



**BLUE GRASS (*Poa pratensis* L.) AND CARABAO GRASS (*Paspalum conjugatum* Berg.) AS AGENTS FOR PHYTOREMEDIATION ON CONTAMINATED SOILS**

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### ABSTRACT

Blue grass (*Poa pratensis* L.) and Carabao grass (*Paspalum conjugatum* Berg.) are grasses under the family Poaceae were subjected to different contamination levels with Cu (12mg/kg low and 25mg/kg high) and Fe (150 mg/kg low and 300 mg/kg high) (Herrero et al. 2003). The purpose of the study was to identify the phytoremediation potentials of the two grass species. The grass species were then cultivated, contaminated and harvested after 8 weeks. After harvesting, the roots and the shoots of the two grass species were dried and ashed under a furnace at 450°C for 300 minutes. It was then digested with 4 mL of 65% HNO<sub>3</sub> and 1 mL of 37% HCl. The digested samples were then tested for its uptake and accumulation using Atomic Absorption Spectroscopy (AAS). After the experiment, the samples were observed according to their ability to tolerate metal stress with the use of Bioconcentration factor (BCF). The BCF was measured by dividing the test plants' concentrations in the different parts by their total available amounts in the soil (Ching 2008). Results showed that the roots uptook and accumulated more chemicals rather than the shoots. This shows that roots have significant difference over shoots of all species and all levels of contamination. For the BCF, the data showed that the carabao grass had a phytoremediation potential until high levels of Cu and a potential until low levels of Fe contamination. The blue grass on the other hand showed a phytoremediation potential until low levels of Cu and Fe contamination.

Keywords: Phytoremediation, Bioconcentration Factor, Blue Grass, Carabao Grass, Uptake and Accumulation, Contamination, Atomic Absorption Spectroscopy



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