B-08 : VARIABILITY OF SOIL TEXTURE, pH AND ELECTRICAL CONDUCTIVITY IN REDDISH BROWN EARTH SOILS (RHODUSTALFS)

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The variability of texture, pH and electrical conductivity (EC) were studied in a 45 m x 45 m area of RBE soils using a grid with 100 sampling points spaced at 5 m apart from 0.20 cm depth. The variability was evaluated using conventional statistical methods and semivariograms for spatial dependence using geostatistics.

All soil properties studied were normally distributed. The statistical parameters which are the mean, standard deviation, coefficient of variation and confidence intervals were calculated for all soil properties. Comparison of the coefficients of variation revealed that soil pH was the least variable property while the clay content was the most variable. Directional semivariograms for the soil properties measured were anisotropic. pH semivariograms showed spatial dependence for the NW-SE direction up to a lag distance of 50 m and EW direction without showing definite sill. Directional semivariograms for EC showed spatial dependence for all directions and

a strong spatial relationship for 7.05 m lag distance. The range of influence was about 58 m for SE direction. Clay content was found spatially independent and hence was described by conventional methods.