

**PENGARUH PEMBERIAN BEBERAPA DOSIS PUPUK
GUANO TERHADAP PERTUMBUHAN DAN HASIL
TANAMAN CAISIM (*Brassica juncea* L.) DI ULTISOL**

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Abstrak

Caisim merupakan sayuran daun yang banyak dikonsumsi masyarakat Indonesia sehingga kebutuhan pasar terus meningkat. Upaya peningkatan produksi caisim dihadapkan pada keterbatasan lahan subur. Sebagian besar lahan pertanian di Indonesia didominasi oleh tanah Ultisol yang memiliki kesuburan rendah, bersifat masam, kandungan bahan organik rendah, serta kekurangan unsur hara makro. Salah satu alternatif untuk meningkatkan kesuburan tanah Ultisol adalah melalui pemanfaatan pupuk organik seperti pupuk guano yang kaya akan unsur nitrogen (N), fosfor (P), dan kalium (K). Penelitian ini bertujuan mengetahui dosis pupuk guano terbaik dalam meningkatkan pertumbuhan dan hasil tanaman caisim. Penelitian ini telah dilaksanakan di Rumah Kawat Fakultas Pertanian Universitas Andalas dengan ketinggian tempat ± 200 m dpl, pada bulan Oktober–Desember 2025. Percobaan menggunakan Rancangan Acak Lengkap lima taraf perlakuan dosis pupuk guano, yaitu 0, 4, 8, 12, dan 16 ton/ha dengan empat kali ulangan. Parameter yang diamati antara lain tinggi tanaman, jumlah daun, luas daun, berat segar tanaman, berat kering tanaman, volume akar, dan uji organoleptik. Data dianalisis dengan uji F pada taraf nyata 5% dan data uji organoleptik dianalisis menggunakan aplikasi IBM SPSS Statistik versi 31. Hasil penelitian menunjukkan bahwa pemberian beberapa dosis pupuk guano mempunyai pengaruh yang sama terhadap pertumbuhan dan hasil tanaman caisim di Ultisol.

Kata kunci : hasil, pertumbuhan, pupuk organik, sayur daun



THE EFFECT OF SEVERAL DOSES OF GUANO FERTILIZER ON THE GROWTH AND YIELD OF CAISIM (*Brassica juncea* L.) PLANTS IN ULTISOL

Abstract

Caisim (*Brassica juncea* L.) is a leafy vegetable widely consumed by the Indonesian population, resulting in consistently high market demand. However, efforts to enhance caisim production are constrained by the limited availability of fertile agricultural land. In Indonesia, a substantial proportion of agricultural areas is dominated by Ultisol soils, which are characterized by low fertility, high acidity, and low organic matter content. One potential strategy to improve the fertility of Ultisol soils is the application of organic fertilizers, such as guano fertilizer, which is rich in essential nutrients including nitrogen (N), phosphorus (P), and potassium (K). This study aimed to determine the optimal dosage of guano fertilizer for improving the growth and yield of caisim plants. The research was conducted in the greenhouse of the Faculty of Agriculture, Andalas University (≈ 200 meters above sea level) from October to December 2025. The experiment was arranged using a Completely Randomized Design (CRD) consisting of five levels of guano fertilizer application: 0, 4, 8, 12, and 16 tons ha^{-1} , each with four replications. Observed parameters included plant height, number of leaves, leaf area, fresh weight, dry weight, root volume, and organoleptic characteristics. The data were analyzed using analysis of variance (ANOVA) at a 5% significance level, while organoleptic data were processed using IBM SPSS Statistics version 31. The results showed that, under the conditions of this study, the application of guano fertilizer at the tested dosages did not significantly affect the growth or yield of caisim plants cultivated on Ultisol soil.

Keywords: yield, marginal, growth, organoleptic, fertilizer, leaf vegetables

