



Interaction effect of organic and inorganic sources on yield and yield attributes of Bhindi

V. SANJIV KUMAR AND G. JAMES PITCHAI

ABSTRACT

Bhindi is one of the most important vegetable crops having rich nutritive value with respect to vitamin A, B, C, protein and minerals and it also has medicinal and industrial importance. For maintaining the soil fertility status and getting maximum yield and quality of bhindi fruits, the use of organics and chemical fertilizers in appropriate combination is essential. For the study, a field experiment was conducted in Agricultural College and Research Institute, Madurai to evaluate the response of bhindi (Arka anamika) with organic sources like goat manure and pig manure combined with inorganic fertilizers. There were ten treatment combinations replicated thrice in RBD in Maddukkur soil series (*Typic Haplustalf*). The results showed that the highest yield of 13 t ha⁻¹ was recorded in treatment that received 50 per cent goat manure with 50 per cent RDF and it was found to be superior to other treatments.

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INTRODUCTION

Continuous use of inorganic fertilizers in modern agriculture has exhausted the soil quality leading to the depletion of secondary and trace elements. This depletion must be replenished by the use of organics which is the cheap and safe method. Application of organic manures along with inorganic fertilizers helps to regenerate the degraded soils and ensure sustainability in crop production. Occurrence of plant nutrient deficiencies has necessitated the use of various organic manures and inorganic fertilizers for the sustenance of agriculture and now holds the key for profitable agriculture. It is an annual crop and generally propagated from seeds. It is a cheap and nutritious vegetable common in India. It is more remunerative than the leafy vegetables. In world okra covers an area of 7.9 lakh ha with production of 50 million tonnes and productivity of 6395 kg ha⁻¹. In India, it occupies an area of about 3.7 lakh ha with production of 35 million tonnes and productivity of 9594 kg ha⁻¹ (FAO Stat Citation, 2004). In Tamil Nadu, okra is cultivated in an area of 6209 hectares with an annual production of 52 thousand tonnes

(Anonymous, 2005).

MATERIALS AND METHODS

The experiment was conducted in Agricultural College and Research Institute, Madurai. There are 10 treatments which includes T₁-Control, T₂-Recommended dose of fertilizer (RDF), T₃-100% pig manure @ 7.5 t ha⁻¹, T₄-100% goat manure @ 6.5t ha⁻¹, T₅-75% RDF+ 25% pig manure, T₆-50% RDF + 50% pig manure, T₇- 75% RDF+25% goat manure, T₈- 50% RDF + 50% goat manure, T₉-50% pig manure + 50% goat manure, T₁₀- 50% RDF+ 25% pig manure + 25% goat manure were replicated thrice in a Randomised Block Design. The test crop was Bhindi (Arka anamika). The experimental soil was sandy loam texture and belongs to madukkur soil series (*Typic Haplustalf*). The crop was raised and grown up to 130 days and harvested. The yield and yield attributes were recorded and statistically scrutinised.

RESULTS AND DISCUSSION

The yield attributes of bhindi was significantly

Correspondence to :

V. SANJIV KUMAR, Department of Soil and Environment, Agricultural College and Research Institute, MADURAI (T.N.) INDIA

Authors' affiliations:

G. JAMES PITCHAI, Department of Soil and Environment, Agricultural College and Research Institute, MADURAI (T.N.) INDIA