

Editor's Comment:

Resubmit the manuscript after major revision with correct language.

Author's Reply:

thank you, I have improved the manuscript

1. EFFECT OF ARENGA PALM [Arenga pinnata (WURMB) MERR.) LIQUID ON THE GROWTH AND YIELD OF RICE**2. ABSTRACT**

Arenga palm is a liquid obtained from the stem of palm plant [Arenga pinnata (Wurmb)Merr)]. and is used as an ingredient for brown sugar or alcoholic beverages. The results of laboratory analysis the arenga palm oil after fermentation contains N, P, K, Ca and IAA and GA3 hormones. This research intends to determine the effectiveness of the dose of arenga palm as a liquid organic fertilizer

3. The results of further tests showed that the highest yield of harvested dry grain (HDG) was found in the treatment of 25.75 L ha⁻¹, namely 5.11 kg plot⁻¹ or equivalent to 7.99 tons ha⁻¹. and very different (<0.001) with other treatments. The control treatment (without treatment) only reached 2.75 kg plot⁻¹ or 4.29 tons ha⁻¹. The second highest treatment is in the treatment of 25.50 L. ha⁻¹ with a yield of 4.25 kg plot⁻¹ or equivalent to 6.65 tons ha⁻¹. From this description, it can be said that the higher the use of liquid organic fertilizer, the higher the results obtained, this is because the nutrients contained in the LOF are sufficiently available and can be absorbed properly by plants. Besides this increase in the amount of rice grains contained due to the presence of Auxin hormones in arenga palm LOF. The application of IAA through the leaves will increase the rate of photosynthesis and cause maximum photosynthate partition to the grain is evidenced by the ability of higher grain filling and grain yield. [18,21]

4. CONCLUSION

- a. The dose of using arenga palm is good for plant height, maximum number of tillers at age 15 DAP, 28 DAP and 43 DAP is 25.25 L. ha⁻¹
- c. The dose of using arenga palm is good for the number of productive tillers and the yield of harvested grain is 25.75 L. ha⁻¹

5. REFERENCES

Mitran.T and P. K. Mani 2017 Effect of organic amendments on rice yield trend, phosphorus use efficiency, uptake, and apparent balance in soil under long-term rice-wheat rotation Journal of Plant Nutrition Volume 40, (9) 1312-1322.