

ABSTRAK

Mita Ariandini Suryadi. 2024. Uji Efektivitas Biochar Three in One terhadap Pertumbuhan Tanaman Sawi (*Brassica juncea* L.).

Tanaman sawi (*Brassica juncea* L.) adalah salah satu sayuran yang digemari oleh masyarakat di Indonesia. Banyaknya kebutuhan sawi di masyarakat, harus ditingkatkan kualitas dan kuantitasnya dengan *biochar three in one*. *Biochar three in one* (biotron) adalah gabungan dari biochar, pupuk organik, dan agen hayati. Biotron memiliki fungsi untuk menyediakan oksigen, air, dan nutrisi bagi tanaman. Penelitian ini bertujuan untuk mengetahui efektivitas *biochar three in one* terhadap pertumbuhan tanaman sawi (*Brassica juncea* L.). Percobaan dilaksanakan di Green House Handaru Kaktus Indonesia yang berlokasi di Jalan Gunung Batu, Kampung Sukamulya RT 01/10, desa Langensari Kec. Lembang Kab. Bandung Barat. Metode penelitian yang digunakan adalah metode eksperimen dengan menggunakan Rancangan Acak Lengkap (RAL), 6 perlakuan dan 4 pengulangan. Perlakuan A (kontrol) tanpa pemberian *biochar three in one* dengan konsentrasi 0g, perlakuan B dengan pemberian *biochar three in one* 35g, perlakuan C dengan pemberian *biochar three in one* 40g, perlakuan D dengan pemberian *biochar three in one* 45g, perlakuan E dengan pemberian *biochar three in one* 50g, dan perlakuan F dengan pemberian *biochar three in one* 55g. Analisis data menggunakan SPSS, dan uji yang dilakukan adalah uji normalitas, uji ANOVA, uji homogenitas, dan uji Duncan. Pemberian *biochar three in one* untuk parameter tinggi tanaman efektif pada konsentrasi 55g, untuk parameter jumlah daun efektif pada konsentrasi 50g, untuk parameter bobot tanaman efektif pada konsentrasi 50g. Berdasarkan keseluruhan parameter yang diukur, dapat disimpulkan bahwa konsentrasi pemberian biochar three in one yang efektif pada penelitian ini adalah 50g.

Kata kunci: Biochar, *biochar three in one*, tanaman sawi

ABSTRACT

Mita Ariandini Suryadi. 2024. Effectiveness Test of Biochar Three in One on Mustard Plant Growth (Brassica juncea L.).

The mustard plant (Brassica juncea L.) is a popular vegetable in Indonesia. Due to the high demand for mustard greens, their quality and quantity must be enhanced using biochar three in one. biochar three in one combines biochar, organic fertilizer, and biological agents. Biochar three in one functions to provide oxygen, water, and nutrients to the plants. This study aims to determine the effectiveness of biochar three in one. on the growth of mustard plants (Brassica juncea L.). The experiment was conducted at the Green House Handaru Kaktus Indonesia located on Jalan Gunung Batu, Kampung Sukamulya RT 01/10, Langensari Village, Lembang District, West Bandung Regency. The research method used was an experimental method with a Completely Randomized Design, consisting of 6 treatments and 4 replications. Treatment A (control) was without the application of biochar three in one at a concentration of 0g, treatment B with 35g of biochar three in one, treatment C with 40g, treatment D with 45g, treatment E with 50g, and treatment F with 55g. Data analysis was performed using SPSS, and the tests conducted were normality test, ANOVA, homogeneity test, and Duncan's test. The application of biochar three in one at a concentration of 55g was effective for plant height, 50g was effective for the number of leaves, and 50g was effective for plant weight. Based on the overall measured parameters, it can be concluded that the effective concentration of biochar three in one in this study is 50g.

Keywords: Biochar, biochar three in one, mustard plant

RINGKESAN

Mita Ariandini Suryadi. 2024. *Nguji Efektivitas Biochar Three in One dina Tutuwuhan Sosin (Brassica juncea L.)*.

Tutuwuhan sosin (*Brassica juncea L.*) nyaéta salasahiji sayuran anu populer di masarakat Indonésia. Paménta ageung pikeun sayuran mustard di masarakat kedah ningkatkeun kualitas sareng kuantitas kalayan biochar three in one. Biochar three in one (biotron) mangrupikeun kombinasi antara biochar, pupuk organik jeung agén biologis. Biotron miboga fungsi nyadiakeun oksigén, cai jeung zat gizi pikeun tutuwuhan. Ieu panalungtikan miboga tujuan pikeun mikanyaho efektivitas biochar three in one dina tumuwuhna sosin (*Brassica juncea L.*). Uji coba dilaksanakeun di Green House Handaru Kaktus Indonesia anu perenahna di Jalan Gunung Batu, Kampung Sukamulya RT 01/10, Desa Langensari, Kec. Kabupatén Lembang Bandung Barat. Méthode panalungtikan anu digunakeun nya éta méthode ékspérimén ngagunakeun Rancangan Acak Lengkap, 6 perlakuan jeung 4 ulangan. Perlakuan A (kontrol) tanpa biochar three in one kalayan konsentrasi 0g, perlakuan B kalayan biochar three in one 35g, perlakuan C kalayan biochar three in one 40g, perlakuan D biochar three in one 45g, perlakuan E kalayan biochar three in one 50g, sarta perlakuan F ku cara méré biochar three in one 55g. Analisis data ngagunakeun SPSS, sarta tés anu dilaksanakeun nya éta uji normalitas, uji ANOVA, uji homogénitas, jeung uji Duncan. Nyadiakeun biochar three in one pikeun parameter jangkungna tutuwuhan éféktif dina konsentrasi 55g, pikeun parameter jumlah daun éféktif dina konsentrasi 50g, pikeun parameter beurat tutuwuhan éféktif dina konsentrasi 50g. Dumasar kana sakabéh parameter nu diukur, bisa dicindekkeun yén konsentrasi éféktif biochar three in one dina ulikan ieu 50g.

Kata kunci: Biochar, biochar three in one, tutuwuhan sosin