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Research Article

Effect of integrated nutrient management on quality of garlic (*Allium sativum* L.)

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ABSTRACT : The present investigation entitled effect of integrated nutrient management on growth, yield and quality of garlic (*Allium sativum* L.)" was under taken at Horticultural Instructional Farm, C. P. College of Agriculture, S. D. Agricultural University, Sardarkrushinagar in *Rabi* season 2010-11. The experiment was laid out in Randomized Block Design with four replications and nine treatments *viz.*, T_1 (RDF-100:50:50), T_2 (50% N in form of FYM+ 50% N in form of inorganic), T_3 (100% N in form of FYM), T_4 (50% N in form of de oil castor cake+ 50% N in form of inorganic), T_5 (100% N in form of de oil castor cake), T_6 (50% N in form of poultry manure+ 50% N in form of inorganic), T_7 (100% N in form of poultry manure), T_8 (50% N in form of vermicompost+ 50% N in form of inorganic) and T_9 (100%N in form of vermicompost). The maximum TSS (48.50 ºBrix) of bulb and N (261.00 kg ha^{-1}), P (28.50 kg ha^{-1}) and K (252.00 kg ha^{-1}) in soil after harvest were found in treatment T_2 (50% N in form of FYM+ 50% N in form of inorganic).

KEY WORDS : Garlic, Organic and inorganic nutrients, Integrated nutrient management

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INTRODUCTION

Garlic (*Allium sativum* L.) is an important bulb crop widely used as a spice or condiment. It's belonging to Alliaceae family and known by several local names in different parts of India. In India it is widely known as Lahsun. It is a valuable condiment which is indispensible part of many of the food items in India. Garlic possesses medicinal properties and it is a very popular medicinal plant. It is a hardy bulbous perennial plant having narrow flat leaves. The economic part of plant which comprise of 6 to 30 smaller bulblets called 'cloves'. Garlic is frost hardy plant requiring cool and moist period during growth and relatively dry period during maturity of bulbs. The critical day length for bulb development is 12 hrs. Day length also affects bulbing. Garlic has several medicinal values. It reduces the cholesterol in blood. For better biometric observations, bulb characters and marketable bulb yield in garlic, combined use of inorganic and organic sources of nutrient supply is preferable. (Patil *et al*., 2007). The pungency, strong flavour and keeping quality of garlic is found to be associated with the Diallyl disulphide content.

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EXPERIMENTAL METHODS

A field experiment was conducted during the *Rabi* season of the year 2010-2011 at Horticultural Instructional Farm, Chimanbhai Patel College of Agriculture, Sardarkrushinagar, Dantiwada Agricultural University, Sardarkrushinagar. The Horticultural Instructional Farm of Sardarkrushinagar (Dantiwada campus) is located at 72^0-19^0' East longitude and