

ABSTRACT

Soil moisture is a very important soil property which is directly related to many soil functions. In this research work the relation of soil moisture and temperature has been discussed with reference to winter and summer season in the metropolitan Lahore. Five land uses from metropolitan Lahore have been taken which includes residential, commercial, Industrial, water body and green areas. Areas from these five land uses have been selected from metropolitan Lahore. 17 samples were collected in summers and 17 in winters. Sampling sites include PIA society, Model Town, Mughalpura, M.M. Alam Road, Green Acres, Peco Road, Chuburji, Shahdra town, Bund Road, Jain Mandir and River Ravi. Soil Samples have been collected from these areas in winters and summers. Soil samples were tested in the laboratory using the Gravimetric method in which the soil moisture is calculated with help of oven and balance. Interpolation was also applied to find out the soil moisture of the whole Lahore. Soil pH is also measured with the help of pH meter. Secondary data of atmospheric temperature and precipitation is also collected from metrological office. Pearson correlation method was also applied to check the correlation of temperature and soil moisture. The results show that soil moisture is higher in winters as compared to summers which shows that the result is highly significant as there is a strong relationship of atmospheric temperature and soil moisture. Secondly soil moisture also varies in different Land uses. pH also varies in different seasons. So, the effect of seasonal variability is clearly seen on soil properties.