

Review Form 3

Journal Name:	Asian Journal of Soil Science and Plant Nutrition
Manuscript Number:	Ms_AJSSPN_127528
Title of the Manuscript:	Acacia Biochar and Irrigation Scheme for Dry Season Teff Production in Highland of Ethiopia
Type of the 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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Important Policies Regarding Peer Review

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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>
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.	The significance of this manuscript for the scientific community cannot be overstated, as it contributes valuable insights and advancements in the field. Its findings may pave the way for further research and innovation, thereby enhancing our understanding of the subject matter. Personally, I appreciate this manuscript for its rigorous methodology and comprehensive analysis, which provide a solid foundation for future studies. However, certain aspects may warrant further exploration or clarification, which could strengthen its overall impact.	
Is the title of the article suitable? (If not please suggest an alternative title)	The title, " Acacia Biochar and Irrigation Scheme for Dry Season Teff Production in Highland of Ethiopia ," is suitable as it clearly reflects the main focus of the study. It highlights the key variables (acacia biochar, irrigation schemes) and the specific context (dry season teff production in Ethiopia's highlands), making it relevant and concise. However, if refinement is desired for greater clarity or academic appeal, the following alternative could be considered: "Enhancing Dry Season Teff Production in Ethiopian Highlands Through Acacia Biochar Application and Optimized Irrigation Schemes." This alternative emphasizes the study's objectives while maintaining its core elements.	

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<p>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>	<p>The abstract of the article is comprehensive and provides a clear overview of the research objectives, methods, key findings, and implications. It effectively communicates the purpose of the study, the experimental setup (biochar application rates and irrigation schemes), and highlights significant results, such as the improvement in teff dry biomass and plant height under specific treatments. However, there is room for improvement to enhance its clarity and completeness:</p> <p>Suggestions for Improvement:</p> <ol style="list-style-type: none"> 1. Include a clearer problem statement: While the abstract mentions the challenges with Nitisols and low teff productivity, explicitly stating the broader significance of addressing these issues (e.g., for food security or sustainable agriculture) could strengthen the introduction. 2. Highlight numerical findings: Key numerical results, such as the percentage increase in biomass or plant height, could be explicitly stated to give readers a better understanding of the impact. 3. Clarify limitations: Briefly mention any limitations, such as the reduced efficacy of biochar in dry conditions or clayey soils, to provide a balanced perspective. 4. Conclude with actionable insights: The abstract could end with a stronger takeaway or recommendation, such as emphasizing the need for further studies on biochar's long-term effects or its potential applicability in other regions. <p>By incorporating these points, the abstract can better engage readers and provide a more rounded summary of the study.</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The subsections and structure of the manuscript are generally appropriate and follow a logical flow typical of scientific studies. The manuscript is divided into clear sections, including Introduction, Materials and Methods, Results, Discussion, and Conclusion, which align with standard academic practices. However, some improvements could make the structure more robust and reader-friendly:</p> <p>Strengths:</p> <ol style="list-style-type: none"> 1. Logical progression: The manuscript effectively introduces the research problem, describes the experimental design, presents the results, and discusses their implications. 2. Detailed methods: The Materials and Methods section is well-detailed, allowing reproducibility, which is a critical aspect of scientific writing. 3. Results supported by figures and tables: The inclusion of data visualizations enhances the clarity and comprehensibility of the results. <p>Suggestions for Improvement:</p> <ol style="list-style-type: none"> 1. Combine or rename subsections for clarity: <ul style="list-style-type: none"> ○ The Materials and Methods section could benefit from more descriptive subheadings, such as "Study Area Description," "Experimental Design," and "Soil and Plant Analysis," for better navigation. ○ Some subsections in the Results could be reorganized to integrate findings with their implications to enhance readability. 2. Strengthen the Discussion: <ul style="list-style-type: none"> ○ While the discussion appropriately interprets results, it could better connect findings to broader contexts, such as global food security or climate-resilient agriculture. ○ Consider using subsections like "Implications for Agricultural Practices" or "Limitations and Future Directions" to make key points more prominent. 3. Align the conclusion with objectives: <ul style="list-style-type: none"> ○ The conclusion could more explicitly restate how the study addresses the objectives outlined in the introduction and emphasize the practical applications of the findings. 4. Add a "Study Limitations" subsection (optional): <ul style="list-style-type: none"> ○ Including a short subsection on limitations within the discussion could provide balance and acknowledge the scope of the study. <p>With these adjustments, the manuscript structure would be even more effective in conveying the study's significance and scientific rigor.</p>	

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<p>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.</p>	<p>This manuscript is scientifically robust and technically sound as it employs a well-designed randomized complete block experiment with clear treatments, replications, and statistical analysis, ensuring reliable results. The use of detailed methods, including biochar preparation, irrigation schemes, and soil and plant measurements, demonstrates technical rigor and reproducibility. The integration of soil sensors and weather data strengthens the study by accounting for environmental variability, a critical factor in agricultural research. Furthermore, the manuscript appropriately interprets the results in the context of existing literature, supporting its findings with relevant references, which enhances its scientific credibility.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p>	<p>The references in the manuscript are largely sufficient and include a mix of foundational studies and recent works relevant to the study topic. Key references on biochar, soil amendments, irrigation practices, and teff production are cited, ensuring a strong theoretical and contextual basis for the research. The inclusion of recent publications, particularly from 2024, reflects an effort to stay updated with the latest scientific developments.</p>	
<p>Minor REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>The language and English quality of the article are generally suitable for scholarly communication. The manuscript uses appropriate academic vocabulary, maintains a formal tone, and effectively communicates the research objectives, methods, and findings.</p>	
<p>Optional/General comments</p>		

PART 2:

	<p>Reviewer's comment</p>	<p>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)</p>
<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>	

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