

## KOMBINASI PEMBERIAN ARANG HAYATI DAN CUKA KAYU TERHADAP PERTUMBUHAN JABON DAN SENGON (*The Combination of Additions of Biochar and Wood Vinegar on Jabon and Sengon Growth*)

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### ABSTRACT

*Biocharcoal is a specific charcoal that can store carbon in soil almost permanently, and be able to improve its humidity as well as fertility. This paper observes the use of biocharcoal and wood vinegar to stimulate jabon and sengon seedlings. Biochar and wood vinegar were made of sawdust, charcoal, compost charcoal (a mixture of sawdust charcoal and compost) and wood vinegar (the condensed gas/vapor fractions that evolved during sawdust carbonization). Sawdust and compost charcoals were mixed thoroughly and evenly with the top soil for jabon and sengons media. Wood vinegar in 2% concentration was then poured and sprayed onto the planted seedlings. Similar seedlings were also planted on the untreated soil media as a control. After five months seedlings growth characteristics (i.e. height and diameter) were observed and measured. Results show that in general, height and diameter of the seedlings planted in treated media are improved. Seedlings of Jabon are increased by 16.38, 21.05, and 62.74 times in height as well as 1.70 and 3.10 times in diameter than those of control. Seedlings of Sengon are increased by 22.50, 21.10, 40.80 times in height as well as and 1.04 and 1.03 in diameter than those of control.*

*Keywords: Sawdust charcoal, compost charcoal, wood vinegar, seedlings, concentration*

### ABSTRAK

Arang hayati (*biochar*) merupakan arang yang berkemampuan menyimpan karbon secara stabil di dalam tanah dan mampu meningkatkan kelembaban dan kesuburan tanah. Tulisan ini menyajikan hasil penelitian pemanfaatan arang hayati berupa arang serbuk gergaji, arang kompos serasah dan cuka kayu sebagai media tumbuh anakan jabon dan sengon selama lima bulan di persemaian. Cuka kayu dengan konsentrasi 2% disiramkan pada anakan jabon dan sengon. Untuk mencegah serangan hama dan penyakit cuka kayu disemprot pada batang, tangkai dan daun. Tujuan penelitian untuk mengetahui pengaruh penambahan arang serbuk gergaji, arang kompos serasah dan cuka kayu terhadap pertumbuhan anakan jabon dan sengon. Hasil penelitian menunjukkan arang serbuk gergaji, arang kompos serasah, campuran arang serbuk gergaji dengan cuka kayu serta campuran arang kompos serasah dan cuka kayu, dapat meningkatkan pertumbuhan tinggi dan diameter anakan jabon dan sengon. Konsentrasi 5% arang serbuk gergaji, 5% campuran arang serbuk gergaji dan 2% cuka kayu serta 10% arang kompos serasah, dapat meningkatkan pertumbuhan tinggi dan diameter anakan jabon sebesar 16,38 kali; 21,05 kali dan 62,74 kali serta 1,7 kali dan 3,1 kali. Untuk pertumbuhan tinggi dan diameter anakan sengon berturut-turut sebesar 22,5 kali; 21,1 kali dan 40,8 kali serta 1,03 kali dan 1,04 kali.

Kata kunci : Arang serbuk gergaji, arang kompos serasah, cuka kayu, anakan, konsentrasi