

Review Form 3

Journal Name:	Journal of Advances in Biology & Biotechnology
Manuscript Number:	Ms_JABB_127475
Title of the Manuscript:	Effect of feeding abamectin 1.9 % EC sprayed mulberry leaves on growth and survival of parental breeds of silkworm, <i>Bombyx mori</i> L.
Type of the 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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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>
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.	This manuscript is important for the scientific community as it evaluates the safety and efficacy of Abamectin 1.9% EC in pest management for mulberry, a critical plant for sericulture. By assessing its effects on silkworm growth, survival, and cocoon quality, it contributes valuable perceptions into balancing pest control with the sustainability of silk production. The findings of zero larval mortality and improved growth metrics at an optimal waiting period provide practical recommendations for sericulture practices. I appreciate this manuscript for addressing a crucial gap in sericulture research, the compatibility of pest management chemicals with silkworm health. Its thorough methodology and relevance to maintaining silk production without compromising environmental safety are commendable. However, I would have liked to see a deeper exploration of the potential long-term ecological impacts of Abamectin use.	
Is the title of the article suitable? (If not please suggest an alternative title)	The current title, " Effect of feeding abamectin 1.9% EC sprayed mulberry leaves on growth and survival of parental breeds of silkworm, <i>Bombyx mori</i> L. ", is informative but somewhat lengthy and could be more concise. It accurately reflects the focus of the study but might benefit from rephrasing to enhance readability and precision. Suggested Alternative Title: "Impact of Abamectin-Treated Mulberry Leaves on Growth and Survival of Silkworm (<i>Bombyx mori</i>) Parental Breeds"	
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.	The abstract of the manuscript is informative but could be improved for comprehensiveness and readability. It provides a clear summary of the study's objective, methodology, and key findings but misses a broader context and specific details that enhance its impact. Suggestions for Improvement: <ol style="list-style-type: none"> Introduction: Briefly mention the significance of mulberry and silkworm in sericulture to give readers a better understanding of the study's importance. Objective Statement: The abstract does not explicitly state the research question or hypothesis. Adding this would help clarify the study's purpose. Expand on Methodology: While the abstract mentions the chemical used and timing, it could briefly explain the experimental setup or how parameters like larval weight and cocoon quality were assessed. Highlight Broader Implications: The findings, such as the safety period and productivity outcomes, should explicitly relate to their relevance for sericulture practices and pest management strategies. Remove Redundancies: The phrase "no mortality of silkworm was observed in the treatment group during two rearing seasons" could be integrated into the sentence summarizing key results to streamline the content. Suggested Revised Abstract: Chemical residues in mulberry leaves, the sole food source for silkworms, can adversely affect silkworm health and silk production. This study evaluated the safety and impact of abamectin 1.9% EC, a novel acaricide and insecticide, sprayed on mulberry foliage for thrips and mite management. Leaves harvested at 15 and 20 days after spraying were fed to silkworms, and their growth, survival, and cocoon quality were assessed. Results revealed no larval mortality, shortest larval duration (24.08 days), highest larval weight (31.54 g/10 larvae), and maximum cocoon weight (1.59 g) when silkworms were fed leaves	

