

## LAJU DEKOMPOSISI SERESAH MAHONI (*Swietenia mahagony*) (L.) Jacq. DAN SENGON (*Falcataria moluccana*) (Miq.) PADA HUTAN RAKYAT DI DAERAH CANGKRINGAN, KABUPATEN SLEMAN

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### INTISARI

Hutan rakyat merupakan pekarangan, tegalan ataupun “wono”, yang dimiliki dan dikelola oleh masyarakat guna memenuhi kebutuhan hidupnya yang ditanami dengan satu jenis tanaman ataupun campuran. Agroforestri merupakan salah satu model pertanaman campuran yang biasa digunakan sehingga menyebabkan perubahan siklus nutrisi di dalam tanah melalui proses dekomposisi.

Penelitian ini menggunakan rancangan split plot dengan rancangan petak terbagi ke dalam tiga faktor yaitu faktor utama yaitu tegakan, anak petak yaitu minggu dan anak-anak petak yaitu jenis seresah. Tegakan yang digunakan dalam penelitian ini yaitu tegakan murni dan campuran. Jenis seresah yang digunakan meliputi seresah mahoni, sengon, dan campuran keduanya, berat kering 25 gram dengan menerapkan *Litter Bag Technique*. Pengambilan *litter bag* dilakukan setiap 1 minggu sekali selama 12 minggu pengamatan. Pada tiap tegakan diambil 5 sampel *litter bag* untuk masing-masing jenis seresah, sehingga total *litter bag* yang diambil selama pengamatan adalah 720 *litter bag*.

Seresah sengon memiliki laju dekomposisi cepat (indeks dekomposisi = 0,055) karena memiliki C:N ratio <25%, diikuti seresah campuran (indeks dekomposisi = 0,044), dan mahoni (indeks dekomposisi = 0,036). Tegakan yang memiliki laju dekomposisi seresah dari yang tercepat adalah tegakan sengon campuran (indeks dekomposisi = 0,049), dan mahoni campuran (indeks dekomposisi = 0,048) apabila dibandingkan dengan tegakan sengon murni (indeks dekomposisi = 0,043), dan mahoni murni (indeks dekomposisi = 0,041). Kondisi iklim mikro pada tegakan sengon campuran dan mahoni campuran lebih sesuai bagi aktivitas fauna tanah apabila dibandingkan dengan tegakan sengon murni dan mahoni murni, karena memiliki penutupan tajuk sebesar 12% (tegakan sengon campuran) dan 30,4% (tegakan mahoni campuran) sehingga intensitas cahaya yang masuk hingga lantai hutan cukup besar dan meningkatkan suhu tanah. Nilai indeks dekomposisi didapatkan berdasarkan data selama 12 minggu pengamatan dengan penurunan berat kering sebesar 49%. Model dekomposisi yang diperoleh berdasarkan data penurunan berat kering seresah adalah berbentuk kuadratik.

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Kata kunci : Hutan rakyat, jenis seresah, jenis tegakan, laju dekomposisi seresah, indeks dekomposisi.

**THE DECOMPOSITION SPEED OF MAHOGANY (*Swietenia mahagony*) (L.)  
Jacq. AND SENGON (*Falcataria moluccana*) (Miq.) LEAF FOLIAGE IN  
COMMUNITY FORESTS IN CANGKRINGAN, SLEMAN DISTRICT**

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**ABSTRACT**

Community forests are yards, moors or “wono”, which are owned and managed by the community so that they can fulfil their needs. These forests are planted with one type of plant or many species (mixed planting). Agroforestry is one type of mixed planting which is usually used so that the nutrition cycle in the soil changes through the decomposition process.

This research used a split plot plan by splitting each plot into three factors. The main factor was the stand, the subplots being weekly, and subplots being the type of leaf foliage. The stands used in this research were pure and mixed stands. The types of leaf foliage used included mahogany, sengon, and a mix of the two with the weight of 25 grams using the Litter Bag Technique. The litter bags were taken once a week for 12 weeks. Five sample litter bags for each kind of leaf foliage were taken from each stand, so that the total number of litter bags gathered during the observation came to a total of 720 litter bags.

Sengon leaf foliage which had the highest decomposition speed (decomposition index = 0,055) because it has a C:N ratio of less than 25%, followed by mixed leaf foliage (decomposition index = 0,044), and then mahogany leaf foliage (decomposition index = 0,036). The stand with highest decomposition speed was the mixed sengon stand (decomposition index = 0,049), and the mixed mahogany stand (decomposition index = 0,048) compared to the pure sengon stand (decomposition index = 0,043), and the pure mahogany stand (decomposition index = 0,041). Micro climate conditions of the mixed sengon stand and the mixed mahogany stand is suitable for ground fauna compared to that of the pure mahogany and sengon stands, because they had crown cover of 12% (mixed sengon stand) and 30,4% (mixed mahogany stand) so that the intensity of light that reached the forest floor was high and the soil temperature increased. The decomposition value was obtained according to a 12 week observation, so that the weight decreased by 49%. The decomposition model obtained according to the decrease in weight was of the quadratic form.

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Key words: community forest, type of leaf foliage, type of stand, leaf foliage decomposition speed, decomposition index