

SINTA MITASARI NPM: 04391911018

PENGARUH PUPUK KANDANG SAPI DAN KOSENTRASI *ECO ENZYME* TERHADAP SIFAT TANAH, PERTUMBUHAN DAN PRODUKSI TANAMAN KACANG PANJANG (*Vigna Sinensis L.*) DI DESA LOLA KECAMATAN OBA TENGAH

Pembimbing : Asrul Dedy Ali Hasan, SP., MP

Idris Abd. Rachman, SP., M.Si

Email: sintamitasari03@gmail.com

RINGKASAN

Tanaman kacang panjang (*Vigna Sinensis L.*) merupakan salah satu komoditas sayuran yang sangat potensial untuk dikembangkan, karena mempunyai nilai ekonomi yang cukup tinggi. Dalam upaya meningkatkan gizi masyarakat, kacang panjang penting sebagai sumber vitamin dan mineral. *Eco enzyme* merupakan hasil dari fermentasi limbah organik seperti ampas buah dan sayuran, gula coklat, gula merah atau gula tebu, dan air yang memiliki spesifik warna coklat gelap serta aroma fermentasi asam manis yang kuat (Cindy *et al.*, 2023). Tujuan penelitian adalah untuk mengetahui pengaruh dosis pupuk kandang sapi dan kosentrasi *Eco Enzyme* terhadap sifat tanah, pertumbuhan dan produksi tanaman kacang panjang. Penelitian ini dilaksanakan di Desa Lola Kecamatan Oba Tengah dan pelaksanaan penelitian dimulai pada bulan November hingga Januari 2024. Analisis sampel tanah dilaksanakan di Laboratorium Ilmu Tanah Fakultas Pertanian Universitas Khairun dan Laboratorium Universitas Hasanuddin. Penelitian ini menggunakan rancangan acak kelompok (RAK) dimana terdiri dari faktor pertama yaitu pupuk kandang sapi dan faktor kedua *eco enzyme*. Kombinasi perlakuan yang diperoleh adalah $3 \times 3 = 9$ kombinasi perlakuan yang diulang sebanyak tiga kali sehingga terdapat 27 unit percobaan. variabel penelitian ini adalah Tinggi tanaman (cm), Perhitungan jumlah cabang, produksi polong, *eco enzyme*, pH tanah , persen kadar air, kadar hara P). Hasil penelitian menunjukkan bahwa Pemberian dosis pupuk kandang sapi 40 ton/ha memberikan pengaruh yang lebih baik terhadap pertumbuhan tanaman kacang panjang pada umur 10, 20 dan 30 HST. Sedangkan pada parameter (tinggi tanaman, jumlah batang, jumlah cabang dan produksi, pH tanah dan kadar air) memberikan pengaruh tidak nyata.

Kata kunci: *Eco enzyme*, Kacang Panjang, Pupuk Organik, Sifat Tanah.

SINTA MITASARI NPM: 04391911018

**THE EFFECT OF CATTLE MANURE AND ECO ENZYME
CONCENTRATION ON SOIL PROPERTIES, GROWTH AND
PRODUCTION OF LONG BEAN (*Vigna Sinensis* L.) IN LOLA VILLAGE,
OBA TENGAH DISTRICT**

Supervisor: Asrul Dedy Ali Hasan, SP., MP

Idris Abd. Rachman, SP., M.Sc

Email: sintamitasari03@gmail.com

SUMMARY

Long bean plants (*Vigna sinensis* L.) are one of the vegetable commodities that have great potential to be developed, because they have a fairly high economic value. In an effort to improve people's nutrition, long beans are important as a source of vitamins and minerals. *Eco enzyme* is the result of fermentation of organic waste such as fruit and vegetable pulp, brown sugar, brown sugar or cane sugar, and water that has a specific dark brown color and a strong sweet and sour ferment aroma (Cindy et al., 2023). The purpose of the study was to determine the effect of cow manure dosage and *Eco Enzyme* concentration on soil properties, growth and production of long bean plants. This research was carried out in Lola Village, Central Oba District and the implementation of the research began from November to January 2024. Soil sample analysis was carried out at the Soil Science Laboratory, Faculty of Agriculture, Khairun University and the Hasanuddin University Laboratory. This study uses a random group design (RAK) which consists of the first factor, namely cow manure and the second factor, eco enzyme. The combination of treatments obtained was $3 \times 3 = 9$ combinations of treatments that were repeated three times so that there were 27 experimental units. The variables of this study are plant height (cm), Calculation of the number of branches, pod production, eco enzyme, soil pH, percent water content, nutrient content P). The results of the study showed that the administration of 40 tons/ha of cow manure had a better effect on the growth of long bean plants at the age of 10, 20 and 30 HST. Meanwhile, the parameters (plant height, number of stems, number of branches and production, soil pH and moisture content) have an insignificant effect.

Key words: *Eco enzyme*, Long Beans, Organic Fertilizer, Soil Properties.