

DODI ANDREAN WIJAYA. 160311100031. Pengaruh Campuran Biochar dan Pupuk Kandang Sapi Terhadap Pertumbuhan dan Produksi Tanaman Kacang Bambara (*Vigna subterranea* (L.) Verdcourt.) Dibawah bimbingan: **Dr. Agr. Eko Setiawan, S.P., M.Si** dan **Mustika Tripatmasari, S.P., M.Si**

ABSTRAK

Peningkatan produksi tanaman kacang bambara dapat dilakukan dengan menambahkan biochar dan pupuk kandang pada media tanam. Penelitian ini menguji pengaruh pemberian biochar dan pupuk kandang sapi terhadap pertumbuhan dan produksi tanaman kacang bambara dan diharapkan dapat memberikan pengaruh yang positif terhadap pertumbuhan dan produksi kacang bambara. Penelitian ini dilaksanakan pada bulan Desember 2019 sampai April 2020 di lahan pertanian masyarakat Desa Telang Dusun Candi Kabupaten Bangkalan dan laboratorium Agroekoteknologi Universitas Trunojoyo Madura. Penelitian ini menggunakan Rancangan Acak Kelompok (RAK) dengan 12 perlakuan dan 3 kali ulangan. Dosis yang digunakan yaitu biochar B0: 0 ton/ha, B1: 10 ton/ha, B2: 20 ton/ha, B3: 30 ton/ha dan pupuk kandang sapi P0: 0 ton/ha, P1: 1 ton/ha, P2: 3 ton/ha, P3: 5 ton/ha, lalu dikombinasikan menjadi 12 perlakuan yaitu B0P0, B0P3, B1P1, B1P2, B1P3, B2P1, B2P2, B2P3, B3P0, B3P1, B3P2, B3P3. Hasil penelitian menunjukkan bahwa perlakuan berpengaruh nyata terhadap produksi kacang bambara. Perlakuan yang memberikan nilai rata-rata tertinggi adalah B1P2 yaitu 5,94 ton/ha dan nilai rata-rata terkecil terdapat pada perlakuan B2P2 yaitu 2,90 ton/ha. Perlakuan berpengaruh tidak nyata terhadap variabel pertumbuhan yang meliputi jumlah cabang, panjang tanaman, kandungan klorofil, kadar air daun relatif, dan berat kering akar.

Kata kunci: Biochar, Pupuk Kandang, Kacang Bambara.

DODI ANDREAN WIJAYA. 160311100031. The Effect of a Mixture of Biochar and Cow Manure on the Growth and Production of Bambara (*Vigna subterranea* (L.) Verdcourt.) Under the Guidance of: **Dr. Agr. Eko Setiawan, S.P., M.Si** and **Mustika Tripatmasari, S.P., M.Si**

ABSTRACT

Increasing the production of bambara beans can be done by adding biochar and cow manure to the growing media. This study examines the effect of giving biochar and cow manure on the growth and production of bambara beans and is expected to have a positive effect on growth and production of bambara beans. This research was carried out from December 2019 to April 2020 on the agricultural land of the Telang Village community, Candi, Bangkalan Regency an Agroecotechnology Laboratory, Trunojoyo University of Madura. This study used a randomized block design (GRBDs) with 12 treatments and 3 replications. The doses used are biochar B0: 0 tons/ha, B1: 10 tons/ha, B2: 20 tons/ha, B3: 30 tons/ha and cow manure P0: 0 tons/ha, P1: 1 tons/ha, P2: 3 tons/ha, P3: 5 tons/ha, then combined into 12 treatments, namely B0P0, B0P3, B1P1, B1P2, B1P3, B2P1, B2P2, B2P3, B3P0, B3P1, B3P2, B3P3. The results showed that the treatments had a significant effect on the production of the bambara beans. The treatment that gave the highest average value was B1P2, which was 5,94 tons/ha and the lowest average value was found in the B2P2 treatment, which was 2,90 tons/ha. Treatment had no significant effect on growth variables which included number of branches, plant length, chlorophyll content, relative leaf water content, and root dry weight.

Keywords: Biochar, Manure, Bambara Beans.