

Effect of adding palm oil mill decanter cake slurry with regular turning operation on the composting process and quality of compost from oil palm empty fruit bunches

ABSTRACT

Formation of compost from oil palm empty fruit bunches (EFB) and decanter cake slurry by adding palm oil mill effluent (POME) with regular turning operation was investigated. The experiment was conducted in a commercial composting plant under the normal production process. The addition of decanter cake slurry has hastened the composting process of the EFB. The C/N ratio after 51 days for the mature compost with the decanter cake slurry was 18.65 while that of the matured compost without the decanter cake slurry remained high at 28.96. The compost formed from the addition of decanter cake to EFB and POME had 46.4% nitrogen, 17.9% phosphorus, 17.7% potassium and 23.1% calcium more than that without decanter cake. The use of compost produced from EFB, POME and decanter cake slurry could solve more environmental problems and enhance economic benefits in the oil palm industry.

Keyword: Empty fruit bunches; Decanter cake slurry; Palm oil mill effluent; Waste management