Soil concentration

Science, Chemistry

Soil Concentration Elemental composition that is found in soils has anomalies leading to plant stress, as well as increased salt concentration (Cl-), and Ca2+ mineral nutrients. The salt concentration found in soil solutions is measured in form of its salinity. The amount of Cl- present in a given soil solution determines its salinity, which is required for proper plant life. Cac2+ is an important mineral nutrient in soil for plant life, but is harmful if in excess. The main cause of soil salinity can be attributed to the water management practices used on a given soil solution. High concentrations of Cl- destabilize membranes and denatured proteins, which is toxic for plants through soil degradation (Huang 17). Due to the decreased water permeability and porosity, it leads to water deficit in plant's leaves. This inhibits metabolism and plant growth, hence making Cl- harmful to plants. It leads to misplacement of Ca2+ from cell wall and reducing the latter's activity occurring on the apoplast, reducing salinity balance in plasma membrane. Increase in CL- and Na+ in the membrane can block the detoxification process (Huang 74). However, there are some soil tolerant plants, commonly referred to as halophytes, which have a higher endurance than the less tolerance ones (glycophyte) (Huang 75).

Salinity of soils in natural environments is mainly caused by the upstream movement of seawater to rivers, which supply plants with water. However in far inland places, natural seepage occurs from geologic marine deposits that wash salt into surrounding areas. Transpiration and evaporation can also extract water through vapor, leading to an increase in soil solution. It is also possible for water droplets that move from the ocean to disperse and later evaporate, causing salinity. Therefore, the distance to saline water from a

sidewalk differs and is determined by assorted factors (Levy, Guy, Pinchas 57).

Works Cited

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