

**AKUMULASI DAN TINGKAT DEKOMPOSISI BAHAN ORGANIK
DI BAWAH TEGAKAN CEMARA UDANG
(*Casuarina equisetifolia* Lin var. *incana*) DI PESISIR KUWARU,
YOGYAKARTA**

INTISARI

Tegakan Cemara Udang di Pesisir Kuwaru, Yogyakarta yang di tanam tahun 2000, sebanyak 3 larik dengan panjang tiap larik \pm 1 km merupakan salah satu tegakan yang terletak di daerah iklim tropis yang berfungsi sebagai penahan angin (*windbreak*). Tegakan tersebut juga dapat menambah bahan organik di tanah melalui produksi seresah yang dihasilkan. Penelitian ini bertujuan untuk mengetahui akumulasi dan tingkat dekomposisi bahan organik Cemara Udang di Pesisir Kuwaru.

Pengamatan dilakukan di 3 lokasi, yaitu dekat dari pantai (103 m dari pantai), di tengah (106 m dari pantai) dan jauh dari pantai (109 m dari pantai). Setiap plot diulang sebanyak 3 kali sehingga total plot pengamatan ada 9. Pengukuran produksi seresah dengan menggunakan *Litter trap* 50x50 cm dipasang di bawah tegakan Cemara Udang. Seresah yang masuk ke dalam *litter trap* diambil dan dipisah-pisahkan berdasarkan bagian-bagiannya (daun, ranting, dan bunga/ buah) kemudian dioven hingga mencapai berat kering konstan. Tingkat dekomposisi seresah diketahui dengan mengambil seresah dalam kawat kuadratik 50x50 cm yang dipasang di plot pengamatan, di lantai tegakan yang belum terinjak, kemudian seresah dipisahkan berdasarkan tingkat dekomposisi, dioven hingga berat kering konstan.

Hasil penelitian menunjukkan bahwa produksi seresah Cemara Udang selama 4 bulan dapat mencapai 4,83 ton/ha dan seresah daun mendominasi hingga mencapai lebih dari 69% dari total seresah yang ada. Akumulasi seresah berkisar 20,44 hingga 31,49 ton/ha dengan akumulasi seresah pada plot jauh dari pantai > di tengah > dekat pantai. Jumlah seresah terfragmentasi lebih banyak dibanding seresah segar karena kandungan lignin yang tinggi pada seresah yang menyebabkan proses dekomposisi berlangsung lambat dan tidak sempurna.

Kata kunci : Cemara Udang, *windbreak*, seresah, akumulasi, dekomposisi

**ACCUMULATION AND DECOMPOSITION STAGE
OF ORGANIC MATTER UNDER
THE STAND OF *Casuarina equisetifolia* Lin var. *incana*
IN KUWARU COAST, YOGYAKARTA**

ABSTRACT

The stand of *Casuarina equisetifolia* Lin var. *incana* that was planted in 2000 in Kuwaru Coast, Yogyakarta is one of stands that located in the tropical climate area that functions as windbreak. It was planted in 3 rows with the length of 1km. This stand can increase the organic matter in the soil through litter fall production. This research aimed to find out the accumulation and decomposition stage of organic matter of *C. equisetifolia* in Kuwaru Coast.

Observation was carried out in 3 locations, the first was near the beach, the second in the medium distance, and the third was far from the beach. Each plot was made 3 replications so there were 9 plots. Litter traps of 50x50 cm set up under the stand of *C. equisetifolia* were used to measure litter production. The litter was taken and separated based on their part (leaf, branch, flower/ fruits) and then were dried oven to dry weight. Litter accumulation was measured in 50x50 cm quadratic wire which was set up on observations plot in undisturbed site. Then they were separated based on the decomposition stage and were dried in on oven.

The result showed that litter production of *C. equisetifolia* within the four months could reach 4.83 ton/ha and production of leaf litter was dominant as reached more than 69% from the total litters. The litter accumulation ranged from 20.44 ton/ha to 31.49 ton/ha with the litter accumulation in the plot far from the beach > in the middle > near the beach. Fragmented litter was greater than fresh litter because the litter contained great amount of lignin that made decomposition process slowly and imperfectly.

Keywords: *Casuarina equisetifolia*, windbreak, litter, accumulation, decomposition.