PENGARUH PEMBERIAN BERBAGAI DOSIS BIOCHAR CANGKANG SAWIT TERHADAP PERTUMBUHAN DAN HASIL TANAMAN KEDELAI (*Glycine max (*L.*)* Merril)

Putri Theresia[1)], Aryunis[2)], Buhaira [3)]
[1)]Mahasiswa Program Studi Agroteknologi, Fakultas Pertanian, Universitas Jambi
[2)]Dosen Program Studi Agroteknologi, Fakultas Pertanian, Universitas Jambi
Kampus Pinang Masak, Mendalo Darat Jambi 36361
*Alamat korespondensi : putrisimanik@gmail.com

ABSTRACT

Soybean *Glycine max* (L.) Merill is one of the third most important food crop commodities in Indonesia after rice and corn. Soybeans play a role as a very important source of vegetable protein in order to fulfill the community's nutrition because it is safe for health and the price is relatively cheap compared to animal protein sources. Soybean plants are used as a basic ingredient for making tempeh, tofu, tauco, soy sauce, and as a mixture of animal feed (Laili, 2022). The research was conducted at the Teaching and Research Farm of the Faculty of Agriculture, Jambi University, UNJA Mendalo campus, Jambi Luar Kota District, Muaro Jambi Regency. The research was conducted from March to June 2025. This research used a one-factor Randomized Block Design (RAK) with six levels of palm shell biochar treatment, namely p0: 0 ton.ha-1, p1: 10 ton.ha-1, p2: 15 ton.ha-1, p3: 20 ton.ha-1, p4: 25 ton.ha-1, p5: 30 ton.ha-1. Each treatment was replicated four times, resulting in 24 experimental plots. Each plot contained 30 plants, and four sample plants were taken from each plot, resulting in a total of 720 plants and 96 sample plants. The results showed that the application of palm kernel shell biochar significantly affected plant height, the number of pods per plant, the number of filled pods per plant, and seed weight per plant. However, it had no effect on primary branches. A plant dose of 20 tons/ha-1 showed the best results for soybean growth and yield.

Keywords: soybean, palm kernel shell biochar

ABSTRAK

Kedelai *Glycine max* (L.) Merill merupakan salah satu komoditi tanaman pangan terpenting ketiga di Indonesia setelah padi dan jagung. Kedelai berperan sebagai sumber protein nabati yang sangat penting dalam rangka pemenuhan gizi masyarakat karena aman bagi kesehatan dan harganya relatif murah dibandingkan dengan sumber protein hewani. Tanaman kedelai dimanfaatkan sebagai bahan dasar pembuatan tempe, tahu, tauco, kecap, dan sebagai campuran makanan ternak (Laili, 2022). Penelitian dilaksanakan di *Teaching and Research Farm* Fakultas Pertanian Universitas Jambi, kampus unja mendalo Kecamatan Jambi Luar Kota, Kabupaten Muaro Jambi. Penelitian dilaksanakan pada bulan Maret sampai bulan Juni 2025. Penelitian ini menggunakan Rancangan Acak Kelompok (RAK) satu faktor dengan enam taraf perlakuan

biochar cangkang sawit yaitu p^0: 0 ton.ha^{-1}, p^1 : 10 ton.ha^{-1}, p^2 : 15 ton.ha^{-1}, p3: 20 ton.ha^{-1} , p^4 : 25 ton.ha^{-1}, p^5 : 30 ton.ha^{-1}. Masing-masing perlakuan diulang empat kali, sehingga terdapat 24 petakan percobaan. Setiap petakan terdapat 30 tanaman dan disetiap petak percobaan diambil 4 tanaman sampel, sehingga secara keseluruhan terdapat 720 tanaman dan 96 tanaman sampel. Hasil penelitian menunjukkan bahwa pemberian biochar cangkang sawit berpengaruh nyata terhadap, tinggi tanaman, jumlah polong pertanaman, jumlah polong berisi pertanaman, dan bobot biji pertanaman. Tetapi tidak bepengaruh terhadap cabang primer. Dosis tanaman dengan 20 ton.ha^{-1} menunjukan hasil terbaik untuk pertumbuhan dan hasil tanaman kedelai

---

Kata kunci : kedelai, biochar cangkang sawit