

Review Form 3

Journal Name:	Journal of Experimental Agriculture International
Manuscript Number:	Ms_JEAI_131112
Title of the Manuscript:	Effect of Biochar as Substitute in Nursery Potting Mixture on Growth of Coffee Seedlings and Soil Properties
Type of the Article	Short Research Article

PART 1: Comments

	<b>Reviewer’s comment</b> Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.	<b>Author’s Feedback</b> (Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.</b>	To explores the potential of biochar as a sustainable substitute in nursery potting mixtures, particularly for coffee seedling growth and soil improvement. Given the increasing demand for eco-friendly and cost-effective agricultural practices, this study provides valuable insights into how biochar influences soil properties, nutrient availability, and seedling development. The findings contribute to sustainable nursery management strategies, enhancing coffee cultivation while promoting soil health and resource efficiency.	Included in the manuscript and highlighted
<b>Is the title of the article suitable? (If not please suggest an alternative title)</b>	<ul style="list-style-type: none"><li>❖ "Effect of Biochar as a Substitute in Nursery Potting Mixture on Coffee Seedling Growth and Soil Properties"</li><li>❖ "Influence of Biochar-Substituted Nursery Potting Mixture on Growth of Coffee Seedlings and Soil Properties"</li><li>❖ "Evaluating Biochar as a Potting Mixture Substitute: Impacts on Coffee Seedling Growth and Soil Properties"</li></ul>	Title of the changed and highlighted
<b>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</b>	<ol style="list-style-type: none"><li>1. <b>Grammar &amp; Readability</b> – Some sentences are lengthy and could be made more concise for better clarity.</li><li>2. <b>Clarification of Findings</b> – The results mention statistical similarity between T1 and T4 but do not explicitly explain why this is significant.</li><li>3. <b>Conclusions &amp; Implications</b> – While the abstract suggests biochar as a substitute for sand, it does not mention the impact on soil properties, which is part of the study's objective.</li></ol>	The manuscript detailed the effect of biochar on some of the soil properties such as pH, EC and OC.
<b>Is the manuscript scientifically, correct? Please write here.</b>	<b>Title Appropriateness:</b> The title is clear but could be slightly refined for readability (e.g., "Effect of Biochar as a Substitute in Nursery Potting Mixture on Coffee Seedling Growth and Soil Properties"). Ensure that the title aligns with the main findings. <b>Methodological Validity:</b> The pyrolysis conditions (500°C for one hour) are appropriate for biochar production. Experimental treatments (T1–T4) are well-structured, but a control treatment with only soil (without farmyard manure or biochar) could strengthen the comparisons. The statistical similarity between T1 and T4 suggests biochar may be beneficial, but are additional statistical tests (e.g., ANOVA, post-hoc analysis) used to validate the results?	Initial trails with only soil proved ineffective in supporting coffee seedling growth. Hence that treatment has not been included in the current study.
<b>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</b>	<ul style="list-style-type: none"><li>➤ Lehmann, J., &amp; Joseph, S. (2015). <i>Biochar for Environmental Management: Science, Technology, and Implementation</i>. Routledge.</li><li>➤ Jeffery, S., Abalos, D., Prodana, M., Bastos, A. C., van Groenigen, J. W., Hungate, B. A., &amp; Verheijen, F. G. (2017). "Biochar boosts tropical but not temperate crop yields." <i>Environmental Research Letters</i>, 12(5), 053001.</li><li>➤ Biederman, L. A., &amp; Harpole, W. S. (2013). "Biochar and its effects on plant productivity: A meta-analysis." <i>GCB Bioenergy</i>, 5(2), 202-214.</li></ul>	Few references from this list have been added in the manuscript at the appropriate place and highlighted.

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	<div>➤ Xie, T., Reddy, K. R., Wang, C., Yargicoglu, E., &amp; Spokas, K. (2015). "Characteristics and applications of biochar for environmental remediation: A review." <i>Critical Reviews in Environmental Science and Technology</i>, 45(9), 939-969.</div> <div>➤ Rondon, M. A., Lehmann, J., Ramírez, J., &amp; Hurtado, M. (2007). "Biological nitrogen fixation by common beans (<i>Phaseolus vulgaris</i> L.) increases with biochar additions." <i>Biology and Fertility of Soils</i>, 43(6), 699-708.</div> <div>➤ Major, J., Rondon, M., Molina, D., Riha, S. J., &amp; Lehmann, J. (2010). "Maize yield and nutrition during 4 years after biochar application to a Colombian savanna oxisol." <i>Plant and Soil</i>, 333(1-2), 117-128.</div> <div>➤ Silva, A. F., Silva, L. L., Azevedo, C. A., &amp; Pereira, W. E. (2020). "Growth of coffee seedlings in alternative substrates." <i>Scientia Agraria</i>, 21(1), 101-110.</div> <div>➤ Alho, C. F. B., Volpato, M. L. M., &amp; Troleis, M. J. (2021). "Effects of different organic substrates on coffee (<i>Coffea arabica</i> L.) seedling development." <i>Agrosystems, Geosciences &amp; Environment</i>, 4(1), e20180.</div>	
Is the language/English quality of the article suitable for scholarly communications?	<div>Areas for Improvement in Language Quality:</div> <div>✔ Grammar &amp; Syntax:</div> <div>✔ Technical Precision:</div> <div>✔ Conciseness &amp; Readability:</div> <div>✔ Formal Academic Tone:</div> <div>Improved:</div> <div>"The study findings suggest that biochar can serve as a viable alternative to sand in nursery potting mixtures for coffee seedling cultivation."</div>	Added in the manuscript and highlighted
Optional/General comments		

PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	(If yes, Kindly please write down the ethical issues here in details)	To the best of authors' knowledge, there are no ethical issues pertaining to this manuscript.