Soil Survey of Kudappanakunnu panchayat in Thiruvananthapuram taluk of Thiruvananthapuram district was undertaken to collect information on the resource base in the panchayat. These are then classified and interpreted to arrive at ameliorative suggestions for the holistic development of the area, with special emphasis on sustainability and eco-restoration. Kudappanakunnu panchayat extends over 769.00 ha. Four soil series and one miscellaneous land type were identified in the panchayat. The soil series are Thiruvananthapuram, Thonnakkal, Mukkunni and Marukil. Five land capability subclasses and six land irrigability subclasses are encountered. Soil conservation priority, Hydrologic grouping, fertility status and crop suitability status have also been undertaken.