

**PENGARUH PEMBERIAN AMELIORAN TERHADAP LAJU  
INFILTRASI PADA TANAH PSAMMENT DAN PERTUMBUHAN SERTA  
HASIL TANAMAN JAGUNG (*Zea mays*)**

**OLEH**

**NURFADILLA HAYANI**

**1510231014**

**SKRIPSI**

**Sebagai Salah Satu Syarat Untuk  
Memperoleh Gelar Sarjana Pertanian**



**JURUSAN TANAH  
FAKULTAS PERTANIAN  
UNIVERSITAS ANDALAS  
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# **THE EFFECT OF AMELIORANT PRIVATE VOCATIONAL SCHOOL OF INFILTRATION IN SOIL PSAMMENT AND GROWTH AND RESULTS OF CORN PLANT (*Zea mays*)**

## **ABSTRACT**

This study aims to study the effect and application of ameliorant on soil infiltration rate and growth and yield of maize (*Zea mays*) in Psamment. This research was conducted in Nagari Katapiang, Batang Anai District, Padang Pariaman, and soil analysis in the laboratory of the Department of Soil, Faculty of Agriculture, Andalas University, Padang. This research was conducted from August 2019 to January 2021 using a randomized block design (RBD) with 8 treatments and 4 replications. The data obtained were analyzed statistically and continued with the DNMRT test at 5% level for significantly different F values. The treatments given were A = Control, B = rice straw mulch (10 tonnes / ha), C = rice husk biochar (20 tonnes / ha), D = clay (20 tonnes / ha), E = rice straw mulch (10 tonnes) / ha) + clay (20 tonnes / ha), F = rice straw mulch (10 tonnes / ha) + rice husk biochar (20 tonnes / ha), G = rice husk biochar (20 tonnes / ha) + clay (20 tonnes) / ha), H = rice straw mulch (10 tonnes / ha) + rice husk biochar (20 tonnes / ha) + clay (20 tonnes / ha). The results showed that the addition of a combination treatment of rice husk biochar, clay, and rice straw mulch had the highest increase in the TRP value of 23.23%, organic matter content of 2.78%, and soil moisture content of 6%, and a decrease in BV value of 0.47. g / cm<sup>3</sup>. The highest decrease in infiltration rate was in the combination treatment of rice straw mulch, clay and rice husk biochar with a value of 506.6 mm / hour compared to control of 994.7 mm / hour, but still within the same criteria. The addition of a combination of rice straw mulch, clay and rice husk biochar treatment in Psamment could increase the yield of maize by 11.05 kg / plot when compared to the control of 6.72 kg / plot.

*Key words: Psamment, infiltration rate, rice husk biochar, clay, straw mulch, maize*

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**ABSTRAK**

Penelitian ini bertujuan untuk mempelajari pengaruh dan pemberian ameliorant terhadap laju infiltrasi tanah serta pertumbuhan dan hasil tanaman jagung (*Zea mays*) pada Psamment. Penelitian ini dilaksanakan di Nagari katapiang, Kecamatan batang Anai Padang Pariaman, dan analisis tanah di laboratorium Jurusan Tanah Fakultas Pertanian Universitas Andalas, Padang. Penelitian ini dilaksanakan pada bulan Agustus 2019 sampai Januari 2021 menggunakan Rancangan Acak Kelompok (RAK) dengan 8 perlakuan dan 4 ulangan. Data yang diperoleh dianalisis dengan statistik dan dilanjutkan dengan uji DNMRT taraf 5% untuk nilai F yang berbeda nyata. Perlakuan yang diberikan adalah A = Kontrol, B = Mulsa jerami padi (10 ton/ha), C = *Biochar* sekam padi (20 ton/ha), D = liat (20 ton/ha), E = Mulsa jerami padi (10 ton/ha) + liat (20 ton/ha), F = Mulsa jerami padi (10 ton/ha) + *Biochar* sekam padi (20 ton/ha), G = *Biochar* sekam padi (20 ton/ha) + liat (20 ton/ha), H = Mulsa jerami padi (10 ton/ha) + *Biochar* sekam padi (20 ton/ha) + liat (20 ton/ha). Hasil penelitian menunjukkan bahwa nilai penurunan laju infiltrasi tertinggi berada pada perlakuan kombinasi mulsa jerami padi, liat dan biochar sekam padi dengan nilai sebesar 506,6 mm/jam dibandingkan kontrol sebesar 994,7 mm/jam, namun masih dalam kriteria yang sama. Penambahan perlakuan kombinasi mulsa jerami padi, liat dan biochar sekam padi pada Psamment dapat meningkatkan hasil tanaman jagung sebesar 11,05 kg/plot jika dibandingkan dengan kontrol sebesar 6,72 kg/plot.

*Kata kunci : Psamment, laju infiltrasi, biochar sekam padi, tanah liat, mulsa jerami, jagung*