



Effect of nitrogen and phosphorus levels on seed yield and quality of fenugreek

Y.L. JAGDALE AND P.D. DALVE

ABSTRACT

An experiment entitled, effect of nitrogen and phosphorus levels on seed yield and quality of fenugreek, was carried out at the main Garden, University Department of Horticulture, Dr. PDKV, Akola (M.S.) with 25 treatments. The treatments were 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 seed yield in terms of pods per plant, seeds per pod, weight of seeds per pod, seed yield per plant, seed yield per plot and seed yield per ha was found to be increased with an increasing level up to 90 kg nitrogen and 45 kg phosphorus per ha. The graded seed yield determining the seed quality and test weight have recorded the higher values with an application of 90 kg nitrogen and 60 kg phosphorus per ha.

See end of the article for authors' affiliations

Correspondence to:

Y.L. JAGDALE

College of Horticulture,
Phaltan, SATARA (M.S.)
INDIA

Jagdale, Y.L. and Dalve, P.D. (2011). Effect of nitrogen and phosphorus levels on seed yield and quality of fenugreek, *Asian J. Hort.*, 6 (1) : 81-84.

Key words : Nitrogen, Phosphorus, Seed yield, Fenugreek

Fenugreek (*Trigonella foenum-gracum* L.) is an important seed spice 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 is third largest seed spice in India after coriander and cumin. 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 seed 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 seed. Therefore, to find out the effect of nitrogen and phosphorus levels to get the better yield in fenugreek, the present investigation was carried out for obtaining the maximum yield under Akola conditions in winter season of the year 2004-05.

MATERIALS AND METHODS

The present study entitled effect of nitrogen and phosphorus levels on seed yield and quality 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 seed yield and quality 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 beds of 2 m x 1 m size each.

RESULTS AND DISCUSSION

The data presented in Table 1 and 2 indicated that the nitrogen and phosphorus levels had influenced all the parameters like pods per plant, seeds per pod, weight of seeds per pod, seed yield per plant, seed yield per plot, seed yield per ha, graded seed yield and test weight. The level of 90 kg N ha⁻¹ (N₃) had produced significantly maximum number of pods per plant (32.24) and seeds