

REVIEWER'S REPORT

Manuscript No.: JNAVS -033

Title: CLIMATE-SMART AGRICULTURE: STRATEGIES FOR ENHANCING FOOD SECURITY AND ENVIRONMENTAL SUSTAINABILITY.

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity	✓			
Significance	✓			

Reviewer Id: JPR-173

Reviewer's Comment for Publication.

The manuscript presents a review of Climate-Smart Agriculture (CSA) and its role in addressing the dual challenges of climate change and food security. The topic is highly relevant and of considerable importance for sustainable agricultural development. The paper provides a clear overview of the principles, practices, environmental benefits, economic impacts, and future prospects of CSA. The manuscript is generally well organized and easy to understand, making it suitable for a broad audience.

Strengths:

1. The manuscript addresses a globally significant issue with direct relevance to agricultural sustainability and climate resilience.
2. The article is logically structured with clear section organization.
3. Key climate-smart agricultural practices such as conservation agriculture, agroforestry, climate-resilient crop varieties, and efficient water management are adequately described.
4. The discussion includes both adaptation and mitigation aspects of climate change.
5. The inclusion of digital technologies and emerging innovations enhances the contemporary relevance of the review.

Minor Revisions Suggested:

1. Incorporate more recent peer-reviewed literature (2021–2025) to strengthen the scientific foundation and provide updated evidence on CSA adoption and impacts.
2. Include quantitative examples or case studies demonstrating the effectiveness of climate-smart agricultural practices in improving productivity, resilience, and greenhouse gas mitigation.
3. Add a comparative table summarizing major CSA practices, their benefits, limitations, and suitability under different agroecological conditions.
4. Expand the discussion on barriers to adoption among smallholder farmers, including economic, social, institutional, and technological constraints.

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5. Strengthen the section on digital agriculture by providing specific examples of artificial intelligence, precision agriculture, climate advisory services, and remote sensing applications.
6. Discuss policy frameworks, financial incentives, and international initiatives that support large-scale implementation of climate-smart agriculture.
7. Ensure consistency in formatting, numbering of sections, and citation style throughout the manuscript.

Overall Assessment:

The manuscript provides a useful and informative overview of Climate-Smart Agriculture and its contribution to food security and environmental sustainability. The content is relevant, well presented, and suitable for publication. However, the inclusion of more recent literature, quantitative evidence, and deeper analysis of implementation challenges would significantly enhance its scientific value and practical applicability.

Recommendation: Accept after Minor Revision.