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Effect of Cassava Mill Effluent on the Growth of Fluted Pumpkin (*Telfairia occidentalis* Hook F) and some Soil Chemical Properties

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Abstract: In the trials, cassava mill Effluent was used for fluted pumpkin (*Telfairia occidentalis*) cultivation in order verify the influence of the effluent on the growth and some soil chemical properties. In this regard therefore, a completely randomized and randomized complete block designs were used in the greenhouse and field trials respectively with 6 treatments replicated 3 times. In the greenhouse, the following rates of 0, 100, 200, 300, 400 and 500 ml per 5 kg topsoil were used while in the field trial, 0, 40000, 80000, 120000, 160000 and 200000 litres/ha were utilized. The rates used in the field were equivalent to those of greenhouse. In both trials, the cassava mill effluent was applied 2 weeks prior to transplanting the seedlings. Results indicated that the cassava mill effluent significantly($P< 0.05$) increased soil pH, organic carbon, N, P, K, Ca, Mg, Na, Fe, Cu and Zn whereas the exchangeable acidity decreased significantly ($P < 0.05$) with corresponding increase in cassava mill effluent treatments. Except N and Na, the cassava mill effluent polluted plants had an improved P, K, Mg, Ca, Fe, Cu and Zn components compared to control. The plant height, significantly ($P < 0.05$) decreased with increased cassava mill effluent treatment in the greenhouse trial while in the field trial, 120,000 litres/ha was significantly ($P < 0.05$) higher than other treatments. In the greenhouse trial, significantly ($P < 0.05$) higher number of leaves was attained in 100 ml treatment compared to other treatments whereas in the field trial, the 120,000 and 200,000 litres/ha were significantly ($P < 0.05$) higher compared to other treatments

Keywords: *Effluent, Fluted pumpkin, growth, Soil properties, Treatments*

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