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Soil fertility status of major nutrients, micronutrients and mapping in Nicchapura-2 micro watershed of Davanagere district, Karnataka

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The investigation was conducted to study the soil fertility status of available macro and micronutrient in Nicchapura-2 micro watershed of Davanagere district. 103 soil samples were collected grid-wise by using cadastral map of study area and were analyzed for their fertility. The value of pH, electrical conductivity, and organic carbon was ranged from 6.2 to 8.7, 0.11 to 0.84 dS m⁻¹ and 3.1 to 5.6 g kg⁻¹ respectively. The available N, P₂O₅, K₂O, was ranged from 135 to 236 kg ha⁻¹, 10 to 34 kg ha⁻¹, 130 to 415 kg ha⁻¹, 8.1 to 38.1 cmol (p⁺) kg⁻¹, 6.3 to 26.2 cmol (p⁺) kg⁻¹ and 6.3 to 12.1 ppm respectively. Available micronutrients iron, manganese, zincs and copper was ranged from 0.58 to 5.92 mg kg⁻¹, 0.60 to 10.83 mg kg⁻¹, 0.01 to 0.41 mg kg⁻¹, 0.06 to 4.81 mg kg⁻¹ respectively. Available micronutrients such as zinc and iron are deficient but copper and manganese were sufficient in these soils of micro-watershed. The study concluded that available nutrients content are low to medium in red soils. The black soils show high phosphorus than red soils. These variations of phosphorus in soils may be due to variation in soil properties like clay content, CEC and P fixation capacity. The exchangeable Ca and Mg content were sufficient surface samples. Low in available sulphur content may be because of acidic reaction, low EC and OC values in both black and red soils. Available micronutrients such as zinc and iron are deficient but copper and manganese were sufficient in these soils of micro-watershed.

Biography

Parashuram Chandravanshi has expertise in Soil Nutrient Management, and having experience in teaching, research and extension methodology adopted for soil sampling and developed soil information system for nutrient and cropping pattern. In 11 years of experience, he has published more than 25 research papers and attended 15 international and national conferences especially on soil fertility and sustainability.

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