

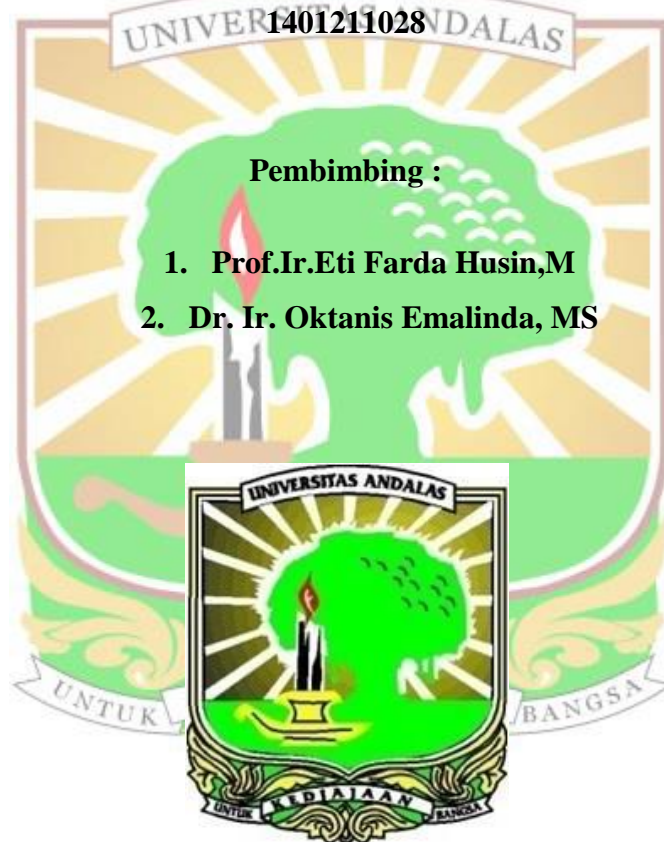
**APLIKASI DOSIS FUNGI MIKORIZA ARBUSKULA (FMA)
PADA TANAH BEKAS TAMBANG BATUBARA YANG TELAH DI
REVEGETASI TERHADAP SIFAT KIMIA TANAH DAN
PERTUMBUHAN TANAMAN CABAI (*Capsicum annum L.*)**

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**PROGRAM STUDI AGROTEKNOLOGI
FAKULTAS PERTANIAN
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ABSTRAK

Penelitian ini telah dilaksanakan di rumah kawat Fakultas Pertanian, Universitas Andalas, Padang pada bulan Juli 2018 sampai November 2018. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian dosis Fungi Mikoriza Arbuskula (FMA) pada tanah bekas tambang batubara yang telah direvegetasi terhadap sifat kimia tanah serta pertumbuhan tanaman cabai (*Capsicum Annum L.*). Penelitian ini merupakan percobaan pot yang terdiri dari 5 perlakuan (0; 10; 15;20; dan 25 gram FMA dengan 3 ulangan menggunakan Rancangan Acak Lengkap (RAL) dengan parameter pengamatan terdiri dari pH, C-organik, N-total, P-tersedia dan K-dd. Hasil penelitian menunjukkan bahwa perlakuan 25 g/tanaman berpengaruh terhadap sifat kimia tanah bekas tambang batubara yang telah direvegetasi 25 tahun mampu memperbaiki nilai pH sebesar 6,96 unit, 2,77% C, 0,47% N, 23,73 ppm P, dan 0,35 me/100g K dibandingkan kontrol. Perlakuan 20 g FMA berpengaruh terhadap pertumbuhan tanaman cabai dengan persentase akar yang terinfeksi FMA 73,33%, peningkatan tinggi tanaman 42,43 cm, berat basah akar 8,95 g, berat kering akar 2,17 g, bobot buah 143,56 g, angkutan hara N tanaman 0,20 g/tanaman, P tanaman 0,25 g/tanaman dan K tanaman 0,06 g/tanaman dibandingkan kontrol. Pemberian 25 g FMA di sarankan untuk meningkatkan pertumbuhan tanaman cabai pada tanah bekas tambang batubara yang telah direvegetasi.

Kata kunci: *FMA, Revegetasi, Sifat Kimia Tanah, Cabai (Capsicum Annum L.), Infeksi*



APPLICATION OF DOSING OF ARBUSCULAR MYCORRHIZAL FUNGI (FMA) OF CHEMICAL PROPERTIES ON COAL MINING USED SOILS IN REVEGETATION WITH GROWTH OF CHILI PLANTS

(Capsicum Annum L.)

ABSTRACT

This research has been carried out at the wire house of the Faculty of Agriculture, Andalas University, Padang from July 2018 until November 2018. This study aims to determine the effect of dosing of Arbuscular Mycorrhizal Fungi (FMA) on ex-coal mine land that has been revegetated to soil chemical properties and the growth of chili plants (*Capsicum Annum L.*). This research is a pot experiment consisting of five dose treatments, those are 0; 10; 15; 20; and 25 grams FMA with three replications using a Completely Randomized Design (CRD) with observation parameters consisting of pH, C-organic, N-total, P-available and K-dd. The results showed that application of FMA in dose of 25 g / plant had an effect on the chemical properties of the former coal mine which had been revegetated with 25 years of being able to improve soil pH by 6.96 units, organic C by 2.77%, total N by 0.47%, available P by 23.73 ppm, and K-dd 0.35 me / 100g compared with control. The dose of 20 g of FMA affects the growth of chili plants with the percentage of roots infected with FMA by 73.33%, increase in plant height by 42.43 cm, root wet weight by 8.95 g, root dry weight by 2.17 g, fruit weight by 143.56 g, plant N nutrient transport by 0.20 g / crop, P plant nutrient transport by 0.25 g / crop and plant K nutrient transport by 0.06 g / crop compared with control. The dose of 25 g of FMA is recommended to increase the growth of chili plants on former revegetated coal mines.

Keywords: *FMA, Revegetation, Soil Chemical Properties, Chili (Capsicum Annum L.), Infection.*

