



Research Paper

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Effect of different biofertilizers on growth, yield and quality of fenugreek

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Abstract : An experiment entitled effect of different biofertilizers on growth, yield and quality of fenugreek was carried out during year 2010-11 at the field of Horticulture farm, Department of Horticulture, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola. The experiment was laid out in Randomized Block Design with three replications. There were 11 treatment tested to study the effect of biofertilizers on vegetative growth, yield, quality parameters in fenugreek variety Rmt-303. The fenugreek seeds were sown in row (line sowing) at 20cm apart on 15th November 2010. Fenugreek seed were treated with *Rhizobium* and PSB, which were also applied in the soil before sowing. The maximum vegetative growths in terms of plant height, number of branches, leaf area and the characters contributing for yield viz., fresh weight of plants per plot (14.06 g) and green leaves yield per hectare (74.57 q) were found to be significantly maximum with seed treatment and soil application of *Rhizobium* plus PSB, also the quality parameters viz. chlorophyll content, leaf moisture content, leaf protein content were found to be significantly maximum with seed treatment and soil application of *Rhizobium* plus PSB.

Key words : Fenugreek, *Rhizobium* inoculation, Phosphate solubilizing bacteria

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Fenugreek (*Trigonella foenum-graecum* L.) is commonly known as 'Methi'. It is grown in our country mainly as leafy vegetable; its seed are also used as condiment and medicinal purposes. Fenugreek is a rich source of vitamin 'A' (6450IU) and minerals and protein. It belongs to the family *leguminosae*. Fenugreek is cultivated throughout India and in other parts of the world for leafy vegetable, condiment and medicinal purposes and for fodder also. Rajasthan, Madhya Pradesh, Gujarat, Uttar Pradesh, Maharashtra and Punjab are the leading States in fenugreek production in India.

It is native to the South-Eastern Europe and West Asia. Fenugreek prefers a cool moist climatic condition that helps in the developing quality. Fresh tender leaves, pods and stems are consumed as curried vegetable alone or in combination with potato. Seeds are mainly used as spice for the preparation of different tasty dishes. It has also high medicinal and industrial importance. It prevents constipation, removes indigestion, stimulates spleen and liver, and is appetizing and diuretic.

Use of biofertilizers i.e. *Rhizobium* and PSB affects on the growth, yield and quality of fenugreek crops. According to recent field tests, the growth parameters, yield per hectare and quality parameters can be increased by the seed treatment and soil application of *Rhizobium* plus PSB. Hence it is profitable to use of biofertilizers for obtaining growth, higher yield with better quality.

RESEARCH METHODS

An experiment entitled effect of different biofertilizers on growth, yield and quality of fenugreek was carried out during year 2010-11 at the field of Horticulture farm, Department of Horticulture, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola. The experiment was laid out in Randomized Block Design with three replications. There were 11 treatments tested to study the effect of biofertilizers on vegetative growth, yield, quality parameters in fenugreek variety Rmt-303. The fenugreek seeds were sown in row (line sowing) at 20cm apart on 15th November 2010. Fenugreek seed are treated with