

Effect of nitrogen levels and varieties on vegetative growth and maturity parameters of fenugreek

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ABSTRACT

In the present investigation, the treatment comprised of the four levels of nitrogen, 0, 30, 60 and 90 kg per ha and four varieties viz, Rmt-1, Rmt-143, Rmt-303 and Pusa Early Bunching. The results indicated that the vegetative growth in terms of plant height and number of branches were increased with the application of 90 kg nitrogen per ha in the variety Pusa Early Bunching. The maturity parameters, like days required for first flowering, days required for 50 per cent flowering, days required for 50 per cent pod formation, days required for maturity of seed crop and days required for harvesting of seed crop were found to be delayed with increasing levels of nitrogen. These maturity parameters were found to be earlier in the variety Pusa Early Bunching.

Key words : Fenugreek, Nitrogen, Growth, Maturity

INTRODUCTION

Fenugreek (*Trigonella foenum-graecum* Linn.) is the third largest seed spice in India after coriander and cumin, specially known as 'Common Methi'. Fenugreek belongs to the family leguminosae and subfamily papilionaceae. India is the major producer and exporter of this seed spice. The dried fenugreek seeds, the leaves, fresh and dried and the tender shoots are all consumed and is valued as food, flavouring agent and medicines. In order to get higher production of good quality vegetable and seed spice, it is required to produce quality seed. The cultural practices viz., different doses of fertilizers and varieties play an important role in the growth and maturity parameters. In manurial trials conducted throughout India the nitrogen has showed to increase the crop yield invariably due to the better photosynthetic activity. Nitrogen is the major element required in adequate quantity for the growth and reproductivity of the plant.

Thus, keeping in view the potentialities of nitrogen and varieties for higher seed yield in fenugreek, the experiment carried out with the objective, to study the effect of nitrogen levels and varieties on vegetative growth and maturity parameters of fenugreek.

MATERIALS AND METHODS

The present investigation was carried on effect of nitrogen levels and varieties on vegetative growth and maturity parameters of fenugreek, at the Main Garden, University Department of Horticulture, 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)

N₀ - 0 kg N per ha.

N₁ - 30 kg N per ha.

N₂ - 60 kg N per ha.

N₃ - 90 kg N per ha.

Sub factor 'B' (Varieties)

V₁ - Rmt-1

V₂ - Rmt-143

V₃ - Rmt-303

V₄ - 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

The results from Table 1 indicate that the maximum growth (88.72 cm) in terms of plant height and number of branches per plant (11.61) were increased with the increasing levels of nitrogen and found to be maximum with an application 90 kg per ha (N₃). It is due to the property of nitrogen to enhance the vegetative growth

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