

**THE EFFECT OF VARIOUS FRESH ORGANIC MATTER ON VARIOUS
INCUBATION TIME ON N AND P NUTRIENT AVAILABILITY AND
MAIZE GROWTH ON LATOSOLS**

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ABSTRACT

Latosols is one of the low-fertility soil. One of the solution to improve it to become high-fertility land are by giving fresh organic matter. Incubation time is the key of giving fresh organic matter to the soil so the nutrients will be available in the soil. The aim of this research is to know the effect of giving incubated various fresh organic matter on N, P availability on Latosol with maize as the indicator. Complete random design with 1 factor was used. Treatments that was done are given various fresh organic matter (Siam weed (*Chromolaena odorata*), cow feces and rice straw) on various incubation time (15, 30, and 45 days of incubation). Parameters that were analyzed are N-Available, P-Available, C-Organic, pH H₂O, CEC, and some agronomy parameters such as fresh weight (g), dry weight (g), and crop height (cm). The result of the research showed that fresh organic matter given gives significant result on C-Organic, N-Available, P-Available, crop fresh weight, and crop dry weight, but non-significantly gives effect on soil pH, CEC, and crop height. The treatment by giving siam weed and the treatment 15 days incubated cow feces (A4) could improve highest P nutrient availability than siam weed and rice straw as organic matter. The best maize growth showed in the treatment by giving 15 days incubated cow feces (A4).

Key words : *Fresh Organic Matter, Latosols, Incubation Time, Nutrient Availability, Nitrogen, Phosporus, Maize*