Review Form 1.7

Journal Name:	**Biotechnology Journal International**
Manuscript Number:	**Ms_BJI_119846**
Title of the Manuscript:	**Efficient Plant Growth Regulators in Indirect Plant Regeneration in Rice Variety Nerica 3 Using Mature Seeds as Explant**
Type of the Article	**Original Research Article**

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PART 1: Review Comments

	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)*
Compulsory REVISION comments 1. **Is the manuscript important for scientific community?** (Please write few sentences on this manuscript) 2. **Is the title of the article suitable?** (If not please suggest an alternative title) 3. **Is the abstract of the article comprehensive?** 4. **Are subsections and structure of the manuscript appropriate?** 5. **Do you think the manuscript is scientifically correct?** 6. **Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.** **(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)**	1. **Yes, the manuscript is important for the scientific community, particularly for researchers and practitioners in the fields of plant biotechnology and agricultural science. The study presents a novel approach to callus induction and plantlet regeneration in the rice variety 'Nerica 3' using mature seeds as explants. This method has the potential to significantly enhance the efficiency of rice breeding programs and genetic improvement efforts. By optimizing the use of plant growth regulators, the research provides valuable insights into improving in vitro plant regeneration protocols, which can be applied to other rice varieties and possibly other crops. The findings contribute to the broader understanding of tissue culture techniques and their practical applications in crop improvement and genetic transformation.** 2. **Yes, the title of the article is suitable as it clearly reflects the main focus of the research. However, if you prefer a slightly more concise and focused title, you might consider: "Optimizing Plant Growth Regulators for Indirect Plant Regeneration in Rice Variety Nerica 3 Using Mature Seed Explants" This title maintains the essential details while streamlining the information for clarity.** 3. **Yes, the abstract of the article is comprehensive. It succinctly outlines the objective, methodology, results, and potential applications of the study. It mentions the use of mature seeds of rice variety Nerica 3 as explants, the different plant growth regulators tested, and the findings regarding the most effective medium for plantlet regeneration. This provides a clear overview of the research for readers.** 4. **Yes, the subsections and structure of the manuscript are appropriate. The manuscript is well-organized into the following key sections: Introduction: Provides background information and sets the context for the study.** **Materials and Methods: Details the experimental design, plant materials, explants preparation, callus induction, maintenance, and plantlet regeneration protocols.** **Results and Discussion: Presents the findings and interprets them in the context of existing literature.** **Conclusion: Summarizes the main findings and their implications.** **Each section logically follows the previous one, ensuring a clear and coherent flow of information. This structure effectively guides the reader through the research process and findings.** 5. **Yes, the manuscript appears to be scientifically correct. The experimental design is robust, with clear descriptions of the materials and methods used, including specific details on the concentrations of plant growth regulators and the conditions for callus induction and plantlet regeneration. The results are presented clearly, with appropriate statistical analysis to support the findings. The discussion effectively interprets the results in the context of existing literature, highlighting the significance of the findings and their implications for genetic improvement programs of the rice variety 'Nerica 3'. However, for a thorough evaluation, a detailed review of the experimental data, statistical analysis, and consistency with the existing scientific literature would be necessary. But based on the provided information, the manuscript appears to be scientifically sound.** 6. **The references cited in the manuscript appear to be relevant and cover a range of studies related to plant growth regulators and tissue culture in rice and other plants. However, to ensure the references are sufficient and up-to-date, it would be beneficial to include more recent studies and reviews that have been published in**	

	the last 5-10 years. This will help to place the current research in the context of recent advances in the field. **Here are some suggestions for additional references that could enhance the manuscript:** **Recent Reviews on Plant Growth Regulators in Rice Tissue Culture:** **Ge, X., Chu, Z., Lin, Y., & Wang, S. (2006). A tissue culture system for different germplasms of indica rice. Plant Cell Reports, 25(5), 392-402.**	

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Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	The language and English quality of the article are generally suitable for scholarly communications. However, there are a few areas where clarity and readability can be improved. Here are some suggestions: Grammar and Sentence Structure: Ensure that all sentences are grammatically correct and clear. Some sentences could be shortened or split into two to improve readability.	
Optional/General comments	General Comments: The manuscript titled "Efficient Plant Growth Regulators in Indirect Plant Regeneration in Rice Variety Nerica 3 Using Mature Seeds as Explant" addresses a significant area in plant biotechnology and breeding by optimizing plant growth regulators for the regeneration of rice plants from mature seeds. The study is well-conducted and provides valuable insights into the use of different plant growth regulators for effective plantlet regeneration. Here are some general comments: Relevance and Importance: The research is highly relevant and important for the scientific community, especially those working in plant biotechnology, tissue culture, and rice breeding. The results contribute to the understanding of efficient regeneration protocols, which are crucial for genetic improvement programs. Title and Abstract: The title is appropriate and clearly reflects the content of the study. However, a minor adjustment for conciseness could be considered, such as "Optimization