ABSTRACT

Detailed Soil Survey of Kadukutty panchayat (1763 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.

Kadukutty panchayat located in Mukundapuram Taluk of Thrissur district extend over 1763.0 ha. Total wetland area of the panchayat is 917.97 ha out of which 204.51 ha has already been converted for cultivation of perennial crops and construction purpose. Present wetland area of the panchayat is 713.46 ha. Garden lands occupy 734.53 ha of the panchayat. Coconut and other tree crops are the major crops grown in the garden lands.

Eight types of soils namely Kizhapallikara, Mulayam, Kolazhy, Koratty, Velappaya, Anjur, Pariyaram and Koottala series were identified of which Kizhapallikkara, Mulayam, and Kolazhy are wetland series and Koratty, Velappaya, Anjur, Pariyaram and Koottala are garden land series. Major portion of wetland area comes under Kizhapallikkara series and garden land comes under Koratty series. 204.51 ha of wetland converted for miscellaneous purposes are classified as miscellaneous soils. The major land capability class encountered in the panchayat was II w 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 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 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 was collected and
tested for major plant nutrients. One hundred and one samples were analyzed for
evaluating surface soil fertility. Majority of samples collected from the gardenlands
are neutral in reaction and that from wetlands are slightly acid in reaction. Surface
samples collected from units of majority of the soils have high availability of
Nitrogen, high availability of Phosphorus and medium availability of Potassium. All
soil series of the panchayat are adequate in available sulphur and deficient in
magnesium status. All wetland series of the panchayat have far above adequate
levels of available iron. Anjur, Koottala, Kizhapallikkara, Mulayam and Kolazhy
series of the panchayat have all micronutrients in adequate levels. Information on
level of plant nutrients in each land parcel may be gathered from the soil fertility
map.