

ABSTRAK

Adnan Mustaqim, NIM 4213220022 (2025), Pengaruh Pemberian Pupuk Kandang Ayam Terhadap Pertumbuhan Dan Produksi Tanaman Kacang Panjang (*Vigna cylindrica* L.)

Penelitian ini bertujuan untuk menganalisis pengaruh berbagai dosis pupuk kandang ayam terhadap pertumbuhan dan hasil tanaman kacang panjang (*Vigna cylindrica* L.). Rancangan percobaan yang digunakan adalah Rancangan Acak Lengkap (RAL) dengan empat perlakuan dan enam ulangan. Perlakuan terdiri dari: A (kontrol tanpa pupuk), B (pupuk kandang ayam 0,5 kg), C (1 kg), dan D (1,5 kg). Variabel yang diamati meliputi tinggi tanaman, jumlah daun, jumlah cabang, jumlah polong, panjang polong, dan berat polong segar pada 14, 28, dan 42 Hari Setelah Tanam (HST). Hasil analisis varians (ANOVA) menunjukkan bahwa pemberian pupuk kandang ayam berpengaruh sangat nyata ($p < 0,05$) terhadap semua parameter pertumbuhan dan hasil tanaman. Hasil uji lanjut DMRT membuktikan bahwa perlakuan D (1,5 kg) secara konsisten menghasilkan nilai tertinggi dan berbeda nyata dengan perlakuan lainnya pada semua fase pengamatan. Secara rata-rata, perlakuan D menghasilkan tinggi tanaman 278 cm, jumlah daun 39,5 helai, jumlah cabang 9,83, berat polong 1,15 ons (panen 1) dan 1,45 ons (panen 2), serta panjang polong 49,90 cm pada panen kedua. Dapat disimpulkan bahwa pemberian pupuk kandang ayam dengan dosis 1,5 kg per petakan merupakan dosis optimal yang mampu meningkatkan pertumbuhan vegetatif dan hasil produksi kacang panjang secara signifikan.

Kata Kunci : Kacang Panjang, Pupuk Kandang Ayam, Pertumbuhan, Produksi Tanaman, Dosis Pupuk.



ABSTRACT

Adnan Mustaqim, NIM 4213220022 (2025), The Effect of Chicken Manure Application on The Growth and Production of Long Bean Plants (*Vigna cylindrica* L.)

This study aimed to analyze the effect of different doses of chicken manure fertilizer on the growth and yield of long bean plants (*Vigna cylindrica* L.). The research was conducted in the Greenhouse of the Biology Department, Universitas Negeri Medan. The experimental design used was a Completely Randomized Design (CRD) with four treatments and six replications. The treatments consisted of: A (control without fertilizer), B (0.5 kg chicken manure), C (1 kg), and D (1.5 kg). The observed variables included plant height, number of leaves, number of branches, number of pods, pod length, and fresh pod weight at 14, 28, and 42 Days After Planting (DAP). The results of the analysis of variance (ANOVA) showed that the application of chicken manure had a significant effect ($p < 0.05$) on all plant growth and yield parameters. The follow-up DMRT test proved that treatment D (1.5 kg) consistently yielded the highest values and was significantly different from the other treatments at all observation phases. On average, treatment D resulted in a plant height of 278 cm, 39.5 leaves, 9.83 branches, pod weight of 1.15 ounces (harvest 1) and 1.45 ounces (harvest 2), and a pod length of 49.90 cm at the second harvest. It can be concluded that the application of chicken manure at a dose of 1.5 kg per plot is the optimal dose capable of significantly increasing the vegetative growth and production yield of long beans. This research recommends the use of chicken manure as an effective organic nutrient source for sustainable long bean cultivation.

Kata Kunci : Long Bean, Chicken Manure, Growth, Crop Yield, Fertilizer Dose.