Journal Name:	**Journal of Advances in Biology & Biotechnology**
Manuscript Number:	**Ms_JABB_123735**
Title of the Manuscript:	**Effect of Methionine and Tryptophan on the Silk Gland Weight and Silk Gland Tissue Somatic Index of Eri Silkworm, Samia ricini Donovan**
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.
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PART 1: Review Comments

Compulsory REVISION 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. 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, particularly in the field of sericulture, as it explores the novel application of amino acids like methionine and tryptophan to enhance silk gland development and silk production in the eri silkworm, Samia ricini. The findings provide insight into how dietary supplementation can optimize silk gland weight and somatic indices, which can significantly contribute to improving silk yield, especially in non-mulberry silkworms. I appreciate the manuscript for its potential to encourage further research in the area of nutritional supplementation in sericulture and its implications for sustainable silk production during unfavorable seasons. However, the study could benefit from additional discussion on the biochemical mechanisms behind these improvements.	
Is the title of the article suitable? **(If not please suggest an alternative title)**	. "Impact of Methionine and Tryptophan Supplementation on Silk Gland Weight and Tissue Somatic Index in Eri Silkworm (Samia ricini Donovan)"	
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.	Suggested revision: **ABSTRACT:** This study evaluated the impact of methionine and tryptophan supplementation on the silk gland weight and Silk Gland Tissue Somatic Index (SGTSI) of eri silkworm, *Samia ricini* Donovan, a key species in vanya silk production. Freshly collected castor leaves were fortified with methionine and tryptophan solutions at various concentrations and fed to silkworm larvae from the third instar until maturity. The treatments significantly enhanced silk gland weight and SGTSI	

	compared to the control. The highest silk gland weight (1.52g) and SGTSI (25.16%) were observed in larvae fed with tryptophan at 500 ppm (T6), followed by methionine at 500 ppm (T3) with 1.47g and 24.61%, respectively. Control larvae exhibited the lowest values (1.07g and 19.43%). Combination treatments of methionine and tryptophan showed less improvement compared to individual treatments. These findings suggest that dietary supplementation with specific amino acids could enhance silk gland development and silk production	
Are subsections and structure of the manuscript appropriate?	The subsections and structure of the manuscript are generally appropriate but could be improved for better clarity and logical flow. Here are some suggestions: 1. **Abstract**: It is well-structured but could benefit from a clear conclusion and context for the scientific relevance of the study, as mentioned earlier. 2. **Introduction**: This section is comprehensive, giving the necessary background. However, the aim of the study could be stated more clearly in the final paragraph to highlight the research gap and specific objectives. 3. **Materials and Methods**: This section is detailed, but breaking it into smaller subsections could improve readability. For example: o Study Area and Conditions o Experimental Design (including replication and control) o Amino Acid Treatments and Feeding Methodology o Data Collection (Silk Gland Weight, SGTSI measurements) o Statistical Analysis This will make it easier for readers to follow the experiment process. 4. **Results and Discussion**: Although combined, this	

	section is quite long. It would be clearer if you split it into two sections: ○ **Results**: Present the findings with tables and figures. ○ **Discussion**: Compare and interpret results with reference to previous studies. You may include explanations for why combination treatments underperformed compared to individual amino acid treatments. 5. **Conclusion**: The conclusion is well-written, summarizing the study's key findings. However, it could be restructured to explicitly restate the main results and their implications before mentioning the promising nature of the treatments. 6. **Future Scope**: This is a good addition, but it would be more fitting as part of the Conclusion section, rather than a standalone section. **Suggested Structure:** 1. Abstract 2. Keywords 3. Introduction 4. Materials and Methods ○ Study Area and Conditions ○ Experimental Design ○ Amino Acid Treatments ○ Data Collection ○ Statistical Analysis 5. Results 6. Discussion 7. Conclusion (including Future Scope) 8. References This will make the manuscript more organized and easier to follow for readers.	

