Abstract

Detailed Soil Survey of Engandiyur panchayat (1568 ha) was undertaken as a part of the New Scheme “Detailed Soil Survey at Panchayat Level” to prepare an inventory of the soil, land and water resources of the panchayat. In the emerging agricultural scenario, the land quality assessment and land resource management are vital aspects for evolving proper land use plans. Generation of soil information system consisting of the soil type, depth, slope, erosion status, land capability class, land irrigability class, soil fertility status, soil conservation priority, etc at panchayat level along with the cadastral details provide authentic soil and land resource database for the formulation of micro level plans.

Engandiyur panchayat is located in Chavakkad Taluk of Thrissur district and extends over 1568 ha. The panchayat is surrounded by Chettuva river in Northern and Eastern side and Arabian sea in the western side. It is included in the revenue boundaries of Engandiyur village, Kadappuram village and Vadanappally village and spreads over 16 wards.

Two soil series are identified in the panchayat of which two series viz. Punnayurkulam and Manathala which are upland series. The entire portion of wetland area are converted for miscellaneous purposes. The whole area of 707.22 ha under converted paddy lands can be considered as permanently converted since there is no scope for reclaiming these areas for paddy cultivation.

The land capability class encountered in the panchayat was IIIws in upland area and IIIws in the converted wetlands. The two land irrigability class observed was 2ds and 3ds in upland region and converted wetlands, respectively.

The soil mapping units representing series, texture, depth, slope and erosion of each land parcels were identified. The results are systematically arranged in this report and detailed descriptions of each management units are given with specific recommendations based on soil fertility analysis. Major texture class noticed in the panchayat was sand, followed by sandy loam and loamy sand. Various interpretative maps are also attached for easy comprehension. The soils identified in the panchayat are classified as per the USDA Soil Taxonomic Classification System which enables information exchange and better understanding of soils.
Systematic collection of surface samples was done and these samples were subjected to detailed analysis for macro and micro nutrients and other soil properties which directly affect the plant growth. The results are interpreted in detail in the report. Information on level of plant nutrients in each land parcel may be gathered from the soil fertility map and nutrients may be applied according to the crops grown as detailed in the report.