

PENGARUH PEMBERIAN BIOAKTIVATOR (EM4 DAN RUMEN SAPI) PADA BERBAGAI BAHAN ORGANIK TERHADAP HASIL KOMPOS(English)

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ABSTRACT

This study aims to investigate the effect of bioactivator application (EM4 and cow rumen) on various organic materials in the composting process. The main issue addressed is the importance of accelerating the decomposition of organic materials using bioactivators, as materials like filter cake, rice straw, coffee husks, and cow manure often require a long time to decompose naturally. The purpose of this research is to determine the impact of bioactivator application on the decomposition rate of organic materials and the quality of the resulting compost. The method used is a Factorial Completely Randomized Design (FCRD), with two factors: the type of bioactivator (EM4 and cow rumen) and the organic materials used (filter cake, rice straw, coffee husks, and cow manure). The results show that the application of bioactivators has a significant effect on the pH of the compost, while temperature and moisture content did not show a significant effect. The combination of EM4 bioactivator and filter cake resulted in the best compost quality, meeting the standards of SNI 19-7030-2004, especially in terms of the C/N ratio and nutrient content.

Keywords: *Bioactivator, EM4, Cow rumen, Organic materials, Compost, Composting process, Compost quality, C/N ratio*