PENGARUH PRESENTASE KAPASITAS LAPANG DAN JENIS FUNGI MIKORIZA ARBUSKULAR (FMA) PADA PERTUMBUHAN BALSA (*Ochroma pyramidale*)

Oleh:

Nanda Mustika Nurbaiti[1]

Ahdiar Fikri Maulana[2]

INTISARI

Balsa (*Ochroma pyramidale*) merupakan tanaman kayu *fast growing* yang cukup diminati. Balsa biasa dimanfaatkan untuk kebutuhan industri, seperti bahan baku alat-alat isolasi, kerajinan, industri perkapalan, bahan dasar panel, produk interior, pesawat terbang, dan peralatan tenaga angin. Kebutuhan kayu balsa yang semakin meningkat tiap tahunnya dan adanya pemanasan global di masa depan membuat balsa perlu dibudidayakan dengan cara yang efektif. Salah satu cara, yaitu penggunaan Fungi Mikoriza Arbuskular (FMA) dan Kapasitas Lapang yang tepat. Penelitian ini bertujuan untuk mengetahui pengaruh FMA dan kapasitas lapang terhadap pertumbuhan semai balsa (*Ochroma pyramidale*). Penelitian dilakukan dari bulan Maret-Oktober 2024, menggunakan Rancangan Acak Lengkap (RAL) faktorial dengan 2 faktor, yaitu jenis FMA dengan 3 taraf (*Glomus etunicatum*, *Glomus clarum*, dan kontrol) dan kapasitas lapang dengan 2 taraf (60% dan 100%) dengan 9 ulangan pada masing-masing perlakuan. Parameter yang diamati adalah tinggi, jumlah daun, diameter, berat basah tajuk, berat basah akar, berat kering tajuk, dan panjang akar. Data hasil pengamatan dianalisis dengan *two way* ANOVA dan diuji lanjut dengan DMRT. Hasil penelitian menunjukkan bahwa secara umum pemberian FMA tidak berpengaruh terhadap pertumbuhan semai balsa, sedangkan kapasitas lapang berpengaruh nyata. Namun, pemberian FMA dengan kapasitas lapang 100% mempunyai kecenderungan pengaruh positif terhadap pertumbuhan balsa di semua parameter. Inokulasi *Glomus etunicatum* meningkatkan pertumbuhan diameter, berat basah akar, panjang akar, dan berat kering tajuk, sedangkan *Glomus clarum* meningkatkan pertumbuhan tinggi, jumlah daun, dan berat basah tajuk.

Kata kunci : Balsa, FMA, Kapasitas Lapang

---

[1]Mahasiswa Program Studi Pengelolaan Hutan, Sekolah Vokasi, Universitas Gadjah Mada

[2]Dosen Program Studi Pengelolaan Hutan, Sekolah Vokasi, Universitas Gadjah Mada

EFFECT OF FIELD CAPACITY PERCENTAGE AND ARBUSCULAR MYCORRHIZAL FUNGI (AMF) ON BALSA (*Ochroma pyramidale*) GROWTH

By:

Nanda Mustika Nurbaiti[1]

Ahdiar Fikri Maulana[2]

ABSTRACT

Balsa (*Ochroma pyramidale*) is a quite popular of fast growing wood plant. Balsa usually used for industrial needs, such as raw materials for insulation equipment, crafts, the shipping industry, basic materials for panels, interior products, aircraft and wind power equipment. Because of increasing need for balsa wood in every year and global warming in the future, balsa needs to be cultivated in an effective way. One way is to use Arbuscular Mycorrhizal Fungi (FMA) and appropriate Field Capacity. This research aims to determine the effect of AMF and field capacity on the growth of balsa (*Ochroma pyramidale*) seedlings. The research was conducted from March-October 2024, using a factorial Completely Randomized Design (CRD) with 2 factors, namely type of AMF with 3 levels (*Glomus etunicatum*, *Glomus clarum*, and control) and field capacity with 2 levels (60% and 100%) with 9 replications for each treatment. The parameters observed were height, number of leaves, diameter, leaf-stem fresh weight, root wet weight, leaf-stem dry weight, and root length. The observation data were analyzed using two way ANOVA and further tested with DMRT. The research results showed that in general, AMF application had no effect on the growth of balsa seedlings, while field capacity had a significant effect. However, the provision of AMF with 100% field capacity had a tendency to positive influence on balsa growth in all parameters. Glomus etunicatum inoculation increased diameter growth, root fresh weight, root length, and leaf-stem dry weight, while *Glomus clarum* increased height growth, number of leaves, and leaf-stem fresh weight.

Keywords : Balsa, AMF, Field Capacity

---

[1]Bachelor of Applied Science in Forest Management, Vocational College, Universitas Gadjah Mada

[2]Lecturer of Applied Science in Forest Management, Vocational College, Universitas Gadjah Mada