

**Review Form 3**

Journal Name:	<b>International Journal of Environment and Climate Change</b>
Manuscript Number:	<b>Ms_IJECC_120626</b>
Title of the Manuscript:	<b>ECONOMICS OF COCOON PRODUCTION AS INFLUENCED BY HYDROGELS UNDER SENSOR BASED IRRIGATION</b>
Type of the Article	<b>Research paper</b>

## 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>
<p><b>Please write few sentences regarding the importance this manuscript for scientific community. Why do you like (or dislike) this manuscript? Minimum 3-4 sentences may be required for this part.</b></p>	<p>This manuscript provides valuable insights into the use of hydrogels in cocoon production, specifically under sensor-based irrigation systems. Given the increasing need for sustainable agricultural practices, this research can significantly contribute to optimizing resource use and enhancing economic returns in sericulture. The study's focus on comparing different hydrogel treatments offers practical guidance for sericulture farmers and researchers aiming to improve yield and cost-efficiency.</p>	
<p><b>Is the title of the article suitable? (If not please suggest an alternative title)</b></p>	<p>The title is suitable as it clearly indicates the focus of the study on the economics of cocoon production influenced by hydrogels and sensor-based irrigation. However, a more concise title could be: "Economic Impact of Hydrogel Application in Cocoon Production Using Sensor-Based Irrigation."</p>	
<p><b>Is the abstract of the article comprehensive? Do you suggest addition (or deletion) of some points in this section? Please write your suggestions here.</b></p>	<p>The abstract is comprehensive but could be improved by including the significance of the findings in a broader context. Additionally, the methodology section in the abstract could be streamlined for clarity. Suggested revision: "A field experiment was conducted to study the economics of cocoon production influenced by hydrogels under sensor-based irrigation using a Randomized Complete Block Design with nine treatments and three replications. The study compared Pusa and Zeba hydrogels at various application rates. Results indicated that Zeba hydrogel @ 6 kg/ac yielded the highest net returns (Rs. 1,48,812 ha<sup>-1</sup> year<sup>-1</sup>) and B ratio (2.88). The findings suggest that using hydrogels can significantly enhance economic returns in cocoon production."</p>	
<p><b>Are subsections and structure of the manuscript appropriate?</b></p>	<p>The subsections and structure of the manuscript are appropriate, providing a clear flow from introduction to conclusion. However, it would benefit from a more detailed discussion section to interpret the results in a broader context and suggest practical implications and future research directions.</p>	
<p><b>Please write few sentences regarding the scientific correctness of this manuscript. Why do think that this manuscript is scientifically robust and technically sound? Minimum 3-4 sentences may be required for this part.</b></p>	<p>The manuscript appears scientifically robust and technically sound, with a well-structured experimental design and comprehensive data analysis. The use of RCBD and appropriate statistical methods adds validity to the findings. However, the manuscript would benefit from a deeper exploration of the underlying mechanisms through which hydrogels influence cocoon production.</p>	
<p><b>Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</b></p>	<p>The references are insufficient and need to be more recent to reflect the current state of research. I suggest including recent studies on the use of hydrogels in agriculture and advancements in sensor-based irrigation technologies. Some additional references could include:</p> <ul style="list-style-type: none"> <li>• Recent advancements in hydrogel technology for agricultural applications.</li> <li>• Current trends in sensor-based irrigation systems and their economic impacts.</li> </ul>	

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Minor REVISION comments <b>Is language/English quality of the article suitable for scholarly communications?</b>	I appreciate the study's practical approach and its relevance to current agricultural challenges. The use of a well-defined experimental design (RCBD) adds robustness to the findings. However, the manuscript could benefit from clearer language and more recent references to support the research context.	
<b>Optional/General</b> comments	Overall, this manuscript makes a significant contribution to the field of sustainable agriculture and sericulture. By addressing the points mentioned above, particularly in improving language clarity, expanding the literature review, and providing more recent references, the manuscript can be further strengthened. The findings have practical implications for improving resource use efficiency and economic returns in cocoon production, making it a valuable resource for researchers and practitioners in the field.  Recommended citations: <a href="https://www.sciencedirect.com/science/article/pii/S2772375521000320">https://www.sciencedirect.com/science/article/pii/S2772375521000320</a> and <a href="https://www.frontiersin.org/journals/sustainable-food-systems/articles/10.3389/fsufs.2020.622720/full">https://www.frontiersin.org/journals/sustainable-food-systems/articles/10.3389/fsufs.2020.622720/full</a> and <a href="https://www.frontiersin.org/journals/sustainable-food-systems/articles/10.3389/fsufs.2023.1223645/full">https://www.frontiersin.org/journals/sustainable-food-systems/articles/10.3389/fsufs.2023.1223645/full</a> Etc.	

### 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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