

widely adopted for routine appraisals of soil salinity because methods for obtaining soil water samples are not practical at typical field water contents. Salt in soil comes from the fertilizer we apply but also from irrigation water and dissolving soil minerals. Soils contain some salts, which are essential for plant growth. However, excess salts will hinder plant growth by affecting the soil-water balance. The electrical conductivity measurement detects the amount of cations or anions

Description of sampling sites

The soil samples were collected from the most teff productive areas of three different localities of Amhara regional state of Ethiopia. Particularly from Bahir Dar, Bure and Debre Markos, which are located in the north western part of Amhara regional state. The geographical locations (latitude, longitude and elevation) of sampling sites are described as follows. Bahir Dar is located at latitude of 11°35'37.1" N and longitude of 37°23'26.8" E in the northern hemisphere. Bahir Dar is located at the exit of the Abbay from Lake Tana at an altitude of 1,820 meters above sea level. The city is located approximately 578 km north-west of Addis Ababa. DebreMarkos is a city in north-west of Ethiopia. It is located in the Misrak Gojjam Zone of the Amhara administrative region, it is located at a latitude and longitude of 10°20' N 37°43' E coordinates and an elevation of 2,446 meters above sea level. Debre Markos is located approximately

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Conclusion

The levels of essential and trace metals (K, Ca, Mg, Fe, Zn, Cu, Mn, Pb and Cd) in the soil samples collected from the three sampling areas were determined by using MP-AES. The study showed that the metals were present at different concentrations in the samples from different sites. Comparable results were found with some of the values reported in the literature and for Cd and Pb metals; the concentrations slightly exceeded the permissible levels by WHO/FAO, which could be attributed to the agricultural practices employed such as the use of fertilizers and herbicides. In this study soil pH, soil organic matter and soil electrical conductivity were also determined. Therefore, this study will give brief information about the essential and trace metals of the soil samples collected from the three different sampling areas.

References

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