

Research Article

Effect of sewage sludge and inorganic fertilizer application on physico-chemical properties of soil and yield of carrot (*Daucus carota* L.)

■ SAURABH UPADHYAY, TARENCE THOMAS, SUSHIL KUMAR AND PRABHAKAR SINGH

Received : 29.04.2013; Revised : 04.08.2013; Accepted : 17.08.2013

MEMBERS OF RESEARCH FORUM :**Corresponding author :**

SAURABH UPADHYAY, School of Forestry and Environmental, Sam Higginbottom Institute of Agriculture Technology and Sciences, ALLAHABAD (U.P.) INDIA
Email: saurabh.environ@gmail.com

Co-authors :

TARENCE THOMAS, Allahabad School of Agriculture, Sam Higginbottom Institute of Agriculture Technology and Sciences, ALLAHABAD (U.P.) INDIA

SUSHIL KUMAR, Department of Agricultural Chemistry and Soil Science, Ch. Chhotu Ram (P.G) College, MUZAFFARNAGAR (U.P.) INDIA

PRABHAKAR SINGH, School of Forestry and Environmental, Sam Higginbottom Institute of Agriculture Technology and Sciences, ALLAHABAD (U.P.) INDIA

Summary

Studies were carried out to investigate how sludge application improves the yield of carrots (*Daucus carota* L.). The experiment was conducted during the year 2010 and 2011 in the *Rabi* season. The area selected for the present investigation is situated at research farm in School of Forestry and Environment SHIATS (Sam Higginbottom Institute of Agriculture, Technology and Sciences, Deemed-to-be University). Sludge application resulted in an increase in available nitrogen, phosphorus, potassium and organic matter content. Sludge application also significantly increased the yield of carrot. Carrot grown with the application of sewage sludge @ 0 t ha⁻¹ and without inorganic fertilizer (T₁) yielded 7.25 t ha⁻¹ in 2010 and 8.15 t ha⁻¹ in 2011. In 2010 the maximum yield were recorded in T₁₁ with the application of sewage sludge @ 20 t ha⁻¹ and 100 % RDF yielded 18.50 t ha⁻¹ followed by 17.32 t ha⁻¹ in T₁₀ with the application of sewage sludge @ 20 t ha⁻¹ and 50 % RDF. In 2011 the maximum yield were recorded in T₉ with the application of sewage sludge @ 15 t ha⁻¹ and 100 % RDF yielded 16.25 t ha⁻¹ followed by 15.75 t ha⁻¹ in T₁₁ with the application of sewage sludge @ 20 t ha⁻¹ and 100 % RDF.

Key words : Sewage sludge, Physico-chemical properties of soil, NPK, Carrot yield

How to cite this article : Upadhyay, Saurabh, Thomas, Tarence, Kumar, Sushil and Singh, Prabhakar (2013). Effect of sewage sludge and inorganic fertilizer application on physico-chemical properties of soil and yield of carrot (*Daucus carota* L.). *Asian J. Soil Sci.*, **8**(2) : 202-207.