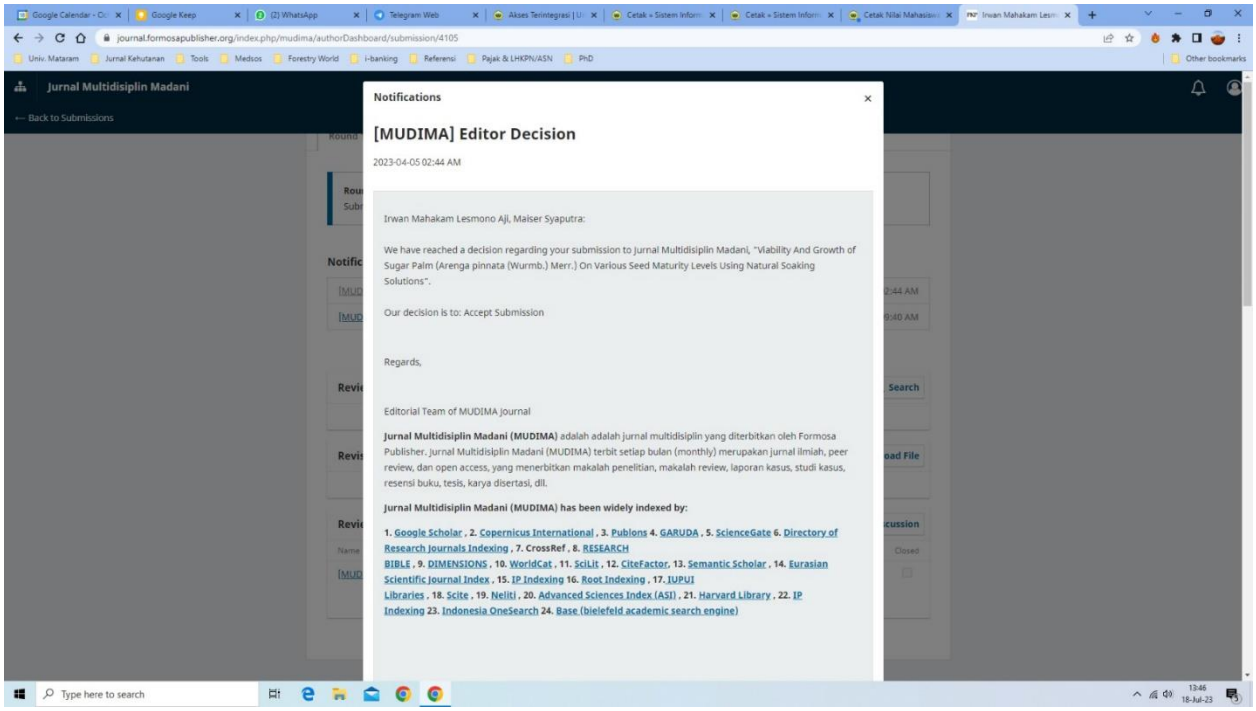
Korespondensi penerbitan jurnal: Viability And Growth of Sugar Palm (Arenga pinnata (Wurmb.) Merr.) On Various Seed Maturity Levels Using Natural Soaking Solutions

Proses Submission (5 April 2023)



