

## HUBUNGAN UMUR DENGAN Biomassa, Stok karbon dioksida, Tegakan POHON DUKU (*Lansium parasiticum*) DI DESA KALIKAJAR KECAMATAN KALIGONDANG KABUPATEN PURBALINGGA

<b>Title</b>	HUBUNGAN UMUR DENGAN Biomassa, Stok karbon dioksida, Tegakan POHON DUKU ( <i>Lansium parasiticum</i> ) DI DESA KALIKAJAR KECAMATAN KALIGONDANG KABUPATEN PURBALINGGA
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<b>Abstract</b>	<p>This research entitled "Age Relationship with Carbon Dioxide Stock of Duku Tree (<i>Lansium parasiticum</i>) in Kalikajar Village, Kaligondang District, Purbalingga Regency". The purpose of this research are: 1) Knowing the effect of stand age on the amount of carbon dioxide stock stored in duku stands (<i>Lansium parasiticum</i>) in Kalikajar Village, Kaligondang District, Purbalingga Regency. 2) Knowing the age of duku plants (<i>Lansium parasiticum</i>) in Kalikajar Village, Kaligondang District, Purbalingga Regency which has the most potential carbon dioxide stock. The research used survey method by determining tree biomass using stratified random sampling. The strata used is the age of duku plants. Each age strata is taken 3 trees to measure its diameter. The land area is divided by the planting distance to get the results of plant density in that location. Measurement of stand stem diameter is carried out on stand stems at the researchers' chest height (at breast height or dbh). The measuring tape is wrapped around the stand stems in a parallel position for all directions so that the data obtained is the circumference or convolution of the stem (<math>\text{circumference of the stem} = 2 \times r</math>). Age, biomass, and carbon stock data were analyzed using variance analysis (Anova), while the relationship between biomass and carbon stock was analyzed using Pearson correlation and regression analysis. The regression analysis between age and carbon dioxide stock shows an exponential pattern. The lowest carbon dioxide stock of the duku plant is found in the age group &lt;5 years, which is 9.54 tons/ha, while the largest carbon dioxide stock of the duku tree is in the age group &gt; 30 years (40 years) which is 74.89 tons/ha. Thus, this study has not yet gotten the most optimal tree age in storing carbon dioxide. Therefore it is necessary to do research on duku trees that are older than 40 years.</p>
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