**Assessment of uptake of readily available plant micronutrients from soils amended with coal fly ash**


ABSTRACT

A greenhouse experiment was conducted on two soils of different texture, Tebuk sandy clay and sandy mine tailings. They were treated with different rates of coal fly ash (0, 10, 20, 40, 80 and 160 Mg ha-1) and the uptake of B, Cu, Fe, Mn and Zn by spinach grown in these soils were determined at six weeks growth The experimental set-up hosen for this study was a factorial 2 (different soil textures) X 6 (six rates of fly ash application) arranged in completely randomized design with 4 replications. Application of fly ash increased the pH and EC of the soils Tissue uptake of B, Cu, Fe, Mn and Zn and plant dry matter weight were influenced by fly ash application rates and soil texture type. Boron uptake increased while Cu, Fe, Mn and Zn uptake decreased with increases in addition of fly ash to the soils The highest spinach dry weight was obtained with the application of 20 Mg ha-1 for the Tebuk soil and 40 Mg ha-1 for the sandy mine tailings.



**Keyword:** Coal fly ash; Micronutrients uptake; Spinach (A. viridis)