THE EFFECT OF HUSK BIOCHAR AND UREA FERTILIZER DOSE ON N, CHIVES PLANT GROWTH ON ANDOSOL SOIL, WONOSOBO, CENTRAL JAVA

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ABSTRACT

The growth of chives plants requires nitrogen (N) nutrients in large enough quantities. One alternative to meet the needs of N in plants is to apply biochar husks and urea fertilizer. The existence of this study aims to determine the effect of applying husk biochar and urea fertilizer doses on N, the growth of chives plants on Andosol soil, Wonosobo, Central Java. This study used a pot/polybag experimental system prepared with a two-factor Complete Randomized Design (RAL), namely the dose of husk biochar and the dose of urea fertilizer. Husk biochar treatment consists of B0: 0 g/polybag; 0 ton/ha, B1: 15.5g/polybag; 5 tons/ha, B2: 31 g/polybag; 10 tons / ha and urea fertilizer dose treatment consists of U0: 0 g / polybag; 0 kg/ha, U1: 0.41 g/polybag; 125 kg/ha, U3: 0.83 g/polybag; 250 kg/ha. The experiment in this study obtained as many as 9 pots which were repeated 3 times to 27 pots. The observation parameters in this study include soil analysis, namely N available, total N, C-Organic, soil CEC, soil pH and plant growth components, namely plant height, number of leaves, root length, total fresh weight of plants and total dry weight of plants. Data analysis using fingerprints, if there is a real difference, the Duncan test continues with a level of 5%. The results showed that the application of husk biochar and urea fertilizer had an effect on Andosol soil N. The best treatment N available is B1U2 treatment of 0.97 ppm. The best plant height growth in B2U0 treatment was 19.47 cm, the highest number of leaves in B1U0 treatment was 7.3, the best root length in B2U1 treatment was 15.0, fresh weight in B0U1 treatment weighing 6.70 grams and dry weight in B0U0 treatment weighing 4.60 grams.

***Keywords** : Andosol, Biochar, Chives, Nitrogen (N), Urea*