

Research Article

Study on correlation between physico-chemical properties of pH, OC and available N, P and K in black soil of Navagarh block under Janjgir district in Chhattisgarh

DEEPIKA DEVDAS, L.K. SRIVASTAVA AND UMASHANKAR VERMA

Received : 30.07.2013; Revised : 14.10.2013; Accepted : 23.10.2013

MEMBERS OF RESEARCH FORUM :

Corresponding author :

DEEPIKA DEVDAS, Department of Soil Science and Agricultural Chemistry, Indira Gandhi Krishi Vishwavidyalaya, RAIPUR (C.G.) INDIA
Email: deepsdevdas@yahoo.com

Co-authors :

L.K. SRIVASTAVA AND UMASHANKAR VERMA, Department of Soil Science and Agricultural Chemistry, Indira Gandhi Krishi Vishwavidyalaya, RAIPUR (C.G.) INDIA

Summary

The study was carried out to soil fertility on the basis of correlation between physicochemical characteristics of pH and EC and N, P, K, in black soil of Navagarh block under Janjgir district of Chhattisgarh. The soil pH varied from 5.8 to 8.0 (mean 6.24) and indicated that soils were found to be moderately acidic to slightly alkaline in reaction. The mean value of organic carbon was 0.58% and about 90% soils of this block comes under medium fertility group. The soils were low in available N content. It ranged from 88 to 399 kg ha⁻¹ with an average of 265 kg ha⁻¹. The status of available phosphorus varied from 1.52 to 29.33 kg ha⁻¹ with a mean value of 7.34 kg ha⁻¹. The 96.82 % village soil samples from the study area can be classified as low fertility class. Nutrient index values were in low fertility class except one village for N and two villages for P comes under medium nutrient index value. The available potassium varied from 101 to 504 kg ha⁻¹ with a mean value of 268 kg ha⁻¹. The more than 90 % soil samples were classified as medium to high fertility class. The correlation studies between available micronutrient (N,P,K,) and soil properties (pH, OC). The N,K, showed significant correlation and P positive non-significant correlation with pH and OC.

Key words : Correlation, pH, OC, Nitrogen, Phosphorus, Potash

How to cite this article : Devdas, Deepika, Srivastava, L.K. and Verma, Umashankar (2013). Study on correlation between physico-chemical properties of pH, OC and available N, P and K in black soil of Navagarh block under Janjgir district in Chhattisgarh. *Asian J. Soil Sci.*, 8(2): 381-384.