

EFEKTIVITAS LIMBAH PADAT KELAPA SAWIT SEBAGAI PENGGANTI PUPUK KANDANG TERHADAP PERTUMBUHAN DAN HASIL CABAI RAWIT (*Capsicum frutescens* L.) DI TANAH REGOSOL

Effectiveness of Oil Palm Solid Waste as a Substitute for Cage Fertilizer for the Growth and Yield of Chili Rawit (*Capsicum Frutescens* L.) in Regosol Land

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ABSTRACT

*The aims of this study was to determine the effectiveness of solid waste (Sludge), palm oil as a substitute for manure and to find out the most appropriate sludge dose for the growth and yield of cayenne pepper (*Capsicum frutescens* L.) varieties of Dewata F1. This research was conducted in May to August 2018 on the Experimental field of the faculty of Agriculture University of Muhammadiyah Yogyakarta.*

This research was carried out using a singel factor experimental design with 5 treatments, namely P0(Control/without organic matter), P1 (manure 20 tons / ha equivalent to 600 g / plants), P2 (sludge 18 tons / ha equivalent 540 g / plants), P3 (Sludge 22 tons / ha equivalent 660 g / plants) P4 (Sludge 26 tons / ha equivalent 780 g / plant) which is prepared with a Completely Randomized Design (CRD).

Observation variables were carried out on vegetative growth in the form of plant height, leaf area, number of branches, fresh and dry weight of plants and the variable yield of cayenne pepper in the form of fruit lenght, fruit diameter, fruit number and fruit weight. Observations showed that sludge can replace manure at all treatment doses of the sludge tested. P3 (Sludge dose of 22 tons / ha equivalent 66 g / plant) and P4 (sludge 26 tons / ha equivalent 780 g / plant) increases the number of branches, total number of fruit and total fruit weight.

Keyword: cayenne pepper, sludge palm oil, organic matter