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RESEARCH PAPER

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Effect of different doses of phosphorus and row spacing on the yield and quality of fenugreek (*Trigonella foenum-graecum* L.) seed

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ABSTRACT: Fenugreek, despite being widely cultivated in the northern states of India, its productivity (about 1,000 kg/ha) is quite low compared to the world average of about 1350 kg/ha. Among the various constraints in cultivation of this crop, non-availability of adequate quantity of good quality seed is considered to be a major factor. The present study, therefore, was conducted at Amar Singh PG College, Lakhaoti, Bulandshahr, Uttar Pradesh, during 2012-13 with an objective to standardize the optimum dose of phosphorus and ideal row spacing for obtaining maximum yield of good quality seed of fenugreek. Four different phosphorus (as single super phosphate) doses ($P_0 = 0$, $P_2 = 30$, $P_6 = 60$ and $P_9 = 90 \text{ kg } P_2 O_5 / \text{ha}$) and three different row spacing ($S_2 = 20$, $S_3 = 30$ and $S_4 = 40$ cm) were applied, thereby making 12 treatment combinations. These 12 treatments were tested following RBDx3 and taking 'Pusa Early Bunching' as the experimental material. The results obtained from the experiment revealed that there was significant effect of different levels of phosphorus and row spacing on all the yield and contributing characters under study except, number of seeds per pod. The tallest plants (49.8 cm), highest number of branches per plant (6.7) and number of pods per plant (50.5), maximum thousand seed weight (18 g) and seed yield (1575 kg/ha) were observed with the application of 60 kg P₂O₅/ha. Application of 60 kg P₂O₅/ha coupled with a row spacing of 30 cm was found to be most suitable for obtaining highest yield of good quality fenugreek seed in North Indian conditions.

KEY WORDS: Phosphorus doses, Row spacing, Fenugreek, Seed

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