THE INFLUENCE OF BIOCHAR AND TYPES OF BIOACTIVATOR ON DECOMPOSITION RATE AND QUALITY OF COFFEE HUSK WASTE COMPOST

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ABSTRACT

Coffee husk waste contains compounds that are difficult to decompose such as 49% cellulose; 24,5% hemicellulose, and 7,63% lignin. The research aims to determine the influence of biochar and types of bioactivator on the decomposition rate and quality of coffee husk waste compost. The study used a Completely Randomized Design (CRD) with 2 factors, namely the type of bioactivator (A) consisting of no bioactivator, Stardec, and Orgadec, and the dose of biochar (B) consisting of no biochar application, 10% (300 g biochar/ 3000 gram of coffee husk waste), and 20% (600 gram of biochar/ 3000 gram of coffee husk waste). Parameters observed in the compost analysis included color, total of Nitrogen, available Nitrogen, available Phosporus, organic C, C/N ratio, pH, and CO_2 evolution. To determine significant differences between treatments, analysis of variance was used, and if significant differences were found, mean difference tests were continued with Duncan's test at a significance level of 5%. The results showed that the biochar dose significantly influenced organic C, nitrogen and phosporus contents.

Kata Kunci : Bioactivator, Biochar, Coffee husk waste, Composting.