Investigations for Installation of Drainage System to Control Salinity in Godavari Western Delta – A Case Study

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ABSTRACT

The study on Pre drainage investigations carried out at Kalipatnam pilot area (18 ha) of Godavari Western Delta under Andhra Pradesh Water Management Project revealed that the pilot area is almost flat with a slope of 0.01 percent and a shallow water table of poor quality (EC 4.8 to 43.1 dS m^{-1}). The soils are highly saline with an EC 4.03 to 16.35 dSm^{-1} and ESP 15 to 60%. The piezometer study concluded that there is vertical ground water movement in the pilot area and hence natural drainage is not possible. The Staff guage studies at Upputeru, revealed that there is back flow of sea water to the fields during summer. The tidal range of Upputeru varies from 0.0 to 0.9 m above MSL where as the maximum land elevation is 0.4 m MSL. Hence, pumped subsurface drainage system is recommended in the pilot area instead of gravity flow.

Key words : Drainage system, Salinity, Waterlogging ,