



RESEARCH PAPER

Soil physico-chemical properties of maize growing area of Vaijapur tahsil of Aurangabad district

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Abstract : The soil is a living ecosystem made up of a complex system of physical, chemical and biological substrates where energy and matter are captured and transformed by plants, animals and microbes. Soil fertility and plant nutrition are two closely related things that emphasize the forms and availability of nutrients in soil, their movement and uptake by roots and utilization of nutrient within plant. Soil is a vital natural resource and should be used judiciously according to its potential to meet the increasing demands of ever-growing population. The present investigation was carried out with one hundred surface soil samples from different villages of Vaijapur tahsil. The soil samples were studied for chemical properties such as soil pH, electrical conductivity, organic carbon and calcium carbonate and available nutrients *viz.*, nitrogen, phosphorus and potassium. The soil reaction of these soils was studied and observed that the pH of maize growing soils of Vaijapur tahsil ranged from 7.35 to 8.24. These pH values indicated that the most of soils from Vaijapur tahsil were neutral to alkaline in reaction. The electrical conductivity of ranged from 0.13 dSm⁻¹ to 0.26 dSm⁻¹. These values of EC showed that these maize growing soils of Vaijapur tahsil were safe for cultivation of crops. The organic carbon content in these soils was ranged from 2.9 g kg⁻¹ to 6.0 g kg⁻¹. The data revealed that these soils were low to medium in organic carbon content. The calcium carbonate content of these soils was ranged from 2.5 g kg⁻¹ to 10.5 g kg⁻¹. The data regarding to the calcium carbonate indicated that the soils of Vaijapur tahsil were low to medium status of calcium carbonate.

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

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