

Feasibility Study of Filter material for Subsurface Drainage System: Kalipatnam Case Study

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ABSTRACT

Filter material requirement for installation of subsurface system of Kalipatnam pilot area was assessed based on the soil texture at drain depth, soil SAR, ground and irrigation water quality. Textural analysis data at the sampling points were interpreted with the help of textural class, particle size distribution curve, per cent clay, clay/silt ratio and Surfer 7.0 map for clay%. Based on the results, filter material is required for installation of subsurface system and out of the tested prediction criteria for requirement of filter material clay % mapping, clay%, textural class, , particle size distribution curve are giving good indication of filter material whereas auger hole is over estimating for these soils. Clay/silt ratio criteria of 0.5 are not fitting for these soils. Surfer 7.0 mapping of percent clay at drain depth is giving best estimate out of the tested criteria.

Key words: Auger hole, Clay/silt ratio, Filter material, Per cent clay, Texture class.