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## Determination of The Potential of Briquette Ashes as a Plant Fertilizer vis-à-vis Conventional Commercial Fertilizers

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### **Abstract**

Fertilizers are applied to replace the essential nutrients for plant growth in the soil after they are depleted. Due to the increased food security in Kenya, poor agricultural yields are a significant problem. Inorganic fertilizers (nitrogenous and phosphate based) are expensive in that many farmers can afford thus resulting in low yields affecting food security. The main objective of this study is to determine the potential of briquette ash as a plant fertilizer vis-à-vis conventional fertilizers. The study evaluated the physicochemical properties, nutritional composition, and pesticide efficacy. Briquette ash has a positive impact on soil since it contains soil rich nutrients. The findings illustrated the high potential of the ash in terms of mineral composition and appearance concerning other contemporary fertilizers as proved by their morphology, particle size (in distribution), crystallinity and physical chemicals. On the other hand, bio-assays analysis using larvae of aphids and Fall armyworms. These findings illustrate that briquette ash can be used especially in rural areas where commercial inorganic fertilizer is expensive and out of reach for the common farmers.

**Keywords:** briquette ash, fertilizer, conventional fertilizer

