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Effects of different phosphorus levels and frequency of boron levels on growth and yield of greengram

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ABSTRACT : Pulse production is very low and become challenging problem against the requirement of increasing population of our country. Moreover, it has a numerous utilities and used primarily as a food crop because it is a major source of protein in cereal based diets for its high lysine content. Among the different phosphorus levels and frequency of boron levels under in treatment T_{11} *i.e.*, N_3(20:60:20NPK) + 0.2% foliar spray of borax at 35DAS (pre-flowering) recorded maximum plant height (53.60cm), number of leaves plant^{-1} (21.16), number of branches plant^{-1} (6.76), no. of nodules plant^{-1} (8.80), dry weight (24.82g), crop growth rate (0.53g m^{-2} day^{-1}), relative growth rate (0.04g g^{-1} day^{-1}), number of pods plant^{-1} (42.46), average number of grain pod^{-1} (13.40), pod length (10.80 cm), test weight (47.00g) , grain yield (1.62 t ha^{-1}), straw yield (2.85 t ha^{-1}), protein content (24.56%) and harvest index (36.15%). Whereas the lowest value (48.26 cm,18.93 plant^{-1},6.20 plant^{-1}, 5.53 plant $^{-1}$, 20.02 g, 0.39g m^{-2} day^{-1}, 0.03g g^{-1} day^{-1}, 30.40 plant^{-1}, 7.73 pod^{-1}, 8.13cm, 41.06g, 0.99 t ha^{-1}, 2.06 t ha^{-1}, 20.36 % and 32.58 %, respectively) in the treatment T_1 *i.e.*, N_1 (20:40:20 NPK). The highest gross return (Rs.78795.00 ha^{-1}), net return (Rs. 57222.00 ha^{-1}) and benefit cost ratio (2.65) were registered in treatment T_{11} *i.e.*, N_3 (20:60:20NPK)+ 0.2% foliar spray of borax at 35DAS (pre-flowering). Whereas the lowest value (Rs.48925.50 ha^{-1}), (Rs.30075.50 ha^{-1}) and (1.59), respectively in the treatment T_1 *i.e.* N_1 (20:40:20 NPK).

KEY WORDS : NPK, Greengram, FsB, DAS, RGR

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