B-133 Spatial and temporal variability of salinity in some salt-affected soils in Hambantota District

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Investigations were conducted to ascertain the spatial and temporal variability of salinity in some salt-affected soils in Hambantota district. In this conection, 22 sites were selected based on the sparseness and nature of vegetation and the external appearence of the soil surface. The salinity was measured using 1:1 soil : water suspensions. The electrical conductivity (EC) of the soils varied from 0.09 to 55.12 dSm^{-1}. A site at Hungama had the highest EC which was considerably higher than that of sea water (38 to 40 dSm^{-1}). Soil salinity showed a temporal variability. It decreased following rains and increased with the onset of the dry season. Thus, a negative relationship was apparent between the soil salinity and rainfall. Studies on variability of salinity down the soil profile indicated a general decline of salinity with increasing depth. At a site in Hungama, the EC dropped from 49.1 dSm^{-1} at the top 10 cm to 8.16 dSm^{1} at a depth of 100 cm. Therefore, planting of appropriate species during the rainy season in planting holes filled with soil from lower strata will reduce the harmful effects of salinity during the early stages of plant growth and establishment.