

Review Form 1.7

Journal Name:	Asian Journal of Advances in Agricultural Research
Manuscript Number:	Ms_AJAAR_108087
Title of the Manuscript:	Use of satellite-based leaf area index data for monitoring green gram crop growth in Ikombe-Katangi area, Machakos county, Kenya
Type of the Article	Original Research Article

Review Form 1.7

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)
<p>Compulsory REVISION comments</p> <ol style="list-style-type: none"> 1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript) 2. Is the title of the article suitable? (If not please suggest an alternative title) 3. Is the abstract of the article comprehensive? 4. Are subsections and structure of the manuscript appropriate? 5. Do you think the manuscript is scientifically correct? 6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form. <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<ol style="list-style-type: none"> 1. Title and Abstract: The title clearly defines the focus of the study, and the abstract provides a concise summary of the research. However, it could benefit from a more specific statement about the potential implications of the study's findings and their significance for agricultural practices. The abstract should contain aim, objective and methodology used for the research study. 2. Introduction: The introduction effectively conveys the importance of monitoring crop conditions and introduces the concept of LAI. However, it lacks a clear problem statement, research objectives, and hypotheses. It would be beneficial to clearly state the research questions and goals to guide the reader. 3. Study Area: The description of the study area is informative and helps readers understand the specific context of the research. The climatic and geographical details are well-presented. However, it would be valuable to include a map to visually depict the study area's location. 4. Methodology: The methodology section outlines the process of using remote sensing data to estimate LAI, but it lacks detail in some areas. Specifically, it should provide more information about the data acquisition process, such as the specific Landsat 8 bands used and their relevance to LAI estimation. Additionally, the methodology for ground-truthing the LAI values could be explained more thoroughly. The Methodology should include Data Acquisition, Satellite Data Selection, Data Pre-processing, LAI Estimation, Selection of LAI Estimation Algorithm, Image Band Calculation, Calibration and Validation, LAI Data Extraction, Time Series Analysis, Crop Growth Monitoring, Threshold Values, Growth Stage Classification, Visualization and Reporting, Mapping, Temporal Analysis, Decision Support, Crop Management 5. Results: The results section provides valuable information about the LAI values obtained from remote sensing and ground measurements. It includes relevant tables and figures. However, it could benefit from a more detailed discussion of the findings. Explain any differences or patterns observed in the LAI values between remote sensing and field measurements. 6. Discussion: The discussion section is concise and provides some relevant insights into the importance of LAI and the choice of vegetation indices. However, it could be expanded to include a deeper interpretation of the results and how they relate to the research objectives. The discussion should also address the implications of the findings for agriculture in semi-arid regions more explicitly. 7. Conclusion: The conclusion summarizes the main findings and their potential significance. It would be more effective with a clear statement of the study's contributions and potential applications for crop monitoring in semi-arid regions. Additionally, it could address limitations and suggest directions for future research. 8. General Structure and Clarity: The manuscript is generally well-structured, with sections clearly defined. However, there are some minor grammar and language issues that need attention. For example, "ca librated" should be "calibrated," and "saturation is less common in relationships" could be more explicitly explained. 9. Citations and References: Ensure that all references are properly formatted and cited in the text. Some references are mentioned but not included in the reference list. 10. Figures and Tables: The figures and tables are well-labeled and provide valuable visual aids to understand the results. However, it's essential to ensure that they are mentioned and discussed in the text to provide context and interpretation. <p>In summary, this manuscript presents a valuable study on the use of satellite-based LAI data for monitoring green gram crop growth. With some improvements in clarity, structure, and detail, this</p>	

Review Form 1.7

	research can significantly contribute to the field of crop monitoring and agriculture in semi-arid regions.	
Minor REVISION comments 1. Is language/English quality of the article suitable for scholarly communications?	No	
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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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