



Effect of organic nutrients on yield and quality of bittergourd

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Abstract : An investigation was carried out to find the effect of soil and foliar application of organic nutrients on yield and quality of bittergourd (*Momordica charantia*) cv. LONG GREEN. From the experimental results, it was found that application of organic nutrients like FYM@ 25 t ha⁻¹ and vermicompost @ 5 t ha⁻¹ along with panchagavya 3 per cent foliar spray increased the yield of bittergourd. The same treatment was found to register the maximum TSS content and increased the ascorbic acid (vitamin C) content of bittergourd cv. LONG GREEN. Among the two seasons studied, season-II recorded high yield and good quality fruits compared to season-I.

Key Words : Bittergourd, Yield, TSS, Ascorbic acid

View Point Article : Anuja, S. and Archana, S. (2012). Effect of organic nutrients on yield and quality of bittergourd. *Internat. J. agric. Sci.*, 8(1): 205-208.

Article History : Received : 04.07.2011; Revised : 09.10.2011; Accepted : 30.11.2011

INTRODUCTION

Bitter gourd or balsam pear (*Momordica charantia* L.) is one of the commercially important cucurbitaceous vegetable crops extensively grown throughout the country for its nutritive value and medicinal properties. It is very rich source of calcium, phosphorus, iron, protein, vitamin A and vitamin C. Its juice consumption is also very useful for diabetic patient due to its potent oxygen free radical scavenging activity of the fruit juice (Sreejayan and Rao, 1991). The bitter principle in bitter gourd is cucurbitacin (tetracycline triterpenes) a bitter glucoside which prevents the spoilage of cooked vegetable and keeps fit for consumption even for two to three days (Aykrod *et al.*, 1951). The leaf extract of bitter gourd has also very good mosquitocidal effect (Yadav, 2008). The fruits are prepared for consumption in many ways and are quite commonly used as fried, boiled and stuffed form. Organic farming helps to improve the physical, chemical and biological properties of the soil and maintains the ecological balance as well as productivity of life supporting systems for the future generations. With this background in view, the present investigation was carried out to find the effect of organic

nutrients on yield and quality of bittergourd.

MATERIALS AND METHODS

An investigation was carried out in the vegetable field unit, Department of Horticulture, Faculty of Agriculture, Annamalai University, Annamalai Nagar, during two seasons viz., Season-I (January-April 2008) and Season-II (July-October 2008) to study the effect of organic nutrients on yield and quality of bitter gourd (*Momordica charantia*) cv. LONG GREEN under irrigated conditions. The experimental field was located at 11° 24' North latitude and 79° 41' East longitude at an altitude of ±5.79 m above mean sea level. The maximum mean temperature ranges from 28°C to 43°C, while the minimum mean temperature ranges from 18.5°C to 27.5°C. The mean annual rainfall is 1655.6 mm with a distribution of 1255.0 mm during north east monsoon (October-December), 358.6mm received during SW monsoon (June-September) and 100 mm summer showers (March-May) and spread over 60 rainy days. The mean relative humidity was 72 per cent. The soil type was clay loam, pH of the soil was 7.5, Electrical conductivity 0.67 dSm⁻¹ and available N 210.5 kg ha⁻¹ (low), P 10.3 kg ha⁻¹

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