ABSTRACT

Detailed Soil Survey of Chelakkara panchayat was undertaken as a part of the New Scheme “Detailed Soil Survey at Panchayat Level” to prepare an inventory of the soil and land resources of the panchayat. 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.

Chelakkara panchayat located in Thalappilly taluk of Thrissur district extend over 5983 ha. Present wetland area of the panchayat is 758.73 ha which constitutes about 12.68 per cent of the total geographic area of the panchayat. 545.41 ha of wetland area has already been converted for cultivation of perennial crops and construction purpose. Garden lands occupy 2762.01 ha of the panchayat. Coconut, rubber and other tree crops are the major crops grown in the garden lands.

Five types of soil series namely Maraickal, Kizhapallikara, Koottala, Velappaya and Kozhukully were identified of which Koottala, Velappaya and Kozhukully are the garden land series identified in the panchayat and Maraickal and Kizhapallikara are the wetland series. 545.41ha of wetland converted for miscellaneous purposes are classified as Miscellaneous soils. The land capability class encountered in the panchayat is IIw in wetland area and converted lands and IIe, IIIe, IVe and Vle in the garden land area. The land irrigability class observed is 2d in wetland region and converted lands and 2t, 3t, 4t and 6t in the garden lands.

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 clay loam in the wetlands and gravelly clay loam in the garden lands. 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. Three hundred and fifty three samples were analysed for evaluating surface soil fertility. Majority of samples collected from the gardenlands and wetlands are medium to strongly acidic in reaction. Surface samples collected from the units of majority of the wetland soils are medium to high in the availability of Nitrogen and low to high in the availability of Phosphorus and Potassium. All the soils of the panchayat except Kizhapallikara and Maraickal are deficient in available sulphur content and all the wetland and all the soils are deficient in magnesium status. All the soils have adequate amount of available micro nutrients and have far above adequate levels of available iron. Information on level of plant nutrients in each land parcel may be gathered from the soil fertility map. The major problems encountered in the panchayat and suggestions for improvement are also included in the report.