**ABSTRACT**

Detailed Soil Survey of Avanur 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, 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.

Avanur panchayat located in Thrissur Taluk of Thrissur district extends over 1825.0 ha. Wetlands occupy 551.64 ha out of which 79.87 ha has already been converted for cultivation of perennial crops, annual crops other than paddy and construction purposes. Paddy is the main crop of wetlands of the panchayat. Garden lands occupy 1246.36 ha of the panchayat. Coconut, nutmeg, arecanut and other tree crops are the major crops grown in the garden lands.

Five types of soils namely Kolazhy, Ayyanthole, Mulayam, Velappaya and Thrikkur series were identified of which Kolazhy, Ayyanthole and Mulayam are wetland series and Velappaya and Thrikkur are garden land series. Major portion of wetland area comes under Kolazhy series and that of garden land comes under Velappaya series. 79.87 ha of wetland converted for miscellaneous purposes are classified as miscellaneous soils of which 77.07 ha is permanent conversion and 2.8 ha is temporary conversion. The major land capability class encountered in the panchayat is IIw in wetland area and IIe in gardenland area. The major land irrigability class observed was 2d 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 in 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 sandy clay loam in wetlands and gravelly sandy clay 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 were collected and tested for major plant nutrients. Ninety-eight samples were analyzed for evaluating surface soil fertility. Majority of samples collected from wetlands were extremely acidic and that from garden lands were medium acidic in reaction. Surface samples collected from units of majority of the soils have medium availability of Nitrogen, Phosphorus, and Potassium. All soils of the panchayat are adequate in available sulphur and deficient in available magnesium. All soil series of the panchayat are adequate in all micronutrients like zinc, iron, copper, manganese, and boron. Information on level of plant nutrients in each land parcel may be gathered from the soil fertility map. Problems and suggestions of the panchayat are also highlighted in the report.