

INTISARI

PENGARUH PUPUK ORGANIK LIMBAH SUSU SAPI DAN BULU AYAM TERHADAP PERTUMBUHAN DAN HASIL KACANG PANJANG (*Vigna unguiculata ssp. Sesquipedalis*)

HANIFA HIRMANINGTYAS

17/412764/PN/15086

Limbah yang dihasilkan dari aktivitas industri dapat memberikan dampak buruk bagi lingkungan. Pemanfaatan limbah sebagai pupuk organik dapat dilakukan untuk meningkatkan pertumbuhan kacang panjang. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian macam dan takaran limbah sebagai pupuk organik terhadap pertumbuhan dan hasil kacang panjang. Penelitian ini dilaksanakan di PIAT, Yogyakarta pada bulan Desember 2020 - April 2021. Penelitian menggunakan rancangan acak lengkap 2x2+1 dengan 5 ulangan. Faktor pertama adalah jenis pupuk organik, yaitu pupuk organik limbah bulu ayam (P1) dan limbah susu sapi (P2). Faktor kedua adalah takaran pupuk organik, yaitu takaran 50% N (A1) dan takaran 100% N (A2). Perlakuan kontrol yaitu tanpa pemupukan (P0A0). Hasil penelitian menunjukkan adanya interaksi antara macam dan takaran pupuk organik terhadap parameter pertumbuhan saat tanaman umur 10 MST. Kombinasi pupuk organik limbah bulu ayam dengan takaran 50% N signifikan meningkatkan jumlah daun, berat segar daun, berat kering daun, dan luas daun dibandingkan dengan kombinasi pupuk organik limbah susu sapi dengan takaran 100% N. Kombinasi pupuk organik limbah bulu ayam dengan takaran 100% N signifikan meningkatkan klorofil total dibandingkan dengan kombinasi pupuk organik limbah susu sapi dengan takaran 100% N dan kontrol. Perlakuan macam dan takaran pupuk organik tidak menunjukkan beda nyata pada parameter hasil dan komponen hasil.

Kata kunci : kacang panjang, pupuk organik, limbah bulu ayam, limbah susu sapi

ABSTRACT

EFFECT OF COMPOSTS DERIVED FROM COW'S DAIRY WASTE AND CHICKEN FEATHER ON GROWTH AND YIELD OF LONG BEANS (*Vigna unguiculata ssp. Sesquipedalis*)

HANIFA HIRMANINGTYAS

17/412764/PN/15086

Waste generated from industrial activities can harm the environment. Utilization of waste as organic fertilizer can be done to increase the growth of long beans. This research aims to know the effect of type and rate of waste as organic fertilizer on the growth and yield of long beans. This experiment was conducted in PIAT, Yogyakarta from December 2020 - April 2021. This experiment was arranged in the factorial Completely Randomized 2x2+1 with five replications. First factor was the types of organic fertilizer, namely chicken feather waste (P1) and cow's dairy waste (P2). Second factor was the rates of organic fertilizer, namely 50% N (A1) and 100% N (A2). The control treatment was without fertilizer (POA0). The results showed that there was an interaction between the type and rate of organic fertilizer on the growth parameters at the age of 10 WAP. Combination of chicken feather waste with a rate of 50% N significantly increased the number of leaves, the leaf fresh weight, the leaf dry weight, and the area leaves compared to combination of cow's dairy waste with a rate of 100% N. Combination of chicken feather waste with a rate of 100% N significantly increased the total chlorophyll compared to combination of cow's dairy waste with a rate of 100% N. The treatment of all types and rates of organic fertilizers did not have a significant effect on crop yields.

Keywords : *long beans, organic fertilizer, chicken feather waste, cow's dairy waste*