

**POTENSI BIOMASSA DAN KARBON
ABOVE DAN BELOW GROUND BAMBU PETUNG
(*Dendrocalamus asper*) DI HUTAN RAKYAT**

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INTISARI

Bambu mempunyai kemampuan tinggi dalam penyerapan karbondioksida (CO₂). Salah satu jenis bambu yaitu bambu petung (*Dendrocalamus asper*) banyak dijumpai di hutan rakyat dengan berbagai manfaatnya, tetapi terdapat manfaat lain yang belum banyak diketahui yaitu tentang kandungan potensi biomassa dan karbon *above* dan *below ground* bambu petung. Penelitian ini bertujuan : (1) Menghitung biomassa dan karbon yang tersimpan pada *above* dan *below ground* bambu petung (*Dendrocalamus asper*), (2) Menyusun persamaan allometrik biomassa dan karbon bambu petung (*Dendrocalamus asper*) di hutan rakyat, (3) Mengetahui potensi biomassa dan karbon secara menyeluruh *above* dan *below ground* bambu petung (*Dendrocalamus asper*) di hutan rakyat, (4) Mengetahui potensi serapan gas CO₂ bambu petung (*Dendrocalamus asper*) di hutan rakyat.

Satu rumpun bambu petung yang terdiri dari duabelas batang bambu petung dengan ukuran diameter bervariasi digunakan sebagai sampel untuk membuat persamaan allometrik/model penduga biomassa dan karbon. Kandungan biomassa diperoleh dengan cara mengeringkan sampel pada suhu 103^o±2^oC sampai tercapai berat konstan. Sedangkan kandungan karbon diperoleh melalui metode *Walkley and Black*.

Hasil penelitian menunjukkan bahwa rata-rata kandungan biomassa dan karbon sampel per batang bambu petung di hutan rakyat adalah Biomassa: 25,309 (25,309 ± 7,055) kg/batang dan karbon: 12,508 (12,508 ± 3,403) kg/batang. Persamaan allometrik/ model penduga yang dihasilkan yaitu hubungan antara Dbh dengan biomassa dan kandungan karbon bambu petung (*Dendrocalamus asper*) di hutan rakyat adalah Biomassa total = 0,118(Dbh)^{2,225} (R²=0,816) dan Karbon total=0,053(Dbh)^{2,267} (R²=0,837). Hasil potensi biomassa dan karbon *above* dan *below ground* bambu petung di hutan rakyat adalah Biomassa: (423,670±129,680) Ton/ha, Karbon: (208,540±63,850) Ton/ha serta serapan gas CO₂: (768,530±234,340) Ton/ha.

Kata Kunci : Bambu Petung, Biomassa, Karbon, Allometrik, Hutan Rakyat

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**POTENTIAL OF BIOMASS AND CARBON
ABOVE AND BELOW GROUND BAMBOO PETUNG
(*Dendrocalamus asper*) IN THE COMMUNITY FOREST**

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ABSTRACT

Bamboo have a high ability to absorb carbondioxide (CO₂). Species of bamboo petung (*Dendrocalamus asper*) much founded in the community forest with multiple use, but there is other ability about potential of biomass and carbon bamboo petung has not much known. The purpose of this research are: (1) measure to estimate biomass and carbon of bamboo petung (2) build the allometric equation/ estimating models to estimate biomass and carbon bamboo petung (*Dendrocalamus asper*) in the community forest, (3) estimate potential of biomass and carbon above and below ground bamboo petung (*Dendrocalamus asper*) in the community forest, (4) estimate potential of CO₂ absorption bamboo petung (*Dendrocalamus asper*) in the community forest.

One of bamboo petung cluster which consist of twelve bamboos petung with varying diameters are used as samples for building allometric equation/ estimating models of biomass and carbon. Biomass was obtained by drying the samples at a temperature of 103^o±2^oC until a constant dryweight, while the carbon content was obtained by Walkley and Black method.

The results of research show that the average of biomass and carbon samples one bamboo petung in the community forest are Biomass: 25,309 (25,309 ± 7,055) kg/one bamboo and carbon: 12,508 (12,508 ± 3,403) kg/one bamboo. Allometric equation/estimating models has built by the correlation between Dbh with biomass and carbon bamboo petung (*Dendrocalamus asper*) in the community forest are biomass total=0,118(Dbh)^{2,225} (R²=0,816) and Carbon total=0,053(Dbh)^{2,267} (R²=0,837). Potential results of biomass and carbon above and below ground bamboo petung (*Dendrocalamus asper*) in the community forest are Biomass: (423,670±129,680) Ton/ha, carbon: (208,540±63,850) Ton/ha and CO₂ absorption: (768,530±234,340) Ton/ha.

Keywords: Bamboo Petung, Biomass, Carbon, Allometric, Community Forest

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