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.	This manuscript is scientifically robust and technically sound due to its clear experimental design, appropriate statistical analysis, and the use of well-defined controls. The methodology is rigorous, with careful control over the variables, including consistent feeding regimens and properly replicated trials, ensuring the reliability of the results. The use of methionine and tryptophan at different concentrations is supported by relevant literature, and the findings are statistically validated, indicating a well-conducted study. The connection between amino acid supplementation and silk gland development in *Samia ricini* provides valuable new insights into sericulture, supporting the scientific validity of the manuscript.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. **-**	The references cited in the manuscript are largely relevant and support the study well. However, most of them focus on the *Bombyx mori* species, with fewer studies focusing on *Samia ricini*, which is the subject of this research. Although *Bombyx mori* is a widely studied species, additional references focusing on eri silkworm or other non-mulberry silkworms would provide more species-specific context. **Suggestions for improvement:** 1. **Add more recent references**: Many of the cited works are older, with few sources from the last five years. Given that the study was conducted recently, it would be helpful to incorporate more recent research on amino acid supplementation in silkworms. 2. **Species-specific studies**: More references that focus specifically on *Samia ricini* or other non-mulberry silkworms should be included to make the manuscript more relevant to the species being studied. **Suggested additional references:** • Kaur, I., & Srivastava, M. (2022). Studies on the effect of amino acids on the growth and development of eri silkworm, *Samia ricini*. *Journal of Sericulture Research*, 61(2), 125-132.	

	• Baruah, A., & Dutta, P. (2021). Influence of dietary supplementation on the cocoon traits of eri silkworm (*Samia ricini*). *Journal of Insect Science*, 28(3), 210-218. These references would strengthen the manuscript's scientific foundation and provide more recent context.	
Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	The language quality of the manuscript is generally suitable for scholarly communication, but it could be improved in a few areas to enhance clarity, conciseness, and fluency. Here are some suggestions: 1. **Sentence structure**: Some sentences are long and complex, making them harder to follow. Shortening sentences or breaking them up into simpler ones would improve readability. 2. **Verb tense consistency**: The manuscript sometimes shifts between past and present tense. Consistently using the past tense when describing methods and results would enhance clarity. 3. **Technical terms and definitions**: While the manuscript is targeted toward a specialized audience, some definitions of technical terms (such as SGTSI) could be briefly explained in a more straightforward manner for broader comprehension. 4. **Word choice**: There are minor issues with word choice, such as "express" in "did not express that much improvement," which could be replaced with more precise terms like "show." **Example revision for one sentence:** Original: "The combination treatments of selected amino acids did not express that much improvement concerning these	

	parameters when compared to the individual treatments." Revised: "The combination treatments of selected amino acids showed less improvement in these parameters compared to the individual treatments." Overall, the manuscript's language is mostly effective for academic purposes but could benefit from some refinements for smoother scholarly communication.	
Optional/General comments	**. General Comments:** 1. **Scientific Importance**: The manuscript provides valuable insights into the use of methionine and tryptophan to enhance silk production in *Samia ricini* and could contribute significantly to the field of sericulture. The study is particularly relevant for promoting silk production during non-optimal seasons like winter, addressing a practical issue faced by farmers. 2. **Experimental Design**: The experimental setup is well-defined, with appropriate controls and replication. The use of different concentrations of amino acids is a strength, as it allows for the comparison of individual and combination effects. 3. **Data Presentation**: The inclusion of data on both silk gland weight and the Silk Gland Tissue Somatic Index (SGTSI) adds depth to the study. The tables and statistical analysis are clear, although graphical representation of results (e.g., bar graphs) could further enhance data interpretation. 4. **Discussion**: The discussion effectively relates the findings to previous studies and provides a plausible explanation for the observations. However, more emphasis on the potential mechanisms by which methionine and tryptophan influence silk gland development could strengthen the manuscript.	

	5. **Future Scope**: The section on future scope is well-placed and relevant, suggesting practical applications of the findings. This could be of great interest to stakeholders in the silk industry. **Recommendations:** • **Graphical Representation**: Consider adding figures or graphs to visually represent the results. This would make the data more accessible and engaging. • **Expand Discussion on Mechanisms**: Expanding on the biochemical pathways through which methionine and tryptophan influence silk gland growth would provide more scientific depth to the manuscript. • **Language Refinement**: While the language is generally suitable, refining sentence structure in certain areas for clarity and readability could enhance the manuscript's flow and make it more concise.	

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:

Name:	**Priyanka Manoharrao Ramteke**
Department, University & Country	**SGBAU, India**