ABSTRACT

Detailed Soil Survey of Pariyaram panchayat (2719 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. 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.

Pariyaram panchayat located in Mukundapuram taluk of Thrissur district extends over 2719 ha. The present paddyland area in the panchayat is 23.76 ha. Paddy is cultivated in an area of 20 ha. The garden lands cover an area of 1656.37 ha. Converted paddylands account for an area of 350.74 ha. The common crops grown in the garden lands of the panchayat are coconut, arecanut, banana, pepper etc.

Ten soil series viz., Mulayam, Manalur, Ayyanthole, Velappaya, Kozhukully, Koottala, Koratty, Pariyaram, Vaniampara and Anjur series are identified in the panchayat. The first 3 are wetland soils. The rest are gardenland series. The soils in the converted paddy lands are marked as miscellaneous soils.

Based on the soil and land characteristics, land capability classes IIw, IIe, IIle, IVe, IVes, Vles and land irrigability classes 2d, 2t, 3t, 4t, 4st, 6st are recognized in the panchayat. The major land capability class encountered in the panchayat is IIIe. The major land irrigability class observed is 3t.

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 gravelly clay loam. 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 the 140 mapping units were collected and tested for major plant nutrients and evaluation of surface soil fertility. Based on laboratory analysis, we can say that in Pariyaram panchayat, more than 90% areas exhibit medium to high available nitrogen, phosphorus and potassium status. All the soils have adequate sulphur content. Deficiency of magnesium, micronutrients and boron is identified in some soils. The pH of wetland soils ranges from very strongly acid to slightly acid and that of garden land soils varies from very strongly acid to neutral. Major area of the panchayat falls in neutral reaction class. Information on level of plant nutrients in each land parcel may be gathered from the soil fertility map.