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Growth and seed yield of fenugreek (*Trigonella foenum-graecum* L.) as influenced by plant growth regulators and bio-fertilizers

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The experiment comprising four levels of bio-fertilizers (no inoculation, *Rhizobium*, PSB and *Rhizobium*+PSB) and four levels of plant growth regulators (GA3 50 and 100 ppm and NAA 10 and 20 ppm) and water were sprayed thrice during the crop growth period. These treatments were evaluated under factorial random block design with three replications. The highest plant height (89.91cm) and dry matter accumulation per plant at all the growth stages as well as number of branches per plant (6.68) and yield attributes, seed yield (17.43q/ha), net return (Rs,22214.27/ha) and BCR(2.71) in fenugreek was obtained highest with dual inoculation of seed with *Rhizobium*+PSB. The growth parameters, yield components and seed yield showed positive response to foliar application of plant growth regulators. Foliar application of plant growth regulators significantly influenced the plant growth parameters, yield attributes, yield, net returns and BCR. Foliar application of 20 ppm NAA exhibited highest dry matter accumulation/plant, yield attributes, seed yield (17.99 q/ha), net returns (Rs.27752.44/ha) and BCR (4.06) followed by 20 ppm NAA. Thus, seed inoculation with *Rhizobium*+PSB along with foliar spray of 20 ppm NAA is better for realizing higher yield, net returns and profit in fenugreek.

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