

Response of Onion to FTM and Inorganic Fertilizers Application on Growth, Yield and Nutrient Uptake in Lateritic Soil of Konkan

Authors : Rupali Thorat, S. B. Dodake, V. N. Palsande, S. D. Patil

Abstract : A field experiment was conducted to study the "Response of onion to FYM and inorganic fertilizers application on growth, yield and nutrient uptake in lateritic soil of Konkan" at the farm of Pangari block of Irrigation of Scheme, Central Experimentation Station, Wakawali during Rabi 2009-10. There were 12 treatment combinations, comprising of 3 levels of NPK fertilizers (C1, C2-125 kg N, 62.5 kg P2O5 and 62.5 kg K2O ha⁻¹ and C3-150 kg N, 75 kg P2O5 and 75 kg K2O ha⁻¹) and 4 levels of FYM (F1-10 t FYM ha⁻¹, F2 - 15 t FYM ha⁻¹, F3-20 t FYM ha⁻¹, F4-25 t FYM ha⁻¹) replicated thrice using Factorial Randomized Block Design. The observations on plant height, number of leaves, girth of plant, polar and equatorial diameter of bulb as well as dry matter yield, onion bulb yield recorded during the course of field study were subjected to statistical analysis. Similarly nutrient content and uptake, quality parameters of bulb and soil properties were also determined and their data were also analyzed statistically. It is revealed from the study that the growth attributes, dry matter yield, onion bulb yield, nutrient content, nutrient uptake, quality parameters were improved significantly due to application of NPK @ 150:75:75 kg ha⁻¹ along with FYM @ 20 t ha⁻¹ (C3F3). Application of NPK @ 150:75:75 kg ha⁻¹ along with FYM @ 20 t ha⁻¹ (C3F3) registered highest onion bulb yield (t ha⁻¹). The quality of onion as well as availability of N, P, K, Fe, Mn, Zn and Cu in the soil was improved due to application of NPK @ 150:75:75 kg ha⁻¹ and FYM @ 20 t ha⁻¹.

Keywords : onion, FYM, yield, nutrient uptake and fertilizer

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