

PENGARUH ABU TANDAN KOSONG KELAPA SAWIT DAN PUPUK NPK TERHADAP PERTUMBUHAN AWAL *Acacia crassica* DI LAHAN GAMBUT KALIMANTAN BARAT

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INTISARI

Acacia crassica merupakan jenis tanaman yang banyak digunakan di Hutan Tanaman Industri (HTI) karena *fast growing* dan toleran terhadap lahan marginal seperti lahan gambut yang memiliki pH rendah dan rendah unsur hara makro dan mikro. Namun seiring meningkatnya rotasi pertumbuhan terjadi penurunan kelangsungan hidup dan hasil. Dibutuhkan penambahan unsur hara dengan pemberian abu tandan kosong kelapa sawit dan pupuk NPK. Penelitian ini bertujuan untuk mengetahui pengaruh abu tandan kosong kelapa sawit, pupuk NPK dan interaksi keduanya terhadap pertumbuhan awal *Acacia crassica* di lahan gambut.

Penelitian ini dilakukan di kawasan HTI milik PT Mayangkara Tanaman Industri, menggunakan Rancangan Acak Kelompok Lengkap (RAKL). Faktor percobaan terdiri atas dua taraf dosis abu tandan kosong kelapa sawit (0 g dan 12,5 g) dan dua taraf dosis pupuk NPK (0 g dan 5 g) sehingga menghasilkan empat perlakuan yang diulang sebanyak lima blok atau 20 plot. Setiap plot terdapat 6 tanaman sampel dan 14 tanaman border sehingga total tanaman sampel 120 tanaman. Variabel pengamatan meliputi persentase hidup, tinggi, diameter, jumlah daun dan lebar tajuk yang diamati selama 12 minggu kemudian dianalisis dengan *Analysis of Variance* (ANOVA) taraf 5% dan analisis deskriptif.

Hasil penelitian ini menunjukkan bahwa perlakuan abu tandan kosong kelapa sawit memberikan pengaruh nyata terhadap pertumbuhan tinggi dan diameter pada minggu ke-6, namun pengaruhnya berubah menjadi tidak nyata pada minggu ke-12. Pupuk NPK dan interaksi tidak memberikan pengaruh nyata terhadap pertumbuhan tinggi, diameter dan lebar tajuk hingga akhir pengamatan. Namun interaksi abu tandan kosong kelapa sawit dan pupuk NPK dapat memberikan persentase hidup terbaik yakni 73,3%.

Kata Kunci: Pencucian hara, Hutan Tanaman Industri, Ketersediaan hara, Persentase hidup.

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THE EFFECT OF EMPTY PALM FRUIT BUNCH ASH AND NPK
FERTILIZER ON THE EARLY GROWTH OF *Acacia crassicaarpa* IN
PEATLANDS IN WEST KALIMANTAN

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ABSTRACT

Acacia crassicaarpa is a species commonly used in Industrial Forest Plantation (IFP) because it is a fast-growing plant and tolerant to marginal lands such as peatlands, which have low pH and deficiencies in macro and micro nutrients. However, as cultivation rotation increases, the survival rate and overall yield decline. Nutrient enrichment is required through the application of empty palm fruits bunch ash and NPK fertilizer. This study aims to determine the effect of empty palm fruit bunch ash and NPK fertilizer, as well as their interactions, on the early growth of *A. crassicaarpa* on peatlands.

The study was conducted in an IFP area of PT Mayangkara Tanaman Industri using a Randomized Complete Block Design (RCBD). The experimental factor consisted of two dosage levels of empty palm fruit bunch ash (0 g and 12,5 g) and two dosage levels of NPK fertilizer (0 g and 5 g). This resulted in four treatment combinations, which were replicated in five blocks, for a total of 20 experimental plots. Each plot had 6 sample plants and 14 border plants, for a total of 120 sample plants. The observations variables were survival rate, height, diameter, number of leaves and canopy width, monitored over a 12-week period. The data were analyzed using the Analysis of Variance (ANOVA) at a 5% significance level and descriptive analysis.

The result of the study showed that the application of empty palm fruit bunch ash had a significant effect on height and diameter growth at week 6, but the effect became non-significant at week 12. NPK fertilizer and its interaction did not give a significant effect on height, diameter and canopy width. However, the interaction of empty palm fruit bunch ash and NPK fertilizzer resulted in the highest survival rate of 73,3%.

Keywords: Nutrient leaching, Industrial Forest Plantation, Nutrient availability, Survival rate.

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