

### Review Form 3

Journal Name:	<a href="#">Journal of Experimental Agriculture International</a>
Manuscript Number:	Ms_JEAI_129042
Title of the Manuscript:	<b>Drones vs. Tradition: Economic Efficiency and Challenges in Modern Agriculture through Machine Learning</b>
Type of the Article	<b>Original Research Article</b>

#### **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: 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>
<b>Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.</b>	This manuscript is highly significant for the scientific community as it addresses the critical need for technological innovation in agriculture, focusing on the integration of drones (UAVs) in paddy cultivation. By demonstrating the economic efficiency of UAV technology—achieving up to 90% efficiency and a 41% increase in income—this study provides concrete evidence of drones' transformative potential in optimizing inputs and reducing costs. Furthermore, the manuscript identifies key challenges to adoption, such as cost barriers and the need for training, offering actionable insights for policymakers and stakeholders. Its findings not only fill a research gap in UAV applications but also pave the way for broader acceptance of precision agriculture technologies, fostering sustainable and economically viable farming practices.	
<b>Is the title of the article suitable? (If not please suggest an alternative title)</b>	The title of your article, " <b>Drones vs. Tradition: Economic Efficiency and Challenges in Modern Agriculture through Machine Learning</b> ", is informative but could be more precise and aligned with the content. Based on the focus on UAVs, paddy cultivation, and their economic and operational impacts, I suggest the following alternative titles:  <ol style="list-style-type: none"><li>1. "<b>Advancing Paddy Cultivation: Assessing Economic Efficiency and Constraints of Drone Technology in Indian Agriculture</b>"</li><li>2. "<b>Economic and Operational Insights into Drone-Assisted Paddy Cultivation in Tamil Nadu</b>"</li><li>3. "<b>Unmanned Aerial Vehicles in Agriculture: Evaluating Efficiency and Barriers in Paddy Farming</b>"</li></ol> Each of these alternatives highlights the study's focus on drones, their economic efficiency, and the challenges of adoption, while maintaining clarity and precision.	

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<p><b>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.</b></p>	<p>The abstract provides a clear overview of the study and its findings but could benefit from some refinements to ensure it is more comprehensive and concise. Here are my suggestions:  <b>Additions:</b>            1. <b>Objectives Statement:</b> Explicitly include the study's objectives in the abstract to provide a clearer sense of purpose.            2. <b>Methodology Summary:</b> Briefly mention the methodology, including the sample size and the use of Data Envelopment Analysis (DEA), to lend credibility and context to the findings.            3. <b>Key Findings in Numbers:</b> Include the exact economic gains (e.g., percentage increases in efficiency and income) and cost reductions for better specificity.            4. <b>Policy Recommendations:</b> Add a short statement on the actionable recommendations or implications for policymakers to make the abstract more impactful.  <b>Deletions:</b>            1. <b>General Observations:</b> Avoid restating well-known facts, such as the importance of paddy cultivation and the challenges of traditional farming methods, unless directly linked to the findings.            2. <b>Lengthy Explanations:</b> Simplify detailed explanations about drone capabilities to keep the abstract concise.</p>	
<p><b>Is the manuscript scientifically, correct? Please write here.</b></p>	<p>The manuscript is scientifically accurate and well-structured, with appropriate methodologies such as Data Envelopment Analysis (DEA) and Responses-Priority Index (RPI) effectively employed. However, the methods section could benefit from more detailed explanations of the DEA assumptions and the rationale for selecting inputs and outputs. The results are clearly presented, though incorporating graphs alongside tables would improve clarity. The discussion effectively highlights the advantages of UAV technology, but a deeper exploration of why UAVs outperform conventional methods and addressing solutions to adoption constraints would add value. The conclusion is concise, but extending it to include broader policy implications and environmental benefits would enhance its impact. Lastly, updating references with recent studies and simplifying technical language for a wider audience could improve the overall quality and relevance of the manuscript.</p>	
<p><b>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</b></p>	<p>The references in your manuscript provide a strong foundation, but adding more recent studies (2022–2024) on UAV advancements, such as AI integration and economic analyses, would enhance relevance and comprehensiveness. Including comparative studies from regions with similar agricultural challenges, like Southeast Asia or Africa, could provide broader context. Additionally, incorporating recent reviews or meta-analyses on UAV applications in agriculture and their economic impacts would strengthen your discussion. Ensure consistency in formatting and verify completeness, including DOIs or page numbers, for all references to maintain a professional standard.</p>	
<p><b>Is the language/English quality of the article suitable for scholarly communications?</b></p>	<p>The language quality of your article is largely suitable for scholarly communication, with a clear academic tone and proper use of technical terms. However, it could benefit from minor refinements, such as breaking complex sentences into shorter ones for better clarity, ensuring smooth transitions between sections, and addressing occasional grammatical inconsistencies. Streamlining repetitive content and enhancing the abstract's conciseness would further improve readability and impact.</p>	
<p><b>Optional/General</b> comments</p>	<p>I have already added my general comments in Word file of this manuscript.</p>	

**PART 2:**

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

**Reviewer Details:**

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