

## PENGARUH SUMBER BENIH DAN KOMPOSISI MEDIA ARANG TONGKOL JAGUNG TERHADAP PERTUMBUHAN SEMAI *Acacia auriculiformis* SAMPAI UMUR EMPAT BULAN

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### INTISARI

*Acacia auriculiformis* merupakan spesies tanaman cepat tumbuh dan kayunya dimanfaatkan untuk kayu energi dan *pulp*. Produksi semai di persemaian membutuhkan media saphi berupa *topsoil* dalam jumlah yang besar sehingga penggunaan *topsoil* perlu dikurangi. Arang tongkol jagung dapat digunakan sebagai alternatif media saphi karena bahan bakunya melimpah dan penggunaannya belum dimanfaatkan secara optimal. Untuk memperoleh semai yang berkualitas penentuan sumber benih penting dilakukan. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh perbedaan sumber benih, komposisi media saphi dan interaksi kedua perlakuan terhadap pertumbuhan semai *A. auriculiformis* sampai umur empat bulan.

Penelitian dilakukan di *glasshouse*, Laboratorium Silvikultur Intensif, Fakultas Kehutanan, Universitas Gadjah Mada. Desain eksperimen yang digunakan adalah *Randomized Complete Block Design* (RCBD) dengan dua perlakuan yaitu sumber benih (Queensland (Q); Vietnam (V)) dan komposisi media saphi (*topsoil*: pupuk kandang kambing: arang tongkol jagung = 1:1:0 (M1), 1:1:1 (M2), 2:1:1 (M3)). Terdapat tiga blok sebagai ulangan. Setiap blok terdiri dari enam kombinasi perlakuan dan setiap perlakuan terdiri dari lima semai. Total semai yang digunakan 90 batang. Parameter yang diamati dan diukur yaitu tinggi semai, diameter batang, kekokohan, jumlah daun, biomassa semai, biomassa total, *top-root ratio*, dan indeks kualitas semai.

Hasil penelitian menunjukkan bahwa sumber benih tidak berpengaruh nyata terhadap pertumbuhan semai *A. auriculiformis* sampai umur empat bulan. Namun terdapat kecenderungan bahwa sumber benih Vietnam memiliki nilai pertumbuhan yang lebih baik daripada yang sumber benih Queensland. Komposisi media pengaruh nyata terhadap pertumbuhan *A. auriculiformis* sampai umur empat bulan, kecuali pada parameter jumlah daun, kekokohan dan *top-root ratio*. Komposisi media 1:1:0 dan 2:1:1 menunjukkan pertumbuhan semai yang lebih baik daripada yang komposisi media 1:1:1. Tidak terdapat interaksi yang signifikan diantara kedua perlakuan.

**Kata kunci:** *Acacia auriculiformis*, sumber benih, arang tongkol jagung, komposisi media.

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**THE EFFECT OF SEED SOURCE AND MEDIA COMPOSITION OF  
CORN-COB BIOCHARCOAL ON THE GROWTH OF FOUR-MONTHS  
*Acacia auriculiformis* SEEDLINGS**

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**ABSTRACT**

*Acacia auriculiformis* is a fast-growing species and its wood used for energy wood and pulp. Seedling production in nurseries requires a large amount of topsoil as a weaning medium, so that excessive use of topsoil needs to be reduced. Corn-cob charcoal can be used as an alternative weaning medium because the raw material is abundant, and it has not been optimally used. To provide good quality of seedlings, an appropriate seed source is required. The purpose of this study was to determine the effect of differences in seed sources, weaning media composition and the interaction between both treatments on the growth of *A. auriculiformis* seedlings up to four months of age.

The study was conducted in a glasshouse at the Intensive Silviculture Laboratory, Faculty of Forestry, Universitas Gadjah Mada. The experiment design was a randomized complete block design with two treatments, namely seed source (Queensland (Q); Vietnam (V)) and media composition (topsoil: goat manure: corn cob charcoal = 1:1:0 (M1), 1:1:1 (M2), 2:1:1 (M3)). There were three blocks as replications. Each block consisted of six treatment combinations and each treatment consisted of five seedlings. A total of 90 seedlings were used. The parameters observed and measured were the seedling height, stem diameter, sturdiness, number of leaves, seedling biomass, total biomass, top-root ratio, and the seedling quality index.

The results showed that the seed source had no significant effects on the growth of *A. auriculiformis* seedlings up to four months of age. However, there was a tendency that the Vietnamese seed source had better growth than the Queensland seed source. The media composition had significant effects on the growth of *A. auriculiformis* up to four months of age, except for the parameters of the number of leaves, sturdiness and top-root ratio. The media compositions of 1:1:0 and 2:1:1 provided better growth for the seedling than the media composition of 1:1:1. There was no significant interaction between both treatments.

**Keywords:** *Acacia auriculiformis*, seed source, corn-cob charcoal, media composition.

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