

Review Form 3

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| Journal Name: | Journal of Advances in Biology & Biotechnology |
| Manuscript Number: | Ms_JABB_127643 |
| Title of the Manuscript: | EVALUATION OF CARBON SEQUESTRATION POTENTIAL OF DIFFERENT MELIA GERMPASMS IN EASTERN DRY ZONE OF KARNATAKA |
| Type of the Article | Original Research Article |

General guidelines for the Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

| Compulsory REVISION comments | Reviewer's comment | Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i> |
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| Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part. | This manuscript presents significant findings that contribute to the understanding of carbon sequestration in agroforestry systems, particularly in arid regions. By identifying the most effective Melia germplasms for carbon capture, this research addresses critical ecological challenges such as climate change and biodiversity loss, making it relevant for both scientific inquiry and practical applications in sustainable forestry management. In addition to the rigorous experimental design and detailed analysis, which provide valuable insights for future reforestation efforts. However, the manuscript could be improved by including a discussion on how these findings can inform local agricultural practices and policies for better carbon management. | |
| Is the title of the article suitable? (If not please suggest an alternative title) | The title is generally suitable as it clearly conveys the focus of the research. | |
| 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. | <p>Suggestions for Improvement:</p> <ul style="list-style-type: none"> • Objective Clarity-While the objective is mentioned, it could be stated more explicitly at the beginning. For example, "This study aims to identify the most suitable Melia germplasm for maximizing carbon sequestration in the Eastern dry zone of Karnataka." • Contextual Background-A brief sentence providing context about the importance of carbon sequestration in agroforestry and its relevance to climate change would strengthen the abstract. This could help readers understand the broader implications of the research. • Key Findings Summary- While specific metrics are provided, summarizing the key findings in a more structured way (e.g., highlighting which germplasms were most and least effective) would enhance readability. • Implications- Including a sentence on the practical implications of these findings for local agroforestry practices or policy recommendations would add depth to the abstract and demonstrate its relevance to stakeholders. • Future Research Directions: -A brief mention of potential future research avenues based on the findings could also be beneficial, indicating how this study fits into ongoing scientific inquiry. | |
| Are subsections and structure of the manuscript appropriate? | The structure is logical and appropriate for conveying research findings. | |
| Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part. | The manuscript shows scientific robustness and technical soundness through its well-defined methodology and comprehensive data analysis. The use of a randomized block design for the experiment ensures that the results are statistically valid and can be generalized to similar contexts. The detailed measurements of tree growth parameters, biomass estimation, and carbon sequestration calculations are based on established methods and references, which enhances the credibility of the findings. Additionally, the thorough discussion of results in relation to existing literature provides a solid framework for understanding the implications of the research, making it a valuable contribution to the field of agroforestry and carbon management. | |

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| <p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p> <p>:-</p> | <p>The references cover a range of relevant topics related to biomass estimation, carbon sequestration, and the specific study of Melia species. However, there are some considerations regarding their sufficiency and recency.</p> <ul style="list-style-type: none"> • The references include both older foundational texts (e.g., Bitterlich, 1984; Chaturvedi & Khanna, 1981) and more recent studies (e.g., Chopra et al., 2023; Laxmi et al., 2021). However, the older references may not reflect the latest methodologies or findings in the field. It would be beneficial to prioritize more recent studies from the last 5-10 years to ensure that the research is aligned with current scientific advancements. • The references include a mix of books, journal articles, and reports from reputable organizations like FAO. This diversity is positive as it provides a broader context for the research. However, ensuring that key journals in agroforestry and environmental science are represented would strengthen the literature base further. • While some references directly address Melia species and carbon sequestration (e.g., Laxmi et al., 2021; Vasudev et al., 2021), others are more general or focus on different species. Including additional studies that specifically evaluate Melia germplasms in relation to carbon sequestration would enhance the manuscript's relevance. | |
| <p><u>Minor</u> REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p> | <p>The English quality of the manuscript is suitable for scholarly communication. The writing is generally clear and coherent, effectively conveying complex scientific concepts related to carbon sequestration and the evaluation of Melia germplasms. The use of technical terminology is appropriate for the target audience, and the structure of the text follows a logical flow.</p> | |
| <p><u>Optional/General</u> comments</p> | <p>none</p> | |

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) |
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| <p>Are there ethical issues in this manuscript?</p> | <p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p> | |

Reviewer Details:

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