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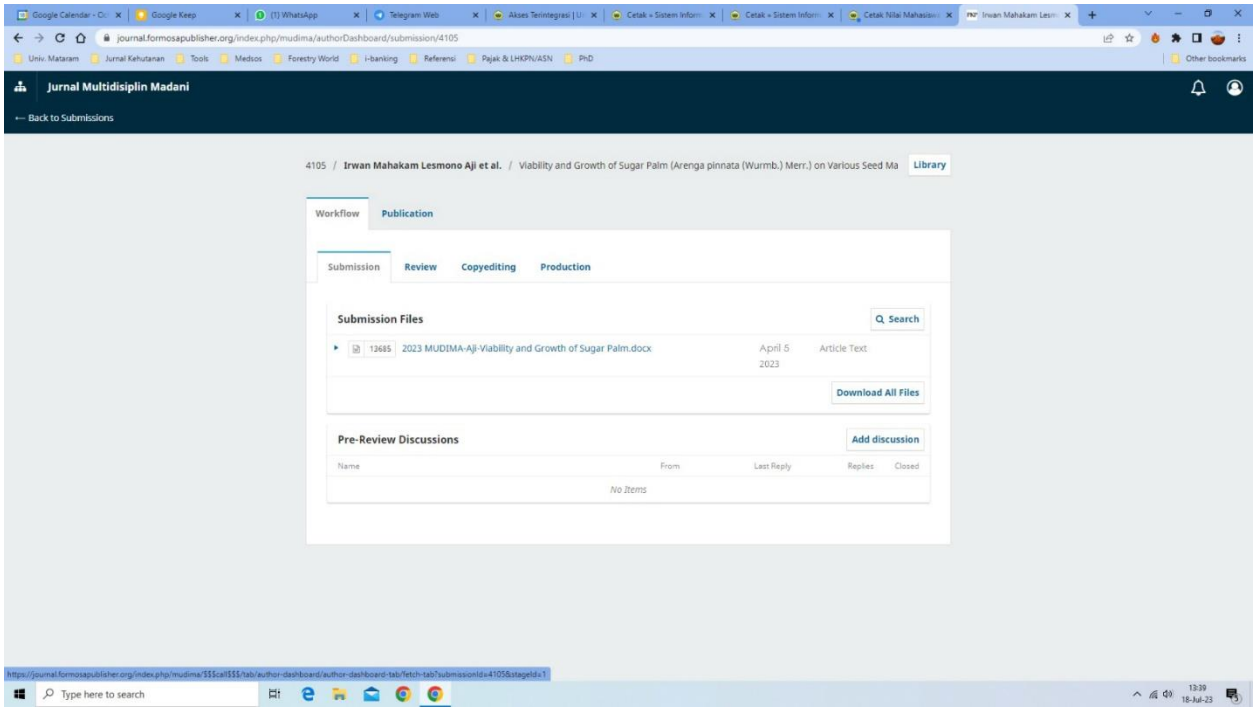

