

**RESPONS PERTUMBUHAN DAN PRODUKSI TANAMAN JAGUNG PULUT
(*Zea mays Ceratina*) TERHADAP PENGGUNAAN
BIOCHAR TONGKOL JAGUNG**

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ABSTRAK

Jagung pulut merupakan salah satu jagung yang dikonsumsi masyarakat Indonesia karena salah satu nilai gizinya akan tetapi produksi jagung pulut menurun. Hal tersebut dikarenakan rata-rata lahan belum optimal yang di mana mengalami defisit air serta kurangnya lahan organik. Penelitian dilaksanakan di Kebonsari. Kecamatan Sumbersari, Kabupaten Jember, dari bulan Agustus hingga Oktober 2024 dengan ketinggian 100 MDPL. Rata-rata suhu pada lahan sebesar 26°C-31°C dan kelembapan berkisar 88% sampai 90%, dengan curah hujan ringan sebanyak 6-20 mm/hari. Rancangan percobaan yang digunakan adalah Rancangan Acara Kelompok (RAK) non-faktorial dengan enam taraf perlakuan dosis biochar (0.8 kg/m², 1.6 kg/m², 2.4 kg/m², 3.2 kg/m², 4 kg/m², dan 4.8 kg/m²) yang diulang sebanyak empat kali. Variabel yang diamati meliputi tinggi tanaman, diameter batang, jumlah daun, berat segar per plot, berat segar per sampel, berat kering per plot, berat kering per sampel, kadar kemanisan, panjang tongkol, diameter tongkol, dan berat 100 biji. Hasil penelitian ini menunjukkan dosis sebanyak 1,6 kg/m² berpengaruh berbeda sangat nyata terhadap berat tongkol segar per sampel (1,08 kg) dan berat tongkol kering per sampel (0,23 kg). Sedangkan dosis biochar 0,8 kg/m² berpengaruh beda nyata terhadap hasil tongkol segar per plot (2,60 kg) dan berat kering tongkol per plot (1,91 kg). Hal ini dikarenakan biochar kaya akan karbon aktif yang berfungsi memperbaiki struktur tanah dan meningkatkan aktivitas mikroorganisme dalam menjaga kesehatan, kesuburan tanah, serta mendukung pertumbuhan tanaman.

Kata kunci : *Biochar tongkol jagung, jagung pulut, produktivitas jagung pulut*

Growth and Production Response of Sticky Corn (*Zea mays Ceratina*) Plants to the Use of Corn Cob Biochar

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ABSTRACT

Sticky corn is one of the corn varieties consumed by the Indonesian population due to its nutritional value; however, sweet corn production has been declining. This is primarily due to suboptimal land conditions, including water shortages and a lack of organic soil. The study was conducted in Kebonsari, Summersari District, Jember Regency, from August to October 2024 at an elevation of 100 meters above sea level. The average temperature on the land ranged from 26°C to 31°C, with humidity levels between 88% and 90%, and light rainfall of 6–20 mm/day. The experimental design used was a non-factorial Group Treatment Design (GTD) with six treatment levels of biochar dosage (0.8 kg/m², 1.6 kg/m², 2.4 kg/m², 3.2 kg/m², 4 kg/m², and 4.8 kg/m²) repeated four times. The variables observed included plant height, stem diameter, number of leaves, fresh weight per plot, fresh weight per sample, dry weight per plot, dry weight per sample, sugar content, cob length, cob diameter, and weight of 100 seeds. The results of this study indicate that a dose of 1.6 kg/m² had a significantly different effect on fresh cob weight per sample (1.08 kg) and dry cob weight per sample (0.23 kg). Meanwhile, the biochar dose of 0.8 kg/m² had a significant effect on fresh cob yield per plot (2.60 kg) and dry cob weight per plot (1.91 kg). This is because biochar is rich in activated carbon, which improves soil structure, enhances microbial activity in maintaining soil health and fertility, and supports plant growth.

Keywords: Corn cob biochar, productivity of sticky corn, sticky corn