ABSTRACT

Detailed Soil Survey of Orumanayur panchayat (519 ha) was undertaken as part of the New Scheme “Detailed Soil Survey at Panchayat Level” to prepare an inventory of the soil and land resources of the panchayat and to provide cadastral level information on the soils. This report has been prepared with the objective of providing 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 so as to serve as an authentic soil and land resource database for the formulation of micro level plans.

Orumanayur panchayat located in Chavakkad taluk of Thrissur district extends over 519 ha. The garden land covers an area of 149.45 ha. Coconut, arecanut, banana etc are the major crops grown in the panchayat. An area of 133.07 ha of paddy land has been converted for raising coconut, arecanut etc. At present, there is no paddy land area in the panchayat.

Two types of soils viz., Punnayurkulam and Manathala series are identified in the panchayat. Both are garden land series. 133.07 ha of wetland converted for miscellaneous purposes are classified as miscellaneous soils since these soils are heterogenous in nature. The major land capability class encountered in the panchayat is Ille. The major land irrigability class observed is 2t.

The soil management units indicating the soil series, texture, slope and erosion of the entire panchayat are described in this report along with supporting maps. The physicochemical properties including the major and micro nutrient status of the soils of the panchayat are included with this report. The detailed descriptions of each management units are given with specific recommendations based on soil fertility analysis. The predominant soil texture noticed in the panchayat is loamy sand. Various interpretative maps are also prepared for easy understanding. 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.
Composite surface soil samples from every mapping unit were collected and tested for major plant nutrients. Twenty-three samples were analyzed for evaluating surface soil fertility. Soils in major part of the panchayat are slightly acidic in reaction. More than half of the total area of the panchayat records low nitrogen, high phosphorus and medium potassium status.

The soils of the panchayat have adequate availability of sulphur and micronutrients like zinc, iron and boron but are deficient in available magnesium and manganese. Status of available copper is adequate in Manathala series whereas it is deficient in Punnayurkulam series. Information on level of plant nutrients in each land parcel may be gathered from the soil fertility map.