

ABSTRACT

The Quality of Composting (Ca, Mg, and S) From Decomposition of Empty Bunch by Liquid Waste of Palm Oil Mill and EM (Effective Microorganism)

The escalating areas of palm oil plantation in Riau Province in 2005 due to the demand for crude palm oil that will also producer wastes. Its solid waste (empty bunch), its liquid waste from waste water treatment and EM can be useful as organic fertilizer by composting them for a period about 45 days. To evaluate the quality of compost such a calcium, magnesium, and sulfur are determined after 10, 15, 20, 25, 30, 35, 40, and 45 days of incubation.

The result show that there is the increment of Ca and Mg contents but not for S because sulfur in the form SO_4^{2-} could be oxidized to develop SO_2 and reduce to H_2S . The highest Ca obtained after 30 days, Mg obtained after 20 days, and S obtained after 10 days incubation period. For Ca is 7,81 % (w/w), Mg is 1,57 % (w/w), and S is 3,68 % (w/w).

From the result, shows that the compost can be used as organic fertilizer for the need of Ca, Mg, and S for plants and corps in Riau Province areas.

Keywords: Composting, Empty Bunch, Liquid waste, Effective Microorganism, Organic Fertilizer, and Palm Oil Mill