



RESEARCH PAPER

Soil resource inventory and soil nutrient assessment of Kudluru micro-watershed of Tarikere taluk, Chikkamagaluru district, Karnataka, India

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Abstract : A land resource investigation was undertaken in Kudluru (4D3E4Q1b - 437.45 ha) micro-watershed of Tarikere taluk, Chikkamagaluru district, Karnataka state, India during 2019 using remote sensing and GIS techniques utilizing LISS IV satellite data. The detailed soil survey (1:7900 scale) of micro watershed was conducted to know the sensate properties and land capability classes for different management units. After detailed field study and laboratory analysis of collected soil samples, seventeen soil mapping units were identified and land capability classification was carried out. Results revealed that, nearly 41.76, 16.03 and 15.29 per cent area was moderately deep, moderately shallow and deep in depth, respectively. About 74.55 per cent area was very gently sloping with moderate erosion and 36.49 per cent area was gravelly (15-35 %) with sandy loam in texture. The study area falls under Class II (53.29 %), Class III (27.35 %) and Class IV (4.07 %) land capability classes having limitations of erosion, wetness, gravelliness and depth. Medium status of soil organic carbon and potassium were recorded in 57.15 and 63.68 per cent of soil samples, respectively. Low status of nitrogen and sulphur was recorded in 78.16 and 84.47 percent soil samples from the study area, respectively. The available copper, zinc, iron, manganese and exchangeable calcium and magnesium contents were sufficient in range in all the soil samples.

Key Words : Soil resource inventory, Soil nutrient assessment, Kudluru micro-watershed

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