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Research Paper

Effect of nitrogen levels and varieties on seed yield of fenugreek

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ABSTRACT

The character contributing for seed yield *viz.*, number of pods per plant, pod length, number of seeds per pod, seed yield per plot and seed yield per hectare were found to be increased with an increasing level of nitrogen. Maximum seed yield and yield contributing characters were obtained with an application of 90 kg nitrogen per hectare. All these characters were found superior in the variety Pusa Early Bunching.

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Key words : Fenugreek, Nitrogen, Yield

Fenugreek (*Trigonella foenum- graecum* Linn.) is the third largest seed spice in India after coriander and cumin. It is one of the odoriferous constituents of curry powder. The seeds are carminative, tonic, and aphrodisiac. Fenugreek seeds substantially contain 'Diosgenin' which is used as a starting material in the synthesis of sex harmones. In order to get higher production of seed, nitrogen and varieties play a important role. Maintaince of nitrogen level in the soil is necessary for improving the seed yield. In addition to this, nitrogen is one of the major element required in adequate quantity for growth and reproductivity of plants. Therefore, keeping in view the potentialities of nutrition, the experiment was carried out with the objective to study the effect of nitrogen levels and varieties on seed yield of fenugreek.

MATERIALS AND METHODS

The present investigation on Effect of nitrogen levels and varieties on seed yield of fenugreek was carried out at the Main Garden, University Department of Horticulure, Dr.Panjabrao Deshmukh Krishi Vidyapeeth, Akola (M.S.) during *Rabi* season of the year 2005-2006. The experiment was laid out in the Split Plot Design with three replications and sixteen treatments combinations comprising of four levels of nitrogen (0, 30, 60, and 90 kg per ha) and varieties Rmt-1, Rmt-143, Rmt-303, Pusa Early Bunching. The selected varieties were planted at a spacing of row to row 30cm.

Main factor 'A' (Nitrogen levels):

N_0 - 0 kg N per ha.
N_1 - 30 kg N per ha.
N_2 - 60 kg N per ha.
N_3 - 90 kg N per ha.

Sub factor 'B' (Varieties):

V_1 - Rmt-1
V_2 - Rmt-143
V_3 - Rmt-303
V_4 - Pusa Early Bunching

All the recommended agronomic packages of practices were followed to raise healthy crop. Data were recorded on ten competitive plants selected randomly in each replication on various quantitative characters. The data were analyzed statistically as per the method prescribed and suggested by Panse and Sukhatme (1967)

RESULTS AND DISCUSSION

Different levels of nitrogen and varieties influenced the yield contributing characters are given in Table 1. Higher level of nitrogen N_3 (90 kg nitrogen per ha) produced maximum number of pods per plant (43.31) and it was found significantly minimum number of pods per plant (26.25) in the control treatment (N_0). The increased number of pods per plant with the added supply of nitrogen was due to better vegetative growth and enhanced photosynthesis. As, a result the better fruiting was