**Category: Sustainable Agriculture**

# Preliminary Study of the Potential of Agriculture Waste as a Biodegradable Products: Banana Trunk

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## ABSTRACT

The banana tree or its scientific name is *Musa spp.* is an important industrial plant in food production. In Malaysia, the banana tree became the second most planted fruit tree because bananas are one of the staple foods of Malaysians. However, after harvesting the banana fruit, the part of the banana tree will become agricultural waste that needs to be managed properly. Environmental pollution might occur without proper waste management. Therefore, this preliminary study was conducted to investigate the potential of banana trunks as agricultural waste products on converting into biodegradable products. The biodegradable product was made up by different treatment groups that consist of banana trunks (BT) as the main ingredients and different ratios of binding material (corn flour (CF) and paper (P)) and water. Treatment 1 (T1, Control) consist of 100g BT, while Treatment 2 (T2) consist of 100g BT + 120g P, Treatment 3 (T3) consist of 100g BT + 20g CF + 20g P, and Treatment 4 (T4) consists of 100g BT + 40g CF + 30g P. The production of these biodegradable products required several methods such as drying, grinding, filtering, mixing materials and shape formation. The biodegradable product was dried under the sunlight for 3 days for the drying process. From this preliminary study, it showed that Treatment 4 (T4=100g BT + 40g CF + 30g P) is the best result of texture, color, aromatic, and shape formation of biodegradable products (food containers). In conclusion, the production of biodegradable products from agricultural waste has many positive effects not only on waste management, the environment, but it is also a starting point to support the Sustainable Development Goals (SDG) in Malaysia.

**Keywords:** Banana Trunk, Agriculture Waste, Biodegradable Product, Sustainable Development Goals