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ABILITY TO ABSORB CARBON DIOXIDE BY SAPLINGS OF RAMBUTAN FOREST (NEPHELIUM RAMBOUTAN-AKE)

Alpian ⁽¹⁾ Yetrie Ludang ⁽²⁾ Wahyu Supriyati ⁽³⁾

⁽¹⁾ Department of Forestry, Faculty of Agriculture, University of Palangka Raya, Palangka Raya, Indonesia.

⁽²⁾ Department of Forestry, Faculty of Agriculture, University of Palangka Raya, Palangka Raya, Indonesia.

⁽³⁾ Department of Forestry, Faculty of Agriculture, University of Palangka Raya, Palangka Raya, Indonesia.

Abstract

Research related to the absorption of carbon dioxide is still open because there are still many types of plants found in Central Kalimantan. Plant species that have not been studied are mainly plant saplings that are easily found and widely known by the people of Central Kalimantan. These types of plants include Rambutan Forest (*Nephelium ramboutan-ake*). This study aims to (a) measure the ability of the CO₂ uptake of Rambutan Forest seedlings (b) measure the fluctuations of seedling's CO₂ uptake during the measurement period of 06.00-06.30, 12.00-12.30 and 15.00-15.30 Indonesia Western Standard Time (WIB), (c) analyze biomass / dry weight and organic carbon stored in Rambutan Forest planters. Rambutan seedlings. The forest used in this study is 3-5 months old. Measurements of CO₂ absorption using a containment method measuring 50 cm x 50 cm x 30 cm and CO₂ gas analysis using Gas Chromatography. The time period for measuring CO₂ uptake is carried out at 06.00-06.30, 12.00-12.30 and 15.00-15.30 WIB with a time interval of 5, 10, 15, 20, 25 and 30 for 4 (four) weeks. Analysis of biomass / dry weight reserves, percent and organic carbon content of each plant species using the gravimetric method. The results showed that the average CO₂ uptake of Rambutan Hutan seedlings was 0.165 mg / m² / minute. The CO₂ uptake of Rambutan Forest seedlings has fluctuated, where the highest CO₂ absorption rates occur at 12.00-12.30 WIB, followed at 06.00- 06.30 WIB and the lowest CO₂ uptake occurs at 15.00-15.30 WIB. The average biomass / dry weight of the saplings of Rambutan Hutan plants is 13.66 grams, the average percent of organic carbon ranges from 55.50% and the organic carbon content is 7.59 grams.

Author Keywords

Rambutan Forests, saplings, carbon dioxide, biomass, organic carbon

Index Keywords

Gas Chromatography, absorption, gravimetric method

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