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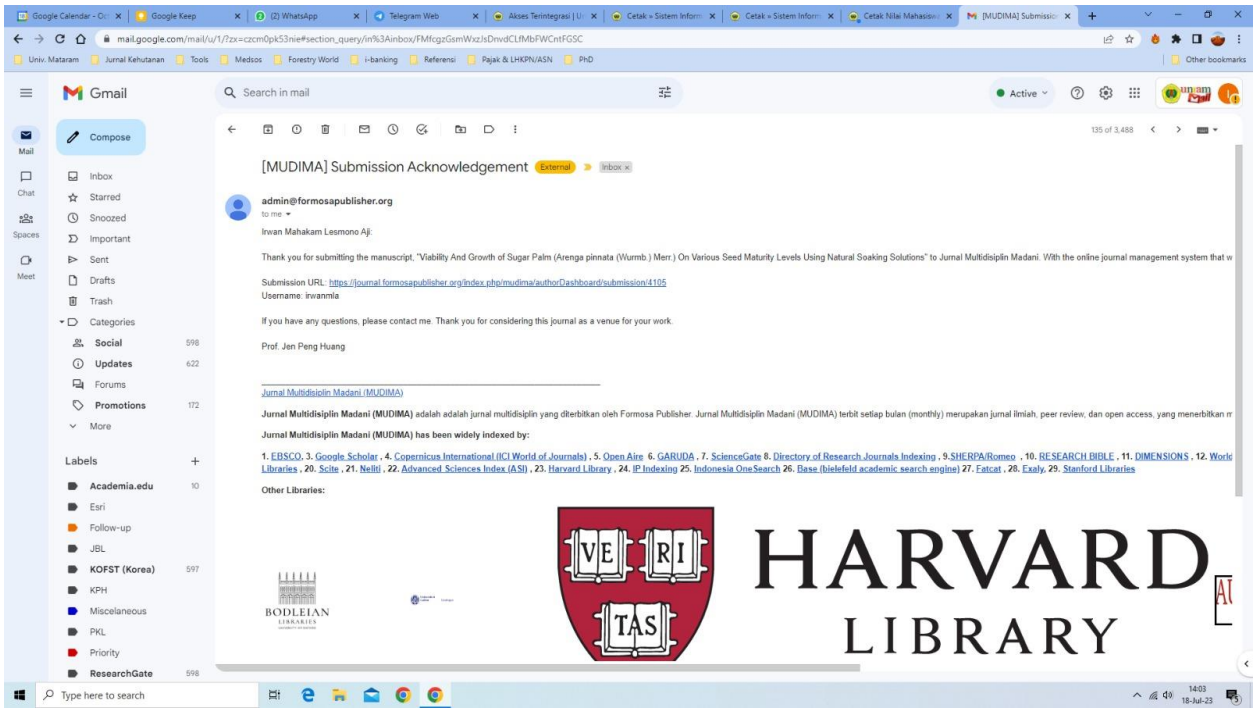
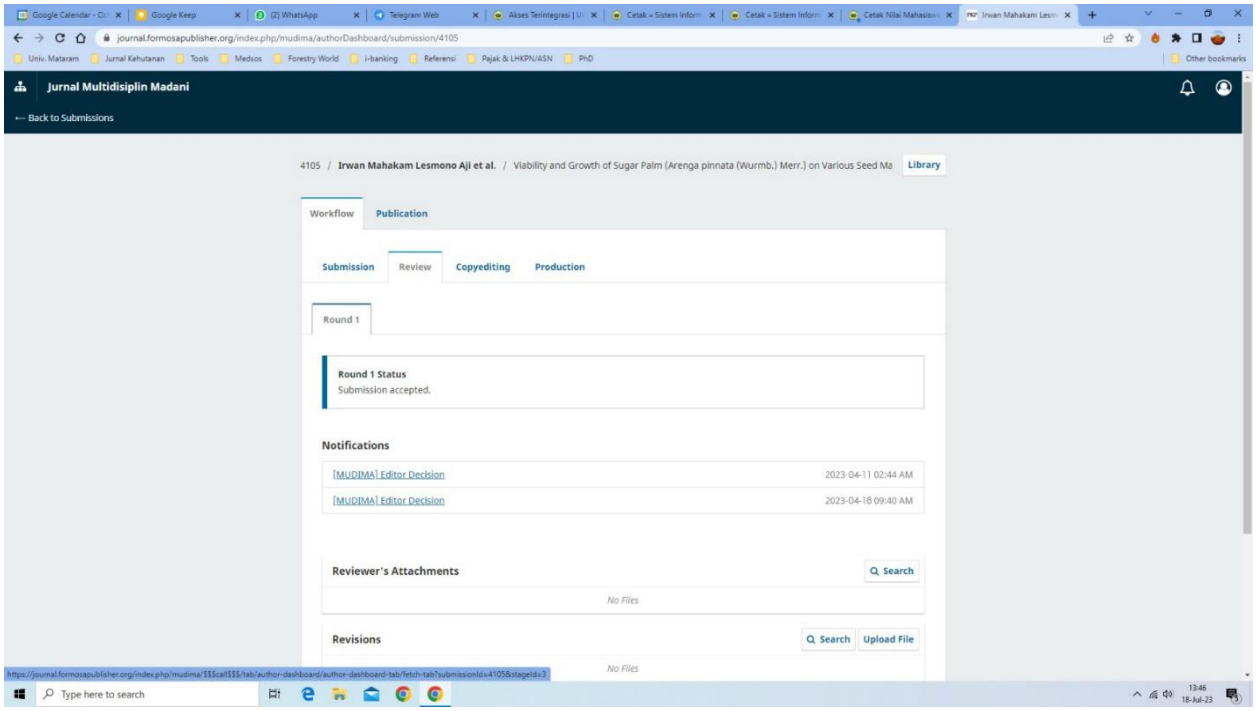


Notifikasi Review Round 1&2 (11 April & 18 April 2023)