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	<p>harvested 20 days post-spray. These findings confirm the safety of abamectin 1.9% EC for silkworm rearing with a 20-day waiting period, providing practical guidance for integrating pest management into sustainable sericulture practices.</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The subsections and structure of the manuscript are logically arranged and mostly appropriate for the study's objectives. However, there are areas where the structure could be improved for clarity and readability. Below is an assessment of the manuscript's subsections and their appropriateness:</p> <p>Strengths:</p> <ol style="list-style-type: none"> 1. Logical Flow: The manuscript follows a logical progression, moving from an introduction to methods, results, discussion, and conclusion. This structure aids in comprehensibility. 2. Detailed Methods: The "Materials and Methods" section is well-detailed, allowing replication of the experiment. 3. Results and Discussion: Key findings are presented clearly, supported by tables and figures, and contextualized with references to relevant literature. <p>Areas for Improvement:</p> <ol style="list-style-type: none"> i. Subsection Titles: Some subsections, especially under "Results and Discussion," are overly specific or redundant. For instance: <ol style="list-style-type: none"> a. Combining "Larval duration (Days)" and "Total larval duration (Days)" could streamline the presentation of data. b. Similar subsections like "Larval weight," "Larval mortality," and "Effective Rate of Rearing (ERR)" can be grouped under broader headings like "Larval Performance Parameters." ii. Integration of Results and Discussion: While this is common in certain fields, separating the "Results" from the "Discussion" might improve clarity and reduce repetition. iii. Conclusion: The conclusion is concise but could have a dedicated section summarizing key findings and their broader implications. <p>Suggestions:</p> <ol style="list-style-type: none"> i. Rename "Material and Methods" to "Materials and Methods" for consistency with standard scientific writing. ii. Consider restructuring the "Results and Discussion" section: <ol style="list-style-type: none"> a. Group related subsections, such as "Growth Parameters" (including larval weight, larval mortality, and ERR) and "Cocoon Parameters" (cocoon weight and defective cocoons). b. If feasible, use bullet points or concise summary tables for key findings to improve readability. iii. Add a subsection under "Introduction" for Research Objectives to explicitly state the study's aims. iv. Under "Materials and Methods," include a clear outline of experimental design, such as a flowchart or schematic, to visualize the process. <p>By refining subsection titles and grouping related content, the manuscript can improve its readability, conciseness, and alignment with scientific writing standards.</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>The manuscript demonstrates scientific robustness and technical soundness in several key aspects. First, the experimental design is well-structured, using a factorial approach to evaluate the effects of Abamectin 1.9% EC sprayed mulberry leaves on silkworm growth and survival. The methods are clearly outlined, allowing for reproducibility, and appropriate statistical analyses (e.g., Factorial-CRD and ANOVA) were employed to assess the significance of the results. The manuscript also appropriately references previous studies, grounding its findings within the broader context of pest management in sericulture. Moreover, the study presents reliable data on multiple performance metrics, such as larval duration, weight, effective rearing rate (ERR), and cocoon quality, across different parental breeds of silkworm (<i>Bombyx mori</i> L.). This comprehensive approach strengthens the credibility of the findings, offering valuable insights into the safety of abamectin as a pesticide in sericulture. The absence of silkworm mortality and the positive effects on productivity under safe waiting periods further reinforce the technical validity of the conclusion of 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>:-</p>	<p>The references in the manuscript are fairly comprehensive and relevant to the subject of sericulture, pest management, and the use of abamectin in agriculture. The authors have cited key studies related to silkworm growth, pesticide safety, and pest control in mulberry cultivation, which strengthens the manuscript's scientific foundation. However, the majority of references seem to be somewhat dated, with most publications from the 1990s to the early 2000s.</p> <p>Strengths:</p> <ol style="list-style-type: none"> i. The references include essential studies on pesticide use in sericulture (e.g., Bhosale & Kallapur, 1988), the impact of chemicals on silkworm health (e.g., Yokoyama, 1962), and the effects of specific pesticides (e.g., Lasota & Dybas, 1990). ii. The manuscript cites recent studies (e.g., Kalpana et al., 2022; Kenchappa et al., 2024) which indicate a consideration of more contemporary research. <p>Areas for Improvement:</p> <ol style="list-style-type: none"> i. Recent References: Although the manuscript includes some recent studies, it would benefit from more recent publications (especially within the last 5 years) to reflect the latest research on pesticide safety in sericulture and 	

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	<p>alternative pest management strategies.</p> <p>ii. Additional References on Abamectin: More up-to-date research on abamectin's effects, especially regarding its environmental impact, residue studies, and safer application methods, would strengthen the manuscript.</p> <p>iii. Multidisciplinary Sources: Including references from other relevant fields, such as environmental science, toxicology, or plant protection, could broaden the manuscript's scope and provide more contemporary insights on pesticide use in agriculture.</p> <p>Suggested Additional References:</p> <p>i. Kenchappa, N. M., Vinoda, K. S., Banuprakash, K. G., Noor Mahammed, N. R., & Murali Mohan, K. (2024). Assessing the impact of abamectin and diafenthiuron on silkworm larval growth and survival. <i>Asian Research Journal of Agriculture</i>, 17(2), 424-436. https://doi.org/10.9734/arja/2024/v17i2464.</p> <p>ii. Ngegba, P. M., Cui, G., Khalid, M. Z., & Zhong, G. (2022). Use of botanical pesticides in agriculture as an alternative to synthetic pesticides. <i>Agriculture</i>, 12(5), 600. https://doi.org/10.3390/agriculture12050600.</p> <p>iii. Tudi, M., Ruan, H. D., Wang, L., Lyu, J., Sadler, R., Connell, D., & Phung, D. T. (2021). Agriculture development, pesticide application and its impact on the environment. <i>International Journal of Environmental Research and Public Health</i>, 18(3), 1112. https://doi.org/10.3390/ijerph18031112.</p> <p>iv. Stanley, J., Preetha, G. (2016). Pesticide Toxicity to Silkworms: Exposure, Toxicity and Risk Assessment Methodologies. In: Pesticide Toxicity to Non-target Organisms. Springer, Dordrecht. https://doi.org/10.1007/978-94-017-7752-0_4</p> <p>Further if you are giving numbering to the references then provide the numbering to the citations during the text also.</p>	
Minor REVISION comments	The language quality of the manuscript is generally clear and suitable for scholarly communication, but it could benefit from some refinement in terms of grammar and sentence structure. There are instances of awkward phrasing, such as "no mortality of silkworm was observed" which could be more naturally expressed as "no silkworm mortality was observed." Additionally, some technical descriptions could be made more concise to improve readability. Overall, while the manuscript is understandable, enhancing the flow and precision of language would further elevate its professionalism for publication in a scholarly journal. Kindly go through the manuscript thoroughly to check the redundancies in the flow and look into the awkward sentences	
Is the language/English quality of the article suitable for scholarly communications?		
Optional/General comments	Overall, the manuscript presents valuable findings on the use of Abamectin in sericulture, but it could be improved with clearer structuring of the results and discussion sections. Furthermore, updating the references with more recent studies would strengthen its scientific relevance and ensure the manuscript aligns with current research trends in pest management.	

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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

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