

Review Form 3

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| Journal Name: | Journal of Scientific Research and Reports |
| Manuscript Number: | Ms_JSRR_124711 |
| Title of the Manuscript: | A Comprehensive Review of Unmanned Aerial Vehicle (UAV) Sprayers Used in Modern Agriculture |
| Type of the Article | Review 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> |
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| <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 provides a comprehensive review of Unmanned Aerial Vehicle (UAV) sprayers, which are an emerging technology in modern agriculture. The significance lies in the growing need to increase food production while maintaining sustainability, and UAV sprayers offer an efficient solution. This technology addresses key challenges such as labour shortages, excessive chemical use, and environmental concerns. The manuscript is valuable as it compiles the latest advancements in UAV sprayer technology, making it a useful resource for researchers and practitioners. I appreciate how it synthesizes diverse studies, but more attention to real-world implementation challenges could enhance its impact.</p> | |
| <p>Is the title of the article suitable? (If not please suggest an alternative title)</p> | <p>The title, "A Comprehensive Review of Unmanned Aerial Vehicle (UAV) Sprayers Used in Modern Agriculture," is clear and accurately reflects the content. However, I suggest an alternative to highlight the technological and sustainability focus: "Technological Advancements and Sustainability in UAV Sprayers for Modern Agriculture."</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 is comprehensive but could benefit from improved clarity and focus. It introduces the issue of food demand, crop productivity, and UAV solutions. However, the mention of job creation and soil fertility could be streamlined for better flow. I recommend including a brief mention of the manuscript's focus on technological advancements, economic viability, and environmental benefits for a well-rounded summary.</p> | |
| <p>Are subsections and structure of the manuscript appropriate?</p> | <p>In its current form, the manuscript lacks a dedicated section for a Proposed Model or Proposed Architecture that synthesizes the information provided and offers a forward-looking perspective. Given the wealth of existing work reviewed, it is crucial for the authors to propose a framework or architecture that can guide future research and development. This would demonstrate the practical implications of UAV sprayers in modern agriculture and show how existing technologies could be improved or combined to achieve better outcomes.</p> | |
| <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 systematically reviews and synthesizes a wide range of studies related to UAV sprayer technology in agriculture. The authors provide detailed information on various UAV models, spray technologies, and operational parameters, demonstrating a thorough understanding of the subject. The use of quantitative data, such as spray deposition rates and drone flight characteristics, ensures that the analysis is backed by empirical evidence. Additionally, the manuscript includes references to cutting-edge technologies, making it relevant to ongoing developments in precision agriculture</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 references are sufficient and mostly recent, covering key advancements from 2007 to 2023. However, adding more recent works focusing on emerging regulatory challenges and UAV integration in small-scale farms could add value. For example, references focusing on sustainability metrics in UAV adoption would provide a broader context.</p> | |

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| <p>Minor REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p> | <p>The language is generally clear, but some sentences in the abstract and main body could be restructured for better readability. Phrases like “diseases brought on by pesticides” could be more precise, e.g., “health risks posed by pesticide exposure.” More consistent terminology would enhance the scholarly tone.</p> | |
| <p>Optional/General comments</p> | <p>This manuscript presents a thorough review of UAV sprayer technology in modern agriculture, offering valuable insights into its applications, benefits, and limitations. However, several areas require improvement:</p> <ol style="list-style-type: none"> 1. Lack of a Proposed Model/Architecture: The manuscript would benefit from a Proposed Model section, synthesizing the reviewed work into a forward-looking framework or architecture for future UAV sprayer development. 2. Abstract Refinement: The abstract should be revised for clarity and conciseness, focusing on the key technological advancements and challenges discussed in the paper while removing less relevant points like job creation. 3. More Critical Analysis: While the review covers a broad range of UAV technologies, a deeper critical analysis of their real-world implementation challenges (e.g., regulatory, cost, scalability) is needed to provide practical value. 4. Language and Structure: The manuscript’s language is generally clear but could benefit from minor grammatical corrections and restructuring for improved readability. <p>Incorporating these changes would strengthen the scientific contribution and relevance of the paper.</p> | |

PART 2:

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| | <p>Reviewer’s comment</p> | <p>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> |
| <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:

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| <p>Name:</p> | <p>Najmus Sakib Sizan</p> |
| <p>Department, University & Country</p> | <p>Jagannath University, Bangladesh</p> |