Review Form 3

Journal Name:	**Journal of Advances in Biology & Biotechnology**
Manuscript Number:	**Ms_JABB_128352**
Title of the Manuscript:	**Population dynamics, incidence and damage of Myzus persicae Sulzer on Capsicum (Capsicum annum) under polyhouse condition in Kashmir Valley**
Type of the Article	**Original Article**

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** *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
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.	This manuscript provides critical insights into the population dynamics, incidence, and damage of *Myzus persicae* on *Capsicum annuum* under controlled polyhouse conditions in the unique agro-climatic context of Kashmir Valley. It bridges a significant gap in understanding how environmental factors within polyhouses influence aphid infestations, offering valuable data for pest management strategies tailored to protected cultivation. The findings are particularly relevant for optimizing *Capsicum* yields, informing integrated pest management (IPM) approaches, and supporting sustainable agricultural practices in similar high-altitude regions. This work contributes to advancing knowledge in entomology, horticulture, and climate-adaptive crop protection.	
Is the title of the article suitable? **(If not please suggest an alternative title)**	"Population Dynamics, Incidence, and Damage of *Myzus persicae* on *Capsicum annuum* under Polyhouse Conditions in Kashmir Valley"	
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.	✓ **Environmental Factors**: Include detailed descriptions of temperature, humidity, and light conditions in the polyhouse, as these are crucial for understanding aphid population dynamics. ✓ **Temporal Trends**: Specify the time of year or specific months when *Myzus persicae* populations peaked and their correlation with environmental parameters. ✓ **Control Measures**: Discuss any pest management practices implemented during the study and their impact on aphid populations. ✓ **Host Plant Response**: Incorporate observations on how *Capsicum annuum* plants responded physiologically or in terms of yield to aphid infestations. ✓ **Economic Threshold**: Mention the economic threshold level (ETL) of aphid infestation and how the observed incidence compares to this threshold. ✓ **Statistical Analysis**: Highlight key statistical methods used to analyze data and their significance in interpreting population dynamics and damage. ✓ The goal is to provide a focused narrative that offers enough detail for scientific clarity while avoiding excessive background or unrelated details.	
Is the manuscript scientifically, correct? Please write here.		

Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	**Criteria for Evaluating References**
	
	1. **Coverage**: Ensure the references include key works on:
	  ○ The biology and ecology of *Myzus persicae*.
	  ○ Studies on aphid population dynamics under polyhouse or greenhouse conditions.
	  ○ Research on aphid damage to *Capsicum annuum* or similar crops.
	  ○ Environmental factors affecting pest populations in Kashmir Valley or similar high-altitude regions.
	  ○ Advances in integrated pest management (IPM) for *Myzus persicae*.
	
	Suggestions for Additional References
	
	1. **Aphid Population Dynamics**: Van Emden HF, Harrington R. (2017). *Aphids as Crop Pests*. CAB International. Studies on aphid behavior and population dynamics in greenhouse environments.
	2. **Polyhouse Studies**: Research focused on pest management in polyhouse conditions, particularly in cold or temperate regions.
	3. **Capsicum-Specific Research**: Recent studies on *Capsicum annuum* under polyhouse conditions and its interaction with pests. For example, Gupta et al. (2020) on the role of environmental factors in *Capsicum* growth under protected conditions.
	4. **Regional Studies**: References specific to pest dynamics in Kashmir Valley or similar high-altitude, cold climates. Local agricultural extension research or reports on aphid infestation trends in Kashmir.
	5. **IPM and Aphid Control**:: Studies on biological or chemical control of *Myzus persicae*. Advances in IPM techniques applicable to polyhouse farming.
	6. **Climate-Specific Factors**: Papers addressing how altitude, temperature, and polyhouse microclimates affect pest biology.	

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Is the language/English quality of the article suitable for scholarly communications?	Yes, It is undarstable . In future you may improve scientific writing skills	
Optional/General comments	1. **Highlight the Unique Context**:: Emphasize why studying *Myzus persicae* in the Kashmir Valley under polyhouse conditions is important. For example, mention the unique agro-climatic conditions of the region and how they differ from other studied areas. 2. **Address Broader Implications**: Discuss how the findings can inform pest management practices for other crops or regions with similar conditions. Link the research to broader themes like food security, climate resilience in agriculture, or sustainable farming practices. 3. **Incorporate Visual Aids**: Consider including tables or graphs showing population trends, incidence rates, and damage levels over time. Images or diagrams of the polyhouse setup and aphid-infested plants can enhance reader understanding. 4. **Include Control Strategies**: Even if control methods were not a primary focus, a brief discussion of potential management strategies (e.g., biological controls, resistant cultivars, or IPM) based on findings can add practical value. 5. **Expand on Methodological Innovations**: If unique or novel methods were used in this study (e.g., specific sampling techniques, environmental monitoring in the polyhouse), highlight them as potential contributions to the field. 6. **Contextualize with Regional Challenges**: Mention any specific agricultural challenges in Kashmir Valley, such as extreme weather events or limited access to pest control resources, and how this research addresses them. 7. **Comparative Insights**: Compare findings with similar studies in other regions or under open-field conditions. This can underscore the impact of polyhouse conditions on pest dynamics. 8. **Future Research Directions**: Suggest areas for further investigation, such as long-term monitoring of *Myzus persicae* populations, impacts of changing climate conditions, or testing control methods in polyhouses. cultivation in similar regions. **References:** Verify that all references are current (preferably from the last 5–10 years) and relevant to the topic. Ensure proper citation formatting according to the journal's guidelines. **Ethical Compliance:** Confirm whether ethical guidelines (e.g., for plant protection or pesticide use) were adhered to during the study. **Additional Suggestions:** Include a dedicated section on future research directions and recommendations for pest management in polyhouse conditions. Consider adding supplementary material, such as raw data tables or methodological details, to support reproducibility. **Final Suggestions:** Present data clearly using well-labeled tables, graphs, and charts. Highlight any significant trends, such as correlations between aphid population peaks and environmental conditions. **Discussion**: Compare findings with existing literature, particularly studies conducted in similar climates or polyhouse conditions. Discuss practical implications for pest management, including integrated pest management (IPM) strategies tailored for polyhouses. **Conclusion**: Provide actionable insights based on the study, such as recommendations for controlling *Myzus persicae* in polyhouses. Suggest directions for future research, such as exploring biological control methods or the effects of varying polyhouse conditions. Include high-quality figures or images, such as photographs of aphid infestations, charts showing population trends, or diagrams of the polyhouse layout.	

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)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

Reviewer Details:

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