

Pengaruh Jenis Media Tanam dan Dosis Pupuk NPK Terhadap Pertumbuhan Semai Gelam (*Melaleuca leucadendra*)

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Intisari

Gelam merupakan spesies dari famili Myrtaceae yang secara alami tumbuh di hutan rawa dan rawa gambut yang memiliki nilai ekonomi tinggi untuk potensi kayunya. Sebagai tumbuhan pionir, para ahli ekologi meyakini bahwa gelam merupakan jenis yang adaptif dan memiliki peran penting dalam perbaikan lahan rawa terdegradasi. Meningkatnya pemanfaatan gelam mengakibatkan tegakan gelam alami di beberapa daerah mulai berkurang. Kondisi tersebut menuntut adanya upaya budidaya gelam yang belum banyak diketahui mengenai teknik silvikultur penyiapan semainya secara baik di persemaian. Penggunaan media tanam dan pemberian sejumlah dosis pupuk NPK yang sesuai diharapkan mampu memacu pertumbuhan semai gelam sehingga dapat siap tanam dalam waktu yang relatif singkat. Penelitian ini bertujuan untuk mengetahui pengaruh jenis media tanam, pengaruh pemberian dosis pupuk NPK, dan pengaruh interaksi antara media tanam dan dosis pupuk NPK terhadap pertumbuhan dan biomassa semai gelam.

Rancangan penelitian yang digunakan yaitu Rancangan Acak Lengkap (RAL) dengan pola faktorial. Penelitian ini dilakukan dengan pemberian perlakuan berupa 3 jenis media (Tanah, Pasir, dan campuran pasir:tanah (1:1) (v/v)) dan 4 tingkat dosis pupuk NPK (0, 1, 2, dan 3 g), sehingga didapatkan 12 kombinasi perlakuan jenis media dan dosis pupuk NPK. Satu unit eksperimen terdiri dari 10 semai sebagai ulangan sehingga total semai yang digunakan 120 buah. Variabel yang diamati adalah jumlah persen hidup, tinggi tanaman, diameter batang, kekokohan semai, biomassa atas, bawah dan total, serta kandungan klorofil total daun. Proses analisis data meliputi *Analisis of Varians* (ANOVA) dan uji pasca anova dengan menggunakan *Duncan Multiple Range Test* (DMRT) pada taraf α 0,05.

Hasil penelitian menunjukkan bahwa perlakuan jenis media tanam berbeda nyata terhadap tinggi, diameter, kekokohan semai, kandungan klorofil daun dan biomassa total dari semai gelam umur 5,5 bulan. Sementara itu, perlakuan dosis pupuk NPK berbeda nyata terhadap tinggi, diameter, biomassa atas dan klorofil, sedangkan interaksi perlakuan jenis media dan dosis pupuk NPK berbeda nyata pada parameter tinggi dan kekokohan semai. Didapatkan kesimpulan bahwa perlakuan terbaik terhadap pertumbuhan semai gelam adalah media tanah, dosis pupuk NPK 2 g, dan interaksi media tanah dan dosis pupuk 2 g memberikan hasil pertumbuhan semai gelam terbaik.

Kata kunci: Gelam, persemaian, media tanam, pupuk NPK, pertumbuhan

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EFFECT OF PLANTING MEDIA TYPES AND DOSAGE OF NPK FERTILIZER ON THE GROWTH OF GELAM (*Melaleuca leucadendra*) SEEDLINGS

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ABSTRACT

Gelam is a species of the Myrtaceae family that naturally grows in swamp forests and peat swamps which have high economic value for its timber potential. As a pioneer plant, ecologists believe that gelam is an adaptive species and has an important role in improving degraded swamplands. The increased use of gelam resulted in a decrease in the natural gelam stand in some areas. This condition calls for an effort to cultivate gelam, which is not widely known about the silvicultural technique of preparing the seedlings properly in the nursery. It is hoped that the use of planting media and the provision of an appropriate dose of NPK fertilizer can stimulate the growth of gelam seedlings so that they are ready for planting in a relatively short time. This study aims to determine the effect of the type of planting media, the effect of NPK fertilizer dosage, and the effect of the interaction between planting media and NPK fertilizer dosage on the growth and biomass of gelam seedlings.

The research design used was a Completely Randomized Design (CRD) with a factorial pattern. This research was conducted by giving treatment in the form of 3 types of media (soil, sand, and a mixture of sand: soil (1: 1) (v / v)) and 4 levels of NPK fertilizer (0, 1, 2, and 3 g), so that obtained 12 combinations of treatment types of media and NPK fertilizer dosage. One experimental unit consisted of 10 seedlings as replications so that the total number of seedlings used was 120. The variables observed were total live percentage, plant height, stem diameter, seedling firmness, top, bottom, and total biomass, and total leaf chlorophyll content. The data analysis process includes the Analysis of Variance (ANOVA) and posts the ANOVA test using the Duncan Multiple Range Test (DMRT) at α 0.05 level.

The results showed that the type of planting media was significantly different from the height, diameter, firmness of the seedlings, leaf chlorophyll content, and total biomass of the 5.5-month-old gelam seedlings. Meanwhile, the NPK fertilizer dose treatment was significantly different on height, diameter, top biomass, and chlorophyll, while the interaction between the type of media and the dose of NPK fertilizer was significantly different in the parameters of height and strength of seedlings. It was concluded that the best treatment for the growth of gelam seedlings was soil media, 2 g NPK fertilizer, and interaction with soil media and a dose of 2 g of fertilizer gave the best growth results for gelam seedlings.

Keywords: Gelam, nursery, planting media, NPK fertilizer, growth

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