ABSTRACT

EFFECT OF COMBINATION OF STRAW AND MANURE PLUS ON DISPOSAL OF CO₂, NITRATE AND AMMONIUM ON MAIZE CROPPING (Zea mays L.)

By

HENDRIYONO

One alternative way in the use of organic materials are cheaper at the farmers, but also cultivated no negative effect for plant growth is to imitate the manufacture of fermented, which is followed by the provision of straw and manure application Biomikro, but directly attributed to agricultural land. Manure is intended to provide the nutrients required by soil microorganisms, whereas Biomikro aimed at providing energy for decomposer bacteria to decompose given fresh hay.

This study aims to determine the effect of biodekomposer (Biomikro) on a combination of straw and manure on the release of CO₂, ammonium and nitrate. Research carried out in complete randomized group design (RAKL), with three replications treatment in this study are: K0 = control, K1 = 2.5 t ha⁻¹ fermented, K2 = 5 t ha⁻¹ fermented, K3= 2.5 t ha⁻¹ straw + 2.5 t ha⁻¹ cow manure, K4= 5 t ha⁻¹ straw + 5 t ha⁻¹ cow manure, K5: 2.5 t ha⁻¹ straw + 2.5 t ha⁻¹ cattle manure + Biomikro, K6= 5 t ha⁻¹ straw + 5 t ha⁻¹ manure + Biomikro. The similarity range was tested with Bartlett test and data kemenambahan tested with Tukey test. Data were analyzed with analysis of variance and followed Honestly Significant Difference test (BNJ) at level 5%.

The results showed that administration of straw and manure and the addition biodecomposer (Biomicro) gives a real influence on the determination of nitrate.

Keywords: Ammonium, Biomicro, Straw, fermented, Manure, Organic Matter, Organic Matter Decomposition, Nitrate, release CO₂.