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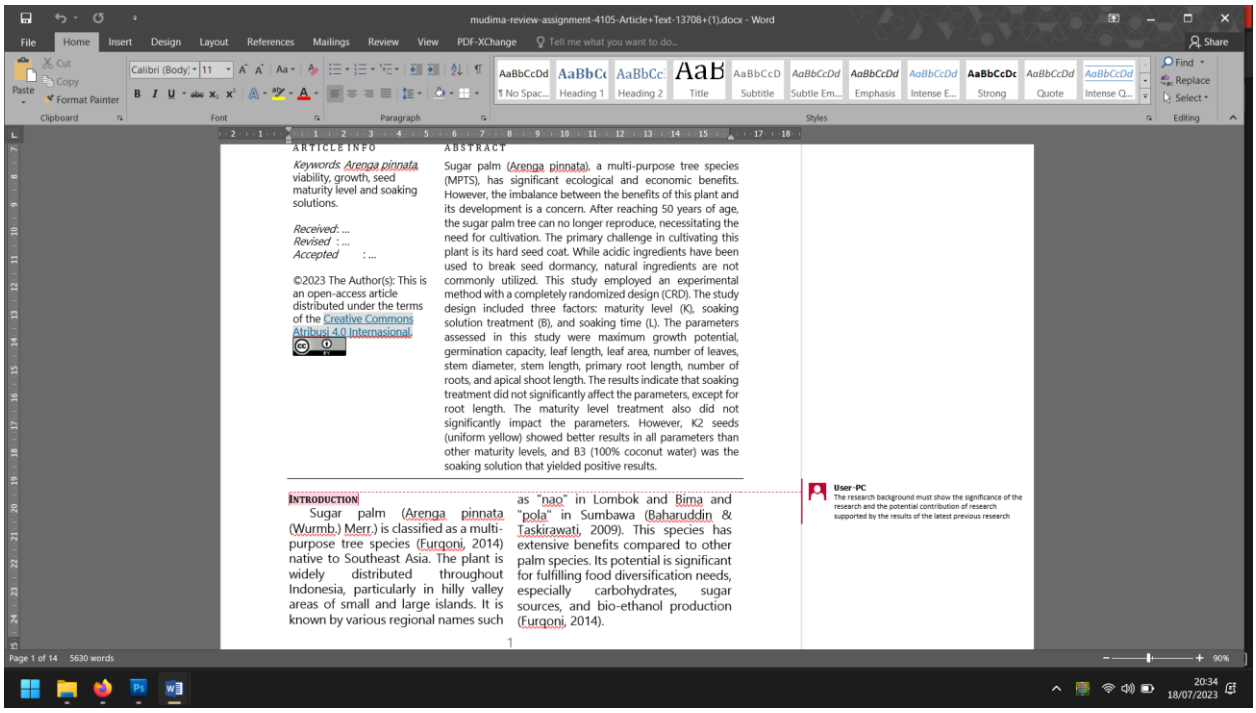

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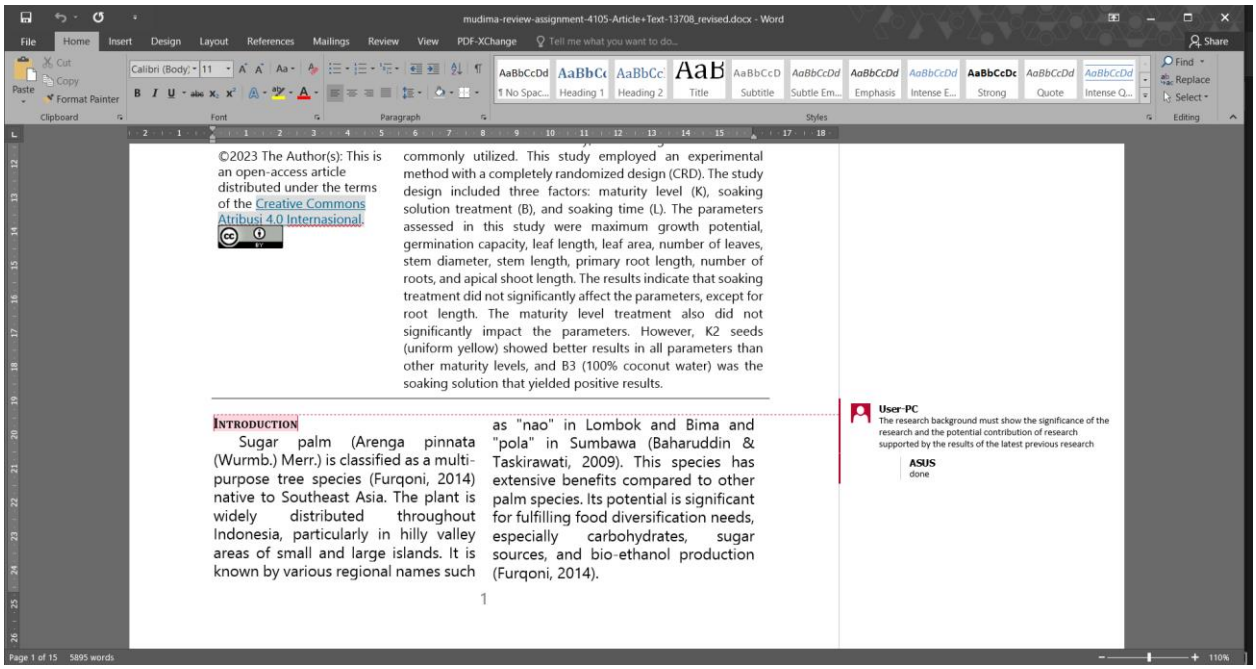

