

PENGARUH PENAMBAHAN DAUN DAN BAHAN DEKOMPOSER PADA MEDIA KULIT KAYU TERHADAP PERTUMBUHAN SEMAI MELINA (*Gmelina arborea* Roxb.)

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INTISARI

Banyak limbah dari industri perkerajinan seperti halnya dengan limbah kulit kayu melina yang belum dimanfaatkan. Sementara persemaian di HTI banyak menggunakan tanah lapisan atas (*top soil*) sebagai media semai dan ini mengakibatkan lahan yang miskin hara cukup luas. Limbah kulit kayu dapat dimanfaatkan untuk media semai melina (*Gmelina arborea* Roxb.) sebagai pengganti tanah lapisan atas apabila terlebih dahulu dilakukan pengomposan.

Tujuan penelitian ini adalah untuk mengetahui pengaruh komposisi (dalam persen) daun melina sebagai bahan pencampur dan pengaruh beberapa bahan dekomposer dalam proses pengomposan kulit kayu terhadap pertumbuhan semai melina. Penelitian ini dilaksanakan di Laboratorium Silvikultur Klebengan, Laboratorium Bioteknologi dan rumah kaca Fakultas Kehutanan UGM. Disiapkan 4 komposisi bahan kompos yang dikombinasikan dengan 5 jenis bahan dekomposer yaitu EM4, Stardec, Thiruline, jamur *Trichoderma* isolat T27 dan jamur *Trichoderma* isolat T13. Jumlah keseluruhan perlakuan adalah 20 unit yang diwakili 3 semai setiap perlakuan dan diulang secara acak pada 5 blok. Pelaksanaan pengomposan dilaksanakan pada tanggal 27 September hingga 5 November 2000, sedangkan pelaksanaan penanaman pada tanggal 8 November 2000 hingga 10 Mei 2001. Parameter yang diamati adalah tinggi (cm), diameter (mm), kekokohan, berat kering (g), nisbah pucuk akar, indeks kualitas semai dan kekompakan akar.

Hasil penelitian menunjukkan bahwa komposisi bahan kompos dan jenis bahan dekomposer berpengaruh terhadap pertumbuhan tinggi semai. Tinggi semai meningkat dengan ditambahkannya komposisi daun melina pada bahan kompos dari tanpa campuran daun melina = 16,823 cm menjadi 19,005 cm pada pencampuran 10% daun, 20,453 cm pada pencampuran 20% daun dan 23,153 cm pada pencampuran 30% daun. Sedangkan tinggi semai pada perlakuan jenis bahan dekomposer dengan perlakuan jamur *Trichoderma* isolat T13 = 17,657 cm meningkat menjadi 18,750 cm pada jamur *Trichoderma* isolat T27 menjadi 19,965 cm pada Thiruline kemudian pada perlakuan EM4 meningkat menjadi 20,682 cm dan pada perlakuan Stardec memiliki rerata tinggi = 22,240 cm.

Kata Kunci : Kompos, limbah kulit kayu, daun melina, EM4, Stardec, Thiruline, jamur *Trichoderma*

**THE INFLUENCE OF LEAF ADDITION AND DECOMPOSER
MATERIAL ON BARK MEDIA TOWARDS THE GROWTH OF MELINA
SEEDLINGS (*Gmelina arborea* Roxb.)**

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ABSTRACT

A big number of wood industries lead to the waste of melina bark caused of lack of know-how on the utilization. Hence the seedlings at a HTI requires a big amount top soil as seedling media and lead to causes a big piece of land to gain poor quality. The bark waste can be utilized for melina (*Gmelina arborea* Roxb.) media as an alternative of top soil if earlier treated with decomposition.

The objectives of this research is to acknowledge the impact of the composition (in percentages) of melina leaves as a mixed material and to know the influence on different decomposer materials towards the growth of melina seedlings. This research was conducted at the Silviculture Laboratory at Klebengan, Biotechnology Laboratory and the Faculty of Forestry's Green House. The research requires 4 compositions of compost material which had been combined with 5 different materials of decomposers, which are EM4, Stardec, Thiruline, Trichoderma isolate T27 fungi and Trichoderma isolate T13 fungi. The number of treatments add up to 20 units which were represented by 3 seedlings each treatment. The treatments were conducted randomly on 5 blocks. The process of the decomposition commenced on September 27th and terminated in November 5th, 2000, while the planting commenced in November 8th and terminated in May 10th, 2001. The parameters required in this research are height (cm), diameter (mm), strenght, dry weight (g), tip of leaf ratio, quality of seedling index and the cohesiveness of roots.

The research result shows that the composition of compost material and the type of decomposer material bring side effects the growth of the seedlings' height. The height of the seedlings increased in line with the addition of the melina leaf composition on the compost material from the non-mixed melina leaves = 16.823 cm becoming 19.005 cm on the 10% mixture of leaves, 20.453 cm on the 20% mixture of leaves and 23.153 cm on the 30% mixture of leaves. Whiles the height of the seedlings treated with the type of decomposer with Trichoderma isolate T13 fungi treatment = 17.657 cm increased to a number of 18.750 cm on Trichoderma isolate T27 fungi becoming 19.965 cm on Thiruline and on the EM4 treatment, it showed an increase becoming 20.682 cm. The range of height on the Stardec treatment = 22.240 cm.

Keywords : Compost, bark waste, melina leaves, EM4, Stardec, Thiruline, Trichoderma fungi