ABSTRACT

Detailed Soil Survey of Manalur panchayat (1822.0 ha) 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.

Manalur panchayat located in Thrissur Taluk of Thrissur district extend over 1822.0 ha. Wetlands occupy 1049.97 ha out of which 475.12 ha has already been converted for perennial crops and construction purposes. 5.43 ha of area is under flooded condition. Presently paddy is cultivated in an area of 472 ha, 74.51 ha of wetland area is kept fallow and 28.3 ha is under temporary conversion. Garden lands occupy 655.3 ha of the panchayat. Coconut and other tree crops are the major crops grown in the garden lands.

Five types of soils namely Perumpuzha, Manalur, Anthikad, Punnayurkulam and Kozhukully series were identified of which Perumpuzha, Manalur and Anthikad are wetland series and Punnayurkulam and Kozhukully are garden land series. Major portion of wetland area comes under Perumpuzha series and garden land comes under Punnayurkulam series. 475.12 ha of wetland converted for miscellaneous purposes are classified as miscellaneous soils. The major land capability class encountered in the panchayat is IV w in wetland area and Ile in gardenland area. The major land irrigability class observed is 4d in wetland region and 2t in gardenland region.

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 in
wetlands and sandy loam in gardenlands. 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 was collected and tested for major plant nutrients. One hundred and nineteen samples were analyzed for evaluating surface soil fertility. Majority of samples collected from the wetlands were very strongly acid and gardenlands were slightly acid in reaction. Surface samples collected from units of majority of the soils have high availability of Nitrogen and Phosphorus and low availability of Potassium. All soil series of the panchayat are adequate in available sulphur. The micronutrient status is adequate except zinc deficiency exhibited in Perumpuzha series and boron deficiency exhibited in Manalur and Punnayurkulam series. Available magnesium content is inadequate for all series of the panchayat. Available iron content is far above adequacy for Punnayurkulam, Anthikad and Manalur series. Information on level of plant nutrients in each land parcel may be gathered from the soil fertility map included in this report.