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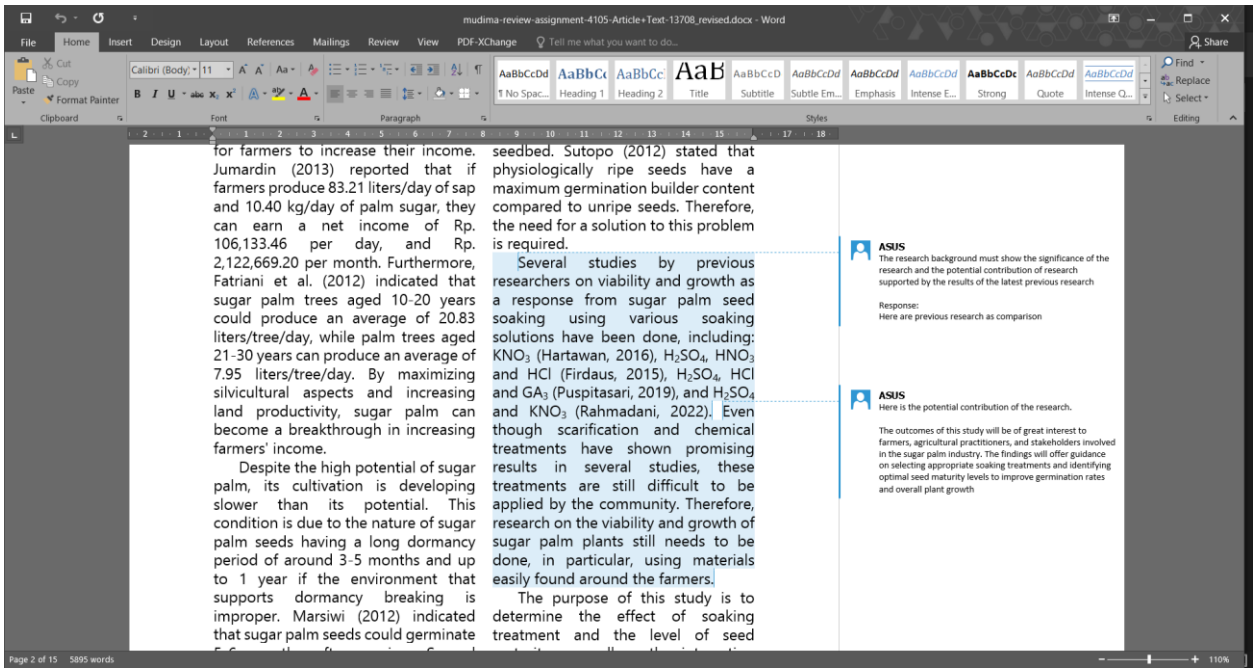

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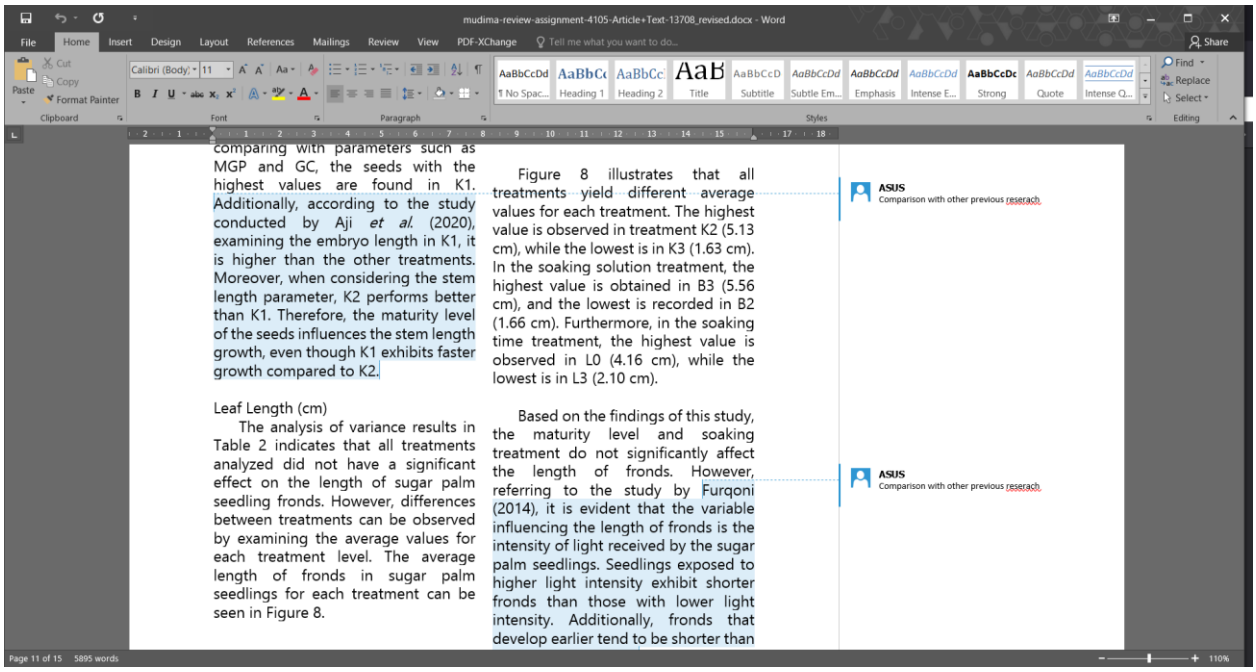
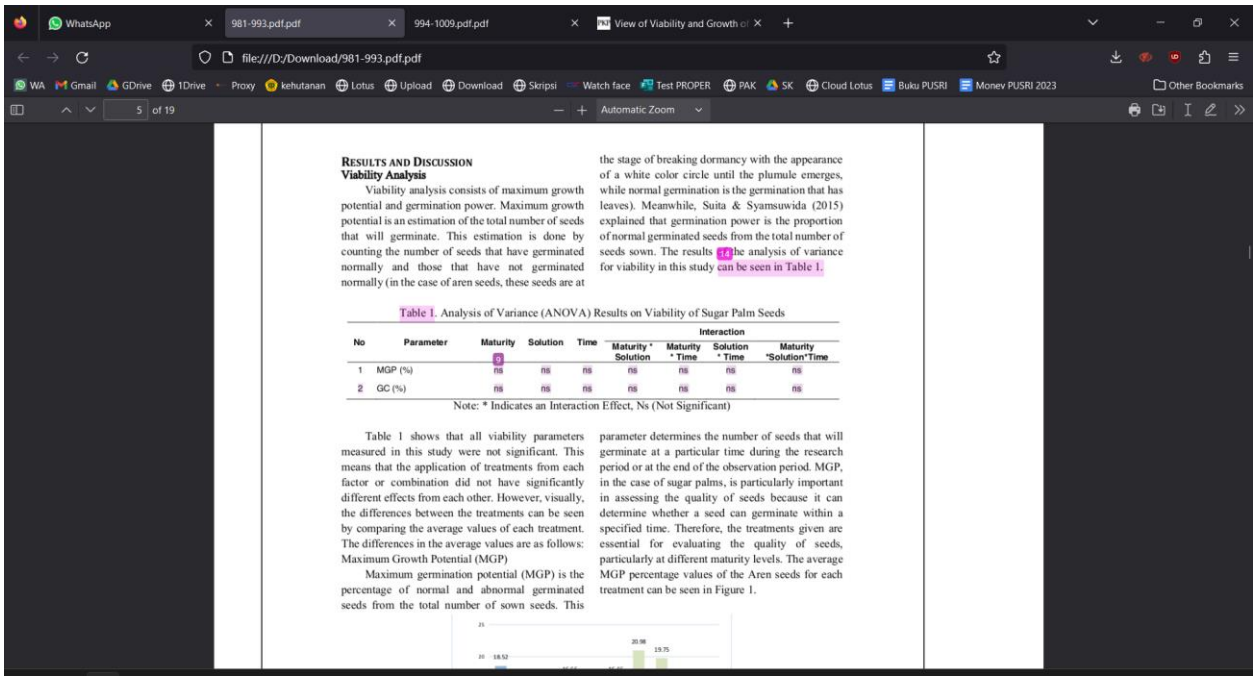


Turnitin Process (10 Mei 2023)



RESULTS AND DISCUSSION

Viability Analysis

Viability analysis consists of maximum growth potential and germination power. Maximum growth potential is an estimation of the total number of seeds that will germinate. This estimation is done by counting the number of seeds that have germinated normally and those that have not germinated normally (in the case of aren seeds, these seeds are at the stage of breaking dormancy with the appearance of a white color circle until the plumule emerges, while normal germination is the germination that has leaves). Meanwhile, Suita & Syamsuwida (2015) explained that germination power is the proportion of normal germinated seeds from the total number of seeds sown. The results of the analysis of variance for viability in this study can be seen in Table 1.

Table 1. Analysis of Variance (ANOVA) Results on Viability of Sugar Palm Seeds

No	Parameter	Maturity	Solution	Time	Interaction			
					Maturity * Solution	Maturity * Time	Solution * Time	Maturity *Solution*Time
1	MGP (%)	ns	ns	ns	ns	ns	ns	ns
2	GC (%)	ns	ns	ns	ns	ns	ns	ns

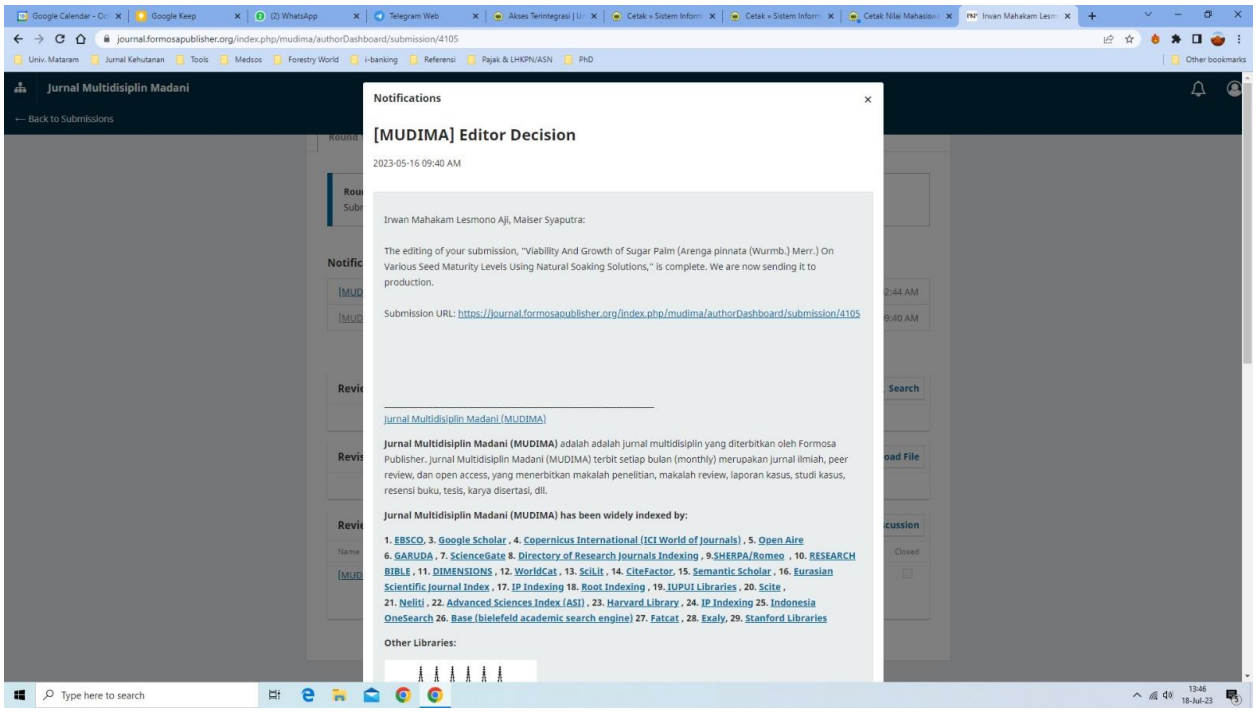
Note: * Indicates an Interaction Effect, Ns (Not Significant)

Table 1 shows that all viability parameters measured in this study were not significant. This means that the application of treatments from each factor or combination did not have significantly different effects from each other. However, visually, the differences between the treatments can be seen by comparing the average values of each treatment. The differences in the average values are as follows:

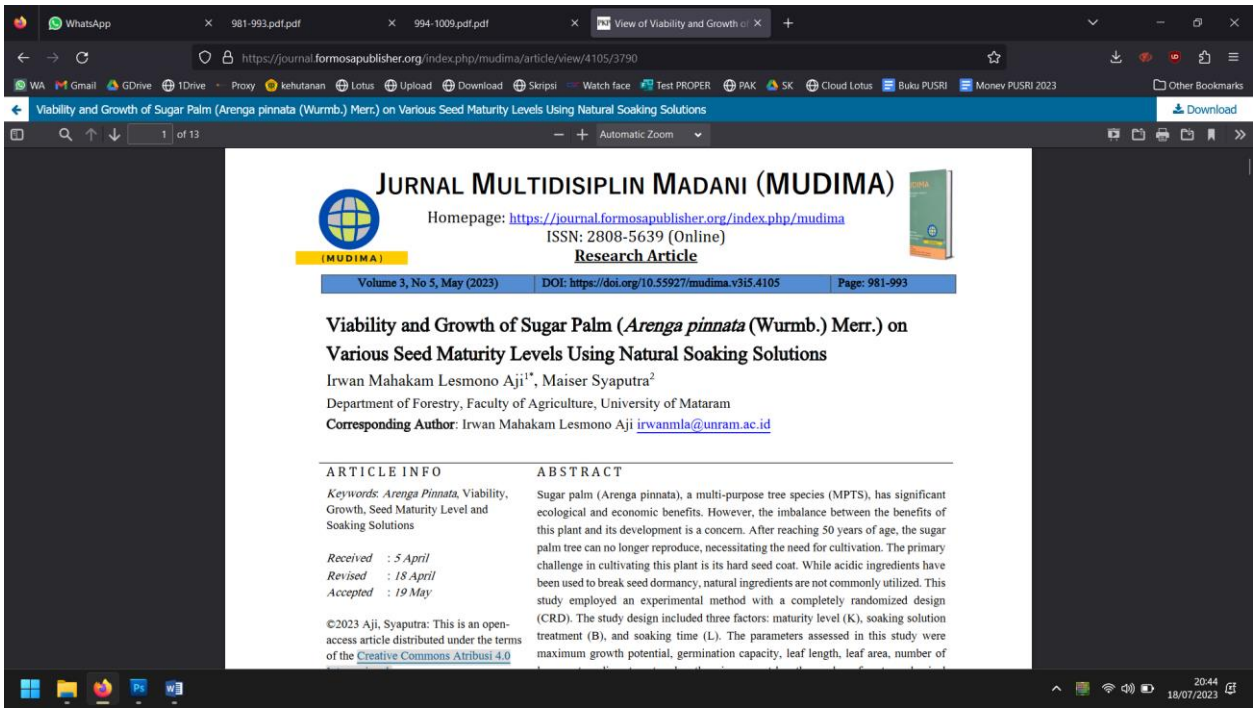
Maximum Growth Potential (MGP)

Maximum germination potential (MGP) is the percentage of normal and abnormal germinated seeds from the total number of sown seeds. This parameter determines the number of seeds that will germinate at a particular time during the research period or at the end of the observation period. MGP, in the case of sugar palms, is particularly important in assessing the quality of seeds because it can determine whether a seed can germinate within a specified time. Therefore, the treatments given are essential for evaluating the quality of seeds, particularly at different maturity levels. The average MGP percentage values of the Aren seeds for each treatment can be seen in Figure 1.

Notifikasi Produksi (16 Mei 2023)



Publish on web (30 Mei 2023)



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Viability and Growth of Sugar Palm (*Arenga pinnata* (Wurmb.) Merr.) on Various Seed Maturity Levels Using Natural Soaking Solutions

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ABSTRACT

Sugar palm (Arenga pinnata), a multi-purpose tree species (MPTS), has significant ecological and economic benefits. However, the imbalance between the benefits of this plant and its development is a concern. After reaching 50 years of age, the sugar palm tree can no longer reproduce, necessitating the need for cultivation. The primary challenge in cultivating this plant is its hard seed coat. While acidic ingredients have been used to break seed dormancy, natural ingredients are not commonly utilized. This study employed an experimental method with a completely randomized design (CRD). The study design included three factors: maturity level (K), soaking solution treatment (B), and soaking time (L). The parameters assessed in this study were maximum growth potential, germination capacity, leaf length, leaf area, number of