

PENGARUH KONDISI FUMIGASI TERHADAP EFEKTIFITAS PEWARNAAN DAN KEAWETAN KAYU HUTAN RAKYAT

(THE EFFECT OF FUMIGATION CONDITION ON STAIN EFFECTIVITY AND DURABILITY OF SOME WOOD SPECIES OF COMMUNITY FOREST)

Istie Sekartining Rahayu^{1*)}, Esti Prihatini¹⁾

ABSTRACT

Indonesian log consumption average in 1999-2004 was about 40 million cubic meter per year. Far above the capacity of natural forest to supply wood demand which was only 6.9 million cubic meter per year and only 5 million cubic meter per year from plantation forest. Now community forest has been managed well based on commercial orientation to fulfill the needs of forest products. Recently community forest is known as realible wood producer for furniture such as rubber wood (*Hevea brasiliensis*), *Maesopsis* (*Maesopsis eminii*), Jeunjing (*Paraserianthes falcataria*), Durian (*Durio spp.*), Jackfruit (*Artocarpus sp.*). However those woods have low appearance quality (pale colours and ununiform, texture not attractive). Thus they need some treatments to enhance their appearance, one of them by fumigation. The purpose of this research are to gain optimalize fumigation condition (combination between amonia volume and time of fumigation) to have wood stain that resistance from weathering and to analyze durability of fumigation wood against *Cryptotermes sp* attack. The treatments were fumigation by 2, 4, 6 litre of amonia for 1, 2, 3 days. Those treatments were applied on 5 wood species (mahagony, jackfruit, rambutan, menteng and mindi). The results of this research showed that fumigation treatments have effects only on jackfruit, mahagony, rambutan. They did not have effects on menteng and mindi. Because the difference of tanin content between woods, made every wood had different reaction to fumigation (amonia). Based on comparison of all treatments quantitatively showed the most darkened colour of jackfruit was resulted by fumigation by 4 litre amonia for 3 days, mahagony was fumigation by 6 litre amonia for 2 days and rambutan was fumigation by 4 liter amonia for 2 days. Weathering resistance resulted all wood species did not resist to weathering or their colour fade away. Wood fumigation durability showed 100 % mortality of *Cryptotermes sp* (on jackfruit, mahagony and menteng), on the other hand mindi showed 83 % and rambutan 89% mortality of *Cryptotermes sp*.

Keywords : Fumigation, community forest, tanin, weathering, *Cryptotermes sp*.

ABSTRAK

Konsumsi log Indonesia rata-rata pada tahun 1999-2004 adalah sekitar 40 juta meter kubik per tahun. Jauh di atas kapasitas hutan alam yang hanya mampu menyediakan 6,9 juta meter kubik per tahun dan hanya 5 juta meter kubik per tahun berasal dari hutan tanaman. Hutan rakyat saat ini telah dikelola dengan baik dengan orientasi komersial untuk memenuhi kebutuhan industri hasil hutan. Akhir-akhir ini hutan rakyat sudah dapat diandalkan sebagai penghasil kayu untuk furniture seperti kayu karet (*Hevea brasiliensis*), *Maesopsis* (*Maesopsis eminii*), Jeunjing (*Paraserianthes falcataria*), Durian (*Durio spp.*), Nangka (*Artocarpus sp.*). Namun kayu-kayu tersebut mempunyai kualitas penampilan yang rendah (warna tidak jelas dan tidak seragam, tekstur tidak menarik). Oleh karena itu membutuhkan beberapa perlakuan untuk meningkatkan kualitas penampilan, salah satunya melalui fumigasi. Tujuan dari penelitian ini adalah untuk mendapatkan kondisi optimal fumigasi (kombinasi antara volume Amonia dan waktu) untuk mendapatkan warna kayu yang tahan terhadap pelapukan dan menganalisis periode waktu fumigasi dalam melawan serangan *Cryptotermes sp*. Perlakuan yang fumigasi dengan 2, 4, 6 liter Amonia untuk selama 1, 2, dan 3 hari. Hasil penelitian ini menunjukkan bahwa perlakuan fumigasi hanya berdampak pada nangka, mahoni, rambutan. Fumigasi tidak berdampak pada Menteng dan Mindi. Sebab perbedaan dalam kandungan tanin dalam kayu membuat setiap kayu mempunyai reaksi berbeda terhadap fumigasi (Amonia). Berdasarkan perbandingan seluruh parameter secara kuantitatif menunjukkan bahwa warna yang paling gelap yaitu nangka dihasilkan dari fumigasi selama 3 hari dan 4 liter ammonia, mahoni selam 2 hari dengan 6 liter amonia, dan rambutan dengan 4 liter amonia selama 2 hari. Resistensi terhadap pelapukan menunjukkan bahwa seluruh jenis tidak

¹⁾Dep. Hasil hutan, Fakultas Kehutanan, Institut Pertanian Bogor.

* Penulis korespondensi : 0818937736; istiesr@yahoo.com