



Effect of chemical fertilizers and mulching on growth, yield and residual soil fertility status under yam-maize intercropping system

T.R. SAHOO¹ AND R.K.TARAI*

Krishi Vigyan Kendra, Kalahandi, BHAWANIPATNA (ORISSA) INDIA

(Email : ranjanouat@gmail.com)

Abstract : An experiment on effect of chemical fertilizers and mulching on growth, yield and residual soil fertility status under Yam-Maize intercropping system was carried out during the year 2003-04 under the rainfed conditions, at the Regional Centre of Central Tuber Crops Research Institute, Bhubaneswar, Orissa, to study the impact of graded levels of chemical fertilizers and mulching on the yam-maize intercropping system. Among the graded levels of chemical fertilizers tried in the present experiment, when 150% of the recommended doses of chemical fertilizers for yam were applied to the yam-maize intercropping system, resulted in the higher production of yam tubers (202 q/ha) and maize cobs (2235 kg/ha) and thereby proved its superiority to the rest of the chemical fertilizer treatments. Higher values in relation to the residual fertility status of the experimental plots were recorded when 150% of the recommended doses of chemical fertilizers for yam were applied to the yam-maize intercropping system. Likewise, in case of nitrogen and phosphorus, the residual fertility status also remained at par with the preceding treatment. Mulching the cropping system with the use of farm wastes was found to be of immense use in promoting the growth and development of crops under reference and also resulted in the higher production of yam tubers (160 q/ha) and maize cobs (2067.6 kg/ha), in comparison to those recorded under no mulch treatment.

Key Words : Yam-maize intercropping, Growth, Yield, Residual soil fertility

View Point Article : Sahoo, T.R. and Tarai, R.K. (2014). Effect of chemical fertilizers and mulching on growth, yield and residual soil fertility status under yam-maize intercropping system. *Internat. J. agric. Sci.*, **10** (1): 372-377.

Article History : Received : 29.08.2013; Revised : 13.11.2013; Accepted : 06.12.2013

* Author for correspondence

¹Krishi Vigyan Kendra, CRRI, CUTTACK (ORISSA) INDIA