

To the editor of Jurnal Manajemen Hutan Tropika

Dear Sir/Madam,

Please find enclosed with this letter the manuscript

“ Effect of Fertilization on Early Growth, Aboveground Biomass, Carbon Storage, and Leaf Characteristics in *Eucalyptus pellita* ”

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Fertilization is one of the nutrient management efforts that plays essential role in improving productivity of plantation forest. It was conducted to provide adequate nutrient for plant at the initial growth period when the availability of soil nutrient is very limited. The optimum dose of fertilization for each plant is different depending on its requirements, climate, and soil properties.

We conducted this study to investigate the influence of fertilization on early growth, aboveground biomass, carbon storage, and leaf characteristics in *Eucalyptus pellita* at the sixth months after field establishment. An experiment comprising four treatments of fertilization, i.e. 0, 75, 133, and 167 kg ha⁻¹ of triple superphosphate 46% P₂O₅ (Control, P1, P2, and P3) was set up using randomized complete block design with five replications. Four indicators were selected to evaluate the early growth of *E. pellita*, namely survival rate, height, collar of diameter, and crown projection area. Aboveground biomass and carbon storage of *E. pellita* were estimated in each component, covering stem, bark, branches, and leaves. The leaf characteristics of *E. pellita* were described by individual leaf area, individual leaf dry weight, specific leaf area, and leaf area index. Results showed that the different treatment of fertilization did not have a meaningful effect on survival rate, individual leaf area, and specific leaf area. However, those treatments demonstrated a substantial effect on other indicators such as height, diameter, crown projection area, aboveground biomass, carbon storage, individual leaf dry weight, and leaf area index. Despite the highest mean of height and collar of diameter were observed in P3, the greatest average of aboveground biomass and carbon storage were recorded in P2. It was caused by the higher leaf area index in P2 than P3. Nevertheless, this study did not find a highly different performance of *E. pellita* between P2 and P3 statistically

We request you to kindly consider this manuscript for publication in Jurnal Manajemen Hutan Tropika as a research paper.

Sincerely yours,

Pandu Y.A.P. Wirabuana

