

Review Form 3

Journal Name:	Journal of Experimental Agriculture International
Manuscript Number:	Ms_JEAI_123942
Title of the Manuscript:	Pest and Disease Video Classification with Convolutional Neural Network and Transfer Learning
Type of the Article	

[Review Form 3](#)

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>
<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 significant for the scientific community because it addresses a crucial challenge in agriculture: early and accurate identification of pests and diseases in crops. By utilizing advanced convolutional neural network (CNN) models and transfer learning techniques, the study demonstrates a high classification accuracy, which can lead to more efficient and automated pest and disease detection systems. This can help farmers take timely action, ultimately reducing crop loss and improving productivity. I appreciate the manuscript for its well-structured methodology, real-world applicability, and the use of diverse CNN architectures, though it could benefit from a more in-depth exploration of limitations and potential improvements in the models.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>The title "Pest and Disease Video Classification with Convolutional Neural Network and Transfer Learning" is clear and informative, accurately reflecting the content and focus of the manuscript. However, it could be refined to highlight the study's contributions and outcomes more effectively.</p> <p>An alternative title could be: "Enhanced Video-Based Pest and Disease Classification in Crops Using CNN Architectures and Transfer Learning Techniques".</p> <p>This version emphasizes both the video-based nature of the study and the advanced methods used.</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 provides a good overview of the manuscript, covering the main objectives, methodologies, and results. However, it can be improved by adding a few more details for better clarity and completeness. Here are my suggestions:</p> <p>Suggested Additions:</p> <ol style="list-style-type: none"> Dataset Information: Mention the size of the dataset (number of videos and images) and the types of crops/pests used. This would give readers a better sense of the data used. Highlight the Methods: While it mentions CNN 	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The subsections and structure of the manuscript are generally appropriate and well-organized. The manuscript follows a clear scientific structure, which includes an introduction, a detailed explanation of materials and methods, results and discussion, and a conclusion. Each section logically flows into the next, making the research easy to follow.</p> <p>However, there are a few potential improvements:</p> <ol style="list-style-type: none"> Introduction: While the introduction covers background information, it could be more comprehensive by including a stronger problem statement and clearly defining the research objectives. Results and Discussion: The results could be better integrated with the discussion to highlight the significance of findings, potential limitations, and areas for future research. Figures and Tables: Ensure all figures and tables are referenced in the text, and consider placing them closer to their relevant descriptions for clarity. <p>Overall, the structure is appropriate, but a few refinements could improve clarity and readability.</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 because it follows established methodologies in deep learning and image processing, particularly through the use of convolutional neural networks (CNNs) and transfer learning, which are well-documented techniques for classification tasks. The manuscript demonstrates a clear experimental design with appropriate data collection, preprocessing, and augmentation steps to ensure the reliability of the models. The comparison of multiple CNN architectures with detailed performance metrics such as accuracy, precision, recall, and F1 score further strengthens its validity. Additionally, the high classification accuracy achieved suggests that the models were properly trained and optimized, supporting the scientific claims made in the study.</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 manuscript includes a sufficient number of references, many of which are relevant and fairly recent, particularly for the field of deep learning and agriculture. The citations span from 2015 to 2021, covering essential works in convolutional neural networks (CNNs), transfer learning, and agricultural applications. However, it might be beneficial to incorporate a few more recent references (2022–2024) to reflect the latest advancements in video classification, deep learning, or agriculture-focused AI.</p> <p>Suggested Additions:</p> <ol style="list-style-type: none"> Recent Work on Transfer Learning in Agriculture: New studies focusing on more specialized applications of transfer learning in agricultural video analysis could be valuable to include. Recent Video Classification Techniques: Research from the last two years discussing advancements in video classification beyond CNNs, such as transformers or hybrid models, might enrich the paper's scope. <p>Updating the literature with a few more current sources will strengthen the manuscript's foundation and ensure it reflects cutting-edge research in the field.</p>	
<p>Minor REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>yes</p>	
<p><u>Optional/General</u> comments</p>		

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)
<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>	

Reviewer Details:

Name:	Hayder Ayad Khudhair
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Department, University & Country	Babylon University, Iraq
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