

**Review Form 1.7**

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| Journal Name:            | <b>Asian Journal of Research in Agriculture and Forestry</b>  |
| Manuscript Number:       | <b>Ms_AJRAF_119135</b>  |
| Title of the Manuscript: | <b>Innovative seed treatment for <i>Cassia siamea</i> Lam. germination and carbon stock analysis in varied stem sizes for sustainable land management and climate change mitigation</b> |
| Type of the Article      | <b>Original Research Article</b>  |

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**PART 1: Review Comments**

|  | 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><b>Compulsory</b> REVISION comments</p> <p>1. <b>Is the manuscript important for scientific community? YES</b><br/>(Please write few sentences on this manuscript)</p> <p><b>Is the title of the article suitable? YES</b></p> <p>2.<br/>(If not please suggest an alternative title)</p> <p>3. <b>Is the abstract of the article comprehensive? YES</b></p> <p>4. <b>Are subsections and structure of the manuscript appropriate? YES</b></p> <p>5. <b>Do you think the manuscript is scientifically correct? YES</b></p> <p>6. <b>Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form. Yes it is sufficient</b></p> <p><b>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</b></p> | <p>This manuscript is important for the scientific community as it contributes to the understanding of Cassia siamea's potential for afforestation, carbon sequestration, and sustainable land management. The study provides valuable insights into optimizing seed germination, assessing carbon stock potential across stem size classes, and informing decision-making processes for climate change mitigation and restoration of degraded landscapes. The findings have both theoretical and practical implications, making it a significant addition to the existing body of knowledge on the subject.</p>   |   |
| <p><b>Minor</b> REVISION comments</p> <p>Is language/English quality of the article suitable for scholarly communications? <b>YES</b></p>  | <p>In the abstract, the sentence "Carbon stock in wood varies significantly across stem size classes, though no direct relationship with size is observed" is unclear. Consider rephrasing it to clarify the findings.</p> <p>In the discussion section, the reference to "Ogungbesan et al. [16]" is missing the year of publication.</p>   |   |
| <p><b>Optional/General</b> comments</p>  | <p><b>General Suggestions:</b></p> <ol style="list-style-type: none"> <li>Afforestation and climate change mitigation: The study focuses on Cassia siamea, a tree species with potential for afforestation and carbon sequestration. As the world grapples with the challenges of climate change, research on tree species that can effectively store carbon and contribute to mitigation efforts is crucial.</li> <li>Seed germination optimization: The study investigates the effects of various seed treatments on the germination of Cassia siamea. Identifying the most effective seed treatment methods is essential for successful plantation establishment and large-scale afforestation programs.</li> <li>Carbon stock assessment: The manuscript provides insights into the carbon stock potential of Cassia siamea across different stem size classes. Understanding the carbon storage capacity of tree species is crucial for accurate carbon accounting and the development of effective carbon sequestration strategies.</li> <li>Sustainable land management: The findings of this study have implications for sustainable land management practices, particularly in the context of mine site reclamation and the restoration of degraded landscapes. The insights gained can inform decision-making processes and guide the selection of suitable tree species for specific environmental conditions.</li> <li>Contribution to knowledge base: The research adds to the existing body of knowledge on Cassia siamea and its potential for carbon sequestration. The study's findings can serve as a foundation for future research and help advance our understanding of the role of exotic</li> </ol> |   |

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|  | <p>tree species in climate change mitigation efforts.</p> <p>6. Practical applications: The manuscript provides valuable information for policymakers, forest managers, and practitioners involved in afforestation projects, carbon offset schemes, and sustainable land management initiatives. The insights gained can guide the development of effective strategies and practices.</p> <p>In summary, this manuscript contributes to the scientific community by addressing important aspects of afforestation, carbon sequestration, and sustainable land management. The findings have both theoretical and practical implications, making it a valuable addition to the existing literature on the subject.</p> |  |
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**PART 2:**

|   | <b>Reviewer's comment</b>  | <b>Author's comment</b> <i>(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)</i> |
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| <b>Are there ethical issues in this manuscript?</b> | <i>(If yes, Kindly please write down the ethical issues here in details)</i> |   |

**Reviewer Details:**

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| Name:                            | <b>G Darshan Balaji</b>                          |
| Department, University & Country | <b>Tamil Nadu Agricultural University, India</b> |