

Review Form 3

Journal Name:	International Journal of Plant & Soil Science
Manuscript Number:	Ms_IJPSS_124825
Title of the Manuscript:	AI-based techniques for comprehensive crop nutrition assessment: A review
Type of the Article	Review

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 '**Jack 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</i>
<p>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.</p>	<p>This manuscript is important for the scientific community as it highlights the transformative role of AI in crop nutrition assessment, showcasing innovative methodologies that enhance precision agriculture. I appreciate its thorough analysis of various AI techniques and their practical applications. However, it could benefit from a deeper exploration of the challenges associated with implementing these technologies in diverse agricultural contexts. Overall, it serves as a valuable resource for advancing sustainable farming practices while pointing out areas for further research.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>yes</p>	
<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 is fairly comprehensive. However, I suggest the following improvements:</p> <ol style="list-style-type: none"> 1. Briefly mention specific AI methodologies (e.g., machine learning, deep learning, data fusion) in the first sentence to immediately highlight the focus. 2. Include an impact statement/sentence about the potential benefits of these AI techniques for farmers and the environment, emphasizing their contribution to sustainable agriculture. 3. Briefly acknowledge any limitations or challenges associated with these AI approaches, which could provide a more balanced view. 	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>Yes, the subsections and structure of the manuscript are generally appropriate. However, adding a discussion section could provide a platform for synthesizing findings, addressing limitations, and exploring implications for future research.</p>	
<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>It is scientifically robust and technically sound, as it reviews contemporary AI methodologies in agriculture, supported by relevant case studies. It effectively evaluates the strengths and limitations of these approaches, demonstrating a comprehensive understanding of the subject. Additionally, its focus on sustainability aligns with current scientific priorities, enhancing its validity within the field. I think, the use of AI and IoT devices may involve collecting and processing sensitive data from farms, raising concerns about data privacy and security. Thus, it should be included</p>	
<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>-</p>	<p>Yes.</p> <p>Few old citations can be avoided and new latest references can be added like:</p> <ol style="list-style-type: none"> 1. Kumar, V., et al. (2023). "Integrating IoT and AI for Real-Time Soil Nutrient Monitoring." <i>Sensors</i>, 23(4), 1862. DOI: 10.3390/s23041862. 2. Ather, D.; Madan, S.; Nayak, M.; Tripathi, R.; Kant, R.; Kshatri, S.S.; Jain, R. Selection of Smart Manure Composition for Smart Farming Using Artificial Intelligence Technique. <i>J. Food Qual.</i> 2022, 2022, 4351825. 3. Liu, X., et al. (2022). "Recent Advances in Artificial Intelligence Applications for Precision Agriculture." <i>Agricultural Systems</i>, 194, 103305. DOI: 10.1016/j.agsy.2021.103305. 4. Suman Madan, Kirti Bhardwaj and Shubhangi Gupta, "Critical Analysis of Big Data Privacy Preservation Techniques and Challenges", <i>Adv in Intelligent Syst. Computing</i>, vol. 1394, pp. 267-278, 2021a 5. Kapoor, M., Aggarwal, R., Madan, S. (2024). <i>Cyber-Security: Critical Analysis on Attacks</i>, 	

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Minor REVISION comments Is the language/English quality of the article suitable for scholarly communications?	Overall, while the language is appropriate, addressing these minor issues would enhance the manuscript's clarity and impact: <ol style="list-style-type: none">1. Ensure that technical terms are defined or explained, particularly for readers who may not be specialists in AI or agriculture.2. Some sentences could be simplified to enhance readability. Shorter, more concise sentences may help convey ideas more clearly.3. Maintain consistent terminology throughout the manuscript, particularly when referring to specific AI	
Optional/General comments	Overall, the manuscript presents a comprehensive and insightful review of AI-based techniques for crop nutrition assessment.	

PART 2:

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

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