



RESEARCH PAPER

Soil physico-chemical properties of continuous sugarcane growing areas of Gangapur tahsil of Aurangabad district

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Abstract : The present investigation was undertaken with an object to know the soil fertility status of continuous sugarcane grown area of Gangapur taluka of Aurangabad district. For this purpose, the soil samples were collected (0-15 cm) from 35 villages of Gangapur taluka. From each village 3 samples were collected. Total 105 samples were analyzed in this study. The collected soil samples were analyzed for chemical properties such as soil pH, electrical conductivity, organic carbon and calcium carbonate. Soil pH in sugarcane growing area was ranged from 7.3 to 8.1. Out of 105 soil samples 66 soil samples were mildly alkaline (7.4-7.8) in reaction whereas 36 soil samples were found moderately alkaline in reaction. Only 3 soil samples were found neutral (6.6-7.3) in reaction. Present study indicates that the soils of Gangapur tehsil are neutral to alkaline in reaction. Soil EC of sugarcane growing soils ranged from 0.20 to 0.55 dSm⁻¹. Electrical conductivity of total sugarcane grown area was normal (< 1.0 dSm⁻¹). These soils were categorized as normal in respect of electrical conductivity. Soil organic carbon content in sugarcane grown area was ranged from 0.36 gkg⁻¹ to 0.89 gkg⁻¹ with 57% soil samples have high organic carbon, 38% soil samples have medium organic carbon and only 5% soil samples have low organic carbon. Majority of these soils were high in organic carbon content. The free CaCO₃ content in sugarcane growing soils was ranged from 5.9% to 8.5%. Generally, all soil samples exhibit medium status of calcium carbonate, these samples were categorized as calcareous.

Key Words : Physico chemical properties, Soil pH, Organic carbon

View Point Article : Kacheriya, Snehal K., Gaikwad, Ganesh K., Bahiram, Rani V., Adsul, P.B., Waghmare, M.S. and Puri, Ajit (2023). Soil physico-chemical properties of continuous sugarcane growing areas of Gangapur tahsil of Aurangabad district. *Internat. J. agric. Sci.*, 19 (1) : 214-219, DOI:10.15740/HAS/IJAS/19.RAAAHSTSE-2023/214-219. Copyright@2023: Hind Agri-Horticultural Society.

Article History : Received : 13.03.2023; Accepted : 20.03.2023