



Effect of nitrogen and phosphorus levels on growth, flowering and pod formation of fenugreek

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ABSTRACT

An experiment was carried out at the main Garden, University Department of Horticulture, Dr. PDKV, Akola (M.S.) with 25 treatments. The treatments comprised of five levels of nitrogen *i.e.* 0, 30, 60, 90 and 120 kg ha⁻¹ and five levels of phosphorus *i.e.* 0, 15, 30, 45 and 60 kg ha⁻¹. The experiment was laid out in Factorial Randomized Block Design with three replications. The result of present investigation indicated that, the vegetative growth in terms of plant height, number of leaves and number of branches was increased due to an application of 120 kg nitrogen and 60 kg phosphorus per ha. The maturity parameters like number of days required for first flower initiation, days required for 50% flowering, first pod formation, 50% pod formation and maturity of seed crop were found to be delayed with an increased level of 120 kg nitrogen and 60 kg phosphorus per ha.

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Fenugreek (*Trigonella foenum-gracum* L.) is an important leafy vegetable specially known as methi. It is an annual herb of leguminous family. There are two species of the genus *Trigonella*, *viz.*, *Trigonella foenum-gracum*, the common methi and *T. corniculata*, the kasuri methi. Fenugreek has well recognized medicinal value particularly against the digestive disorders and useful for diabetic patients. Any attempt to increase return from fenugreek will have a decisive influence over the farm economy. One of the best method for maximization of yield is through balance utilization of fertilizers. Optimum supply of nutrients is of paramount importance not only for the higher yield but also for an improvement of the quality of fenugreek. Therefore, to find out the effect of nitrogen and phosphorus levels to get the better yield in fenugreek, the present investigation entitled, "Effect of nitrogen and phosphorus levels on growth, flowering and pod formation of fenugreek" was carried out for obtaining the maximum yield under Akola conditions in winter season of the year 2004 at the Main Garden, University Department of Horticulture, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola (M.S.)

MATERIALS AND METHODS

The present study entitled "Effect of nitrogen and phosphorus levels on growth, flowering and pod formation of fenugreek" was carried out at the Main Garden, University Department of Horticulture, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola during the year 2004-2005 to record the growth and flowering parameters of fenugreek.

The soil of experimental plot was rich in potash with good water holding capacity, fairly good drainage and reasonably suitable for cultivation of fenugreek. The experimental plot was laid out in three replications in factorial randomized block design with 25 treatments (Factor 'A' Nitrogen 0, 30, 60, 90, 120 kg per ha and Factor 'B' Phosphorus 0, 15, 30, 45, 60 kg per ha). Nitrogen and phosphorus were applied through urea and SSP, respectively. While applying the fertilizers, half dose of nitrogen and full dose of phosphorus were applied at the time of seed sowing and remaining half dose of nitrogen was applied 45 days after sowing. These fertilizers were applied after calculating the plot-wise requirement of nitrogen and phosphorus. At the time of field preparation FYM @ 10 tones per hectare was applied to the experimental plot and it was mixed thoroughly in the soil. The experimental area was laid out in 75 flat