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## Proximate analysis, translocation and elemental distribution of *Celosia trigyna* L. from the western geographical region of Nigeria

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*Celosia trigyna* L. of the plant family Amaranthaceae is a medicinal plant used in traditional medicine for the treatment of several diseases. The elemental concentrations of the plant and the growth soil of *Celosia trigyna* L. from the western region of Nigeria were investigated. The proximate analyses and the impact of soil quality parameters; pH, SOM and CEC in the growth soil were also determined to evaluate their impact on elemental uptake. Samples were taken from ten different sites in the western region and their geographical coordinates obtained. The concentration of the elements in the leaves are in the decreasing order of Ca >Mg>Fe>Mn>Zn>Cu>Cr>As>Se. The proximate analyses in the leaves were; ash (22±0.58%), crude fibre (1.4±0.2%) protein (25.6±1.05%) and fat (1.6±0.57%). Zn was found to contribute between 5.3-7.3% and Ca between 11.3-14.7%, towards their recommended dietary allowance (RDA). However, Fe and Mn contributes above 50% towards its RDA for these elements which makes the plant suitable for treating deficiencies of these element. Statistical analyses (principal component analysis and correlations) indicated that certain elements taken up by these plants were from common sources. Both positive and negative relationships between soil parameters and elements were observed in the plant parts. It was also discovered that the leaves contain low concentrations, below the ULs of toxic elements, making them safe and beneficial for human consumption.

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