

Review Form 1.7

Journal Name:	Journal of Advances in Biology & Biotechnology
Manuscript Number:	Ms_JABB_119269
Title of the Manuscript:	Precision Farming Solutions: Integrating Technology for Sustainable Pest Management
Type of the Article	

General guideline for 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 guideline for Peer Review process, reviewers are requested to visit this link:

(<https://journaljabb.com/index.php/JABB/editorial-policy>)

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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. Yes, the manuscript is likely important for the scientific community interested in precision agriculture and pest management. Here's why: <ul style="list-style-type: none"> ▪ Addresses a critical aspect of agriculture: The manuscript focuses on precision agriculture, a rapidly growing field that offers significant potential to improve efficiency and sustainability in crop production. Pest management is a major challenge for farmers, and the manuscript explores how precision agriculture technologies can address this challenge. ▪ Highlights new technologies and applications: The manuscript discusses recent advancements in remote sensing, sensor technology, and data analysis relevant to pest management. This information can be valuable for researchers developing and implementing new precision agriculture solutions. ▪ Promotes data-driven pest control: The manuscript emphasizes the importance of data collection, analysis, and decision-making in pest management. This aligns with the growing trend towards data-driven approaches in agriculture, which can lead to more targeted and effective pest control strategies. ▪ Provides a foundation for further research: The manuscript offers a comprehensive overview of precision agriculture technologies for pest management. This can serve as a valuable resource for researchers exploring this field in more detail. <p>Overall, the manuscript contributes to the scientific understanding of how precision agriculture can be leveraged for sustainable and efficient pest management. It provides valuable insights for researchers, practitioners, and policymakers interested in this field.</p> 2. Yes, the title "Precision Farming Solutions: Integrating Technology for Sustainable Pest Management" is suitable for the article. Here's why: <ul style="list-style-type: none"> ▪ Clearly communicates the topic: The title mentions both precision farming and sustainable pest management, accurately reflecting the article's content. ▪ Uses keywords relevant to the field: The title includes keywords like "precision farming" and "sustainable pest management" that researchers and practitioners might use when searching for information on this topic. ▪ Concise and informative: The title is concise enough to be easily readable, yet informative enough to convey the article's focus. 3. Yes, the abstract is comprehensive and effectively summarizes the key points of the article. Here's why: <ul style="list-style-type: none"> ▪ Clearly states the topic: The abstract mentions precision agriculture and its role in sustainable pest management. ▪ Highlights key approaches: It outlines the multi-faceted approach of precision agriculture, including remote sensing, sensor technology, GPS/GIS, and entomological data integration. ▪ Mentions specific technologies: It names specific technologies like automated insect recognition and decision support systems. ▪ Discusses benefits and challenges: The abstract touches upon the economic and environmental benefits of precision pest management, as well as the challenges faced in implementation. ▪ Overall, the abstract provides a clear and concise overview of what the reader can expect to learn from the article. It effectively piques the reader's interest while accurately reflecting the article's content. <p>Here are some minor improvements you could consider:</p> <ul style="list-style-type: none"> ▪ Quantify benefits (optional): If you have specific data on efficiency improvement or environmental impact reduction, you could mention it in the abstract to strengthen its 	

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	<p>impact.</p> <ul style="list-style-type: none">▪ Mention target audience (optional): Briefly mentioning the target audience (e.g., researchers, farmers, policymakers) could further tailor the abstract.▪ These are just suggestions, and the current version of the abstract is already quite strong. <p>4. Yes, the subsections and structure of the manuscript are very appropriate.</p> <p>5. Your manuscript on "Precision Farming Solutions: Integrating Technology for Sustainable Pest Management" is comprehensive and well-structured. Here are some recommendations to enhance its scientific rigor and clarity:</p> <ul style="list-style-type: none">▪ Integration of Entomological Data<ul style="list-style-type: none">a. Technological Integration: Discuss how various technologies (e.g., AI, sensor technologies) are integrated to provide a comprehensive pest management solution.b. Examples and Case Studies: Include specific examples or case studies that illustrate successful integration of entomological data in precision agriculture.▪ Precision Application of Pest Control Measures<ul style="list-style-type: none">a. Real-world Applications: Provide more real-world applications or case studies to demonstrate how these technologies are being implemented successfully.b. Economic Analysis: Discuss the cost-effectiveness of these technologies, including initial investment and long-term savings.▪ Environmental Impacts<ul style="list-style-type: none">a. Quantitative Data: Incorporate quantitative data where possible to support claims about reductions in pesticide usage and environmental impact.b. Long-term Benefits: Discuss long-term environmental benefits and how precision pest management contributes to sustainable agriculture.▪ Challenges in Implementing Precision Pest Management<ul style="list-style-type: none">a. Detailed Barriers: Provide more details on specific technological barriers and how they can be overcome.b. Case Studies: Include case studies or examples of how specific challenges were addressed in real-world scenarios.▪ Future Trends and Innovations<ul style="list-style-type: none">a. Cutting-edge Research: Highlight recent cutting-edge research or emerging technologies in more detail.b. Potential Impact: Discuss the potential impact of these future trends on the agricultural industry. <p>6. Based on the categorized references, the distribution is as follows:</p> <ul style="list-style-type: none">▪ There are 16 references from the year 2014 and earlier, making up approximately 14.16% of the total references.▪ There are 20 references from the years 2015 to 2019, accounting for approximately 17.70% of the total references.▪ There are 69 references from the years 2020 to 2024, which represent approximately 61.06% of the total references. <p>Given that over 78% of the references are from the last 10 years (2015-2024), the selection demonstrates a strong emphasis on recent research and developments. This is crucial for ensuring that the discussion and analysis are grounded in the most current findings and trends within the field.</p> <p>To further improve the credibility and relevance of the study, it is recommended to include more references from the most recent years, ideally ensuring that over 80% of the references come from the last 10 years. This can be achieved by incorporating additional recent studies and</p>	
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	reviews that highlight the latest advancements in pest and disease management, remote sensing technologies, and precision agriculture.	
Minor REVISION comments 1. Is language/English quality of the article suitable for scholarly communications?	Yes	
Optional/General comments		

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>	

Reviewer Details:

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