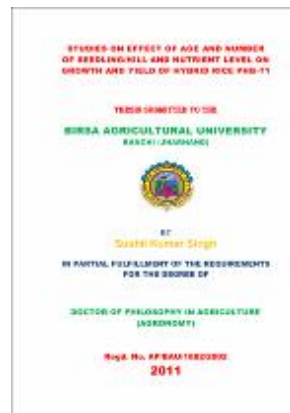
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