THE INFLUENCE OF BLOTONG AND KETTLE ASH FROM PG. MADUKISMO TO SEVERAL CHEMISTRY CHARACTERISTICS OF REGOSOL

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ABSTRACT

Regosol is rich in nutrients but it is not available for the plant, the organic material's level is low as well as cation exchange capacity and lack of N. Blotong and kettle ash have a high rate of nutrients which can use to increase several chemistry characteristics of Regosol. This research aimed to know the influence of blotong and kettle ash application to several chemistry characteristics of Regosol. This research was held in the greenhouse of Agricultural Faculty of Universitas Pembangunan Nasional "Veteran" Yogyakarta, and used a pot experiment that was held from June until July 2018. This research used Factorial Completely Randomized Design (FCRD) method that divided into 2 factors. The first factor is blotong with B0: 0 ton/ha, B1: 15 ton/ha, B2: 30 ton/ha, and B3: 45 ton/ha dose. The second factor is kettle ash with A0: 0 ton/ha, A1: 5 ton/ha and A2: 15 ton/ha dose. There are 12 different types of treatment, and each treatment was repeated thrice. The early soil analysis was texture, pH, C-organic, N-total, N-available, Phosphate-available, Potassium-available and CEC. Blotong and kettle ash analysis were C-organic, pH, N-total, N-available, Phosphate-available, and Potassium available. The analysis after the experiment was pH, C-organic, N-total, N-available, Phosphate-available, Potassium available and CEC. This research used ANOVA, If there was significantly different, then it continued with DMRT in scale 5%. The result showed that blotong gives significantly different to pH, C-organic, N-total, Phosphate-available, Potassium-available and CEC in the soil. Meanwhile, kettle ash gives significantly different to pH, C-organic, Potassium-available, and CEC in the soil. The best combination between blotong and kettle ash was A2B2 treatment (kettle ash 15 ton/ha and blotong 30 ton/ha).

Keywords : *Blotong, Kettle Ash, Regosol, Chemistry Characteristic*