

## Properties and available micronutrient status of some soils derived from Abeokuta formation in Nigeria

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Available iron, zinc, copper and manganese were determined in six pedons located in upper slope, middle slope and valley bottom soils derived from Abeokuta geological materials in Nigeria. The soils had an average of 639.8 g kg<sup>-1</sup> sand, 241.8 g kg<sup>-1</sup> clay and 118.4 g kg<sup>-1</sup> silt. The fertility status of the soils was low–medium with a strongly acid–neutral reaction, 1.3–15.1 g kg<sup>-1</sup> organic carbon contents, moderate–high exchangeable bases and 1.38 mg kg<sup>-1</sup> available phosphorus. Both Fe (122.50 mg kg<sup>-1</sup>) and Mn (111.40 mg kg<sup>-1</sup>) occurred at toxic levels, whereas the mean Cu (1.27 mg kg<sup>-1</sup>) and Zn (2.56 mg kg<sup>-1</sup>) contents were found to be adequate for most crops grown in the region. There were significant positive correlations among the micronutrients and also between soil pH, organic carbon, particle size fractions and micronutrients. The high levels of Fe and Mn were probably due to the presence of oolitic ironstone in the parent material.

**Keywords:** micronutrients; soil fertility; land use; availability