



Integrated nutrient management in Bhendi

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ABSTRACT

A field experiment was conducted to study the integrated nutrient management in bhendi in randomized block design with ten treatments replicated thrice at Pune. Data revealed that significantly maximum height of the plant (215.46 cm) and number of branches (3.79) were recorded at 100 DAS. The treatment T₅ produced significantly maximum fruit yield per plant (0.124 kg) and fruit yield per ha (26.99 tones).

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Bhendi [*Abelmoschus esculentus* (L.) Moench] is most popular vegetables cultivated in India which belongs to family Malvaceae. It is originated from tropical or subtropical and commonly called as Bhendi or Lady's finger. It is rich source of vitamin A, B, and C, protein and minerals. It is used in curries, soups, stewed with meat, canned and dried.

After 'Green Revolution' it becomes an evident that the inorganic farming has many unwanted side effects, both on natural sources (soil, water and diversity) and human health. Also, high cost of chemical fertilizers coupled with relatively greater losses from fertilizer nitrogen make it necessary to look for cheaper and more sustainable ways to improve the productivity. It includes the use of organic manures and crop residues in conjunction with chemical fertilizers, rotation of cereals with legumes and use of biofertilizers.

The application of organic, inorganic and biofertilizers are essential to maintain and improve soil productivity, to increase production of okra as well as prevent soil deterioration. The inorganic or organic fertilizers alone for increasing production are not sustainable on long term basis. It is therefore, planned to study the integrated nutrient management in bhendi.

MATERIALS AND METHODS

A field experiment was conducted at Modibaug Garden, Department of Horticulture, College of Agriculture, Pune during the period from May 2006 to September 2006. The soil of experimental plot was medium to deep black clayey in nature having good texture and drainage along with good water holding capacity. Well decomposed farm yard manure was used for all experiential area as basal dose except control. Recommended dose of fertilizer was applied through inorganic fertilizers viz., urea, single super phosphate and muriate of potash. Panchagavya @ 2% was sprayed for plant protection. The bio-fertilizers viz., *Azotobacter* and phosphate solubilizing bacteria were used @ 25 g mixture / kg seed as seed treatment and 7.5 kg /ha for soil application. Gross plot size of 2.4 x 1.8 m² and net plot size of 1.8 x 1.5 m² were prepared and furrows of 60 cm width and 30 cm depth were opened.

After land preparation and layout, common dose of FYM was applied as basal dose for all experimental area except control. The remaining dose of nitrogen was applied 30 DAS at the time of intercultivation. Panchagavya was sprayed after one month of sowing at 15 days interval upto September 06. Soil application and seed treatment of biofertilizers was applied as per