AN EXECUTIVE SUMMERY OF THE FINAL REPORT OF WORK DONE ON THE MINOR RESEARCH PROJECT ENTITLED IMPACT ON INDUSTRIALIZATION ON SOIL FERTILITY SANCTIONED BY UGC VIDE SANCTION LETTER MRP(S)-0127/12-13/KAMA002/UGC-SWRO dated 23-09-2013

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EXECUTIVE SUMMERY OF THE MINOR RESEARCH PROJECT

Soil is essential to life. All life supporting components derive, either directly or indirectly, from the soil. Plants growing in soil are directly used for food or fed to animals, which are then used for food. Soil is vastly more complex than simply ground-up rock. It contains solid inorganic and organic components in various stages of decomposition and disintegration, an aqueous solution of elements, inorganic and organic ions and molecules, and a gaseous phase containing nitrogen, oxygen, carbon dioxide, water vapour, argon and methane plus other gases. The wide -spread industrialization and increasing consumption have changed the very complexion of soil.

The soil-testing programme is to give farmers a service leading to better and more economic use of fertilizers and better soil management practices for increasing agricultural production. High crop yields cannot be obtained without applying sufficient fertilizers to overcome existing deficiencies.

Soil samples were collected from in and around Mangalore. The various parameters were studied using standard procedures. The interpretation of data has been made with the help of statistical tools.

It is observed that the pH of the soil varies slightly from acidic to alkaline. Usually the most desirable pH range for mineral soils is 6.0 to 7.0 and for organic soil 5.0 to5.5.Fluctuations of soil pH recorded. The electrical conductivity of soil depends on the amount of salts present. In humid regions they are at low concentration and do not affect plant growth, while in semiarid and arid regions they are at high concentration and effects on plant growth.

Cation exchange capacity(CEC) measure the soil's ability to hold nutrients such as calcium, magnesium and potassium, as well as other positively charged ions such as sodium and hydrogen. The common expression for CEC is in terms of milli equivalents per 100 grams (meq/100g)of soil. The CEC of soil was within the range of 5to 35 meq/100 g which is suitable for agriculture.

Nitrogen occurs in soil samples in bound and organic forms .Total nitrogen in soil various from 0.01 to 0.03%.Phosphorus in soil ranges from 0.01 to 0.3% and occurs in the form of apatite and hydroxyl phosphates of Fe,Al,Mn,Ca and Hg.Potassium level should be high in clay and organic matter which are sandy and low in organic matter. Optimum levels for light -colored , coarse - textured soil may range from 90 to 125 ppm . On dark-colored heavy textured soils levels ranges from 125 to 200 ppm. Levels of calcium in soil is closely related to soil pH.Calcium deficiences were rarely observed in soil since its pH is adequate.Magnesium deficiences were observed in samplell since adequate magnesium levels range from 30 to 70 ppm.

CONCLUSION

After analysis of the soil taken from industrial area and its comparison with the fertile soil taken from the agricultural field we come to the conclusion that these soils are not suitable for cultivation of the crops as there is imbalance in the nutrients required for the plant growth.