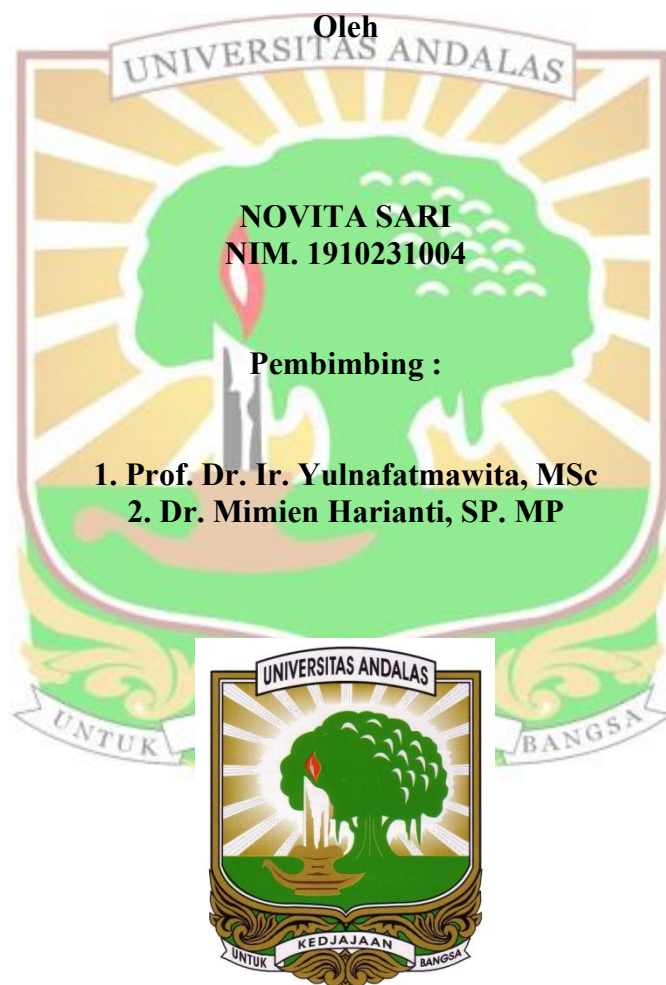


**APLIKASI BIOCHAR SEKAM PADI DAN DOLOMIT  
TERHADAP STABILITAS AGREGAT TANAH DAN  
PERTUMBUHAN TANAMAN KEDELAI (*Glycine max* (L.)  
Merill) PADA INCEPTISOL**

**SKRIPSI**



**FAKULTAS PERTANIAN  
UNIVERSITAS ANDALAS  
PADANG  
2023**

# **APLIKASI BIOCHAR SEKAM PADI DAN DOLOMIT TERHADAP STABILITAS AGREGAT TANAH DAN PERTUMBUHAN TANAMAN KEDELAI (*Glycine max* (L.) Merill) PADA INCEPTISOL**

## **Abstrak**

Stabilitas agregat tanah merupakan salah satu sifat fisika tanah yang dipengaruhi oleh tekstur dan kandungan bahan organik tanah. Tanah bertekstur kasar cenderung mempunyai stabilitas agregat yang rendah. Penelitian ini bertujuan mengkaji pengaruh kombinasi biochar sekam padi (BSP) dan dolomit (D) terhadap stabilitas agregat tanah dan pertumbuhan tanaman kedelai (*Glycine max* (L.) Merill) pada Inceptisol. Penelitian ini merupakan percobaan pot yang dilaksanakan di lapangan dan analisis tanah di Laboratorium Fisika Tanah Fakultas Pertanian Universitas Andalas dari bulan Januari sampai Mei 2023. Penelitian terdiri atas 8 perlakuan: (S1 = 0 t/ha BSP + 0 t/ha D; S2 = 0 t/ha BSP + 1.5 t/ha D; S3 = 7.5 t/ha BSP + 0 t/ha D; S4 = 7.5 t/ha BSP + 1.5 t/ha D; S5 = 15 t/ha BSP + 0 t/ha D; S6 = 15 t/ha BSP + 1.5 t/ha D; S7 = 22.5 t/ha BSP + 0 t/ha D; S8 = 22.5 t/ha BSP + 1.5 t/ha D) dengan 3 ulangan. Satuan percobaan dialokasikan di lapangan berdasarkan rancangan acak lengkap (RAL). Parameter yang dianalisis yakni bahan organik tanah, BV, TRP, permeabilitas, stabilitas agregat serta pengamatan tinggi dan produksi tanaman kedelai. Berdasarkan hasil penelitian perlakuan terbaik bahwa pengaplikasian 22,5 t/ha BSP dan 1,5 t/ha D mampu meningkatkan nilai stabilitas agregat Inceptisol dari kriteria kurang mantap (42,61%) menjadi mantap (66,78%), serta pertumbuhan tinggi (67,33) cm dan produksi sebesar (98,06 g/pot) tanaman kedelai.

Kata Kunci : Biochar Sekam Padi, Dolomit, Inceptisol, Stabilitas Agregat, Kedelai



# APPLICATION OF RICE HUSK BIOCHAR AND DOLOMITE ON SOIL AGREGATE STABILITY AND GROWTH OF SOYBEAN (*Glycine max* (L.) Merrill) ON INCEPTISOL

## Abstract

Soil aggregate stability is one of soil physical properties influenced by soil texture and organic matter. Coarse-textured soils are use to have low aggregate stability. This study was aimed to examine the effect of rice husk biochar (BSP) and dolomite (D) combination on soil aggregate stability and soybean (*Glycine max* (L.) Merrill) growth on Inceptisol. The research was a pot experiment conducted in the wire house and soil analysis was conducted at the Soil Physics Laboratory, Faculty of Agriculture, Andalas University from January to May 2023. The study consisted of 8 treatments (S1 = 0 t/ha BSP + 0 t/ha D; S2 = 0 t/ha BSP + 1.5 t/ha D; S3 = 7.5 t/ha BSP + 0 t/ha D; S4 = 7.5 t/ha BSP + 1.5 t/ha D; S5 = 15 t/ha BSP + 0 t/ha D; S6 = 15 t/ha BSP + 1.5 t/ha D; S7 = 22.5 t/ha BSP + 0 t/ha D; S8 = 22.5 t/ha BSP + 1.5 t/ha D) with 3 replicates. The experimental units were allocated based on Completely Randomized Design (CRD). The parameters analyzed were soil organic matter, BD, TSP, permeability, aggregate stability as well as production of soybean. Based on the results of the research, it showed that application of 22.5 t/ha BSP and 1.5 t/ha D was able to improve soil aggregate stability from less stable (42.61%) to stable (66.78%) criteria, as well as crop height (67.33 cm) and pod production (98.06 g/pot).

Keywords: Aggregate Stability, Dolomite, Inceptisol, Rice Husk Biochar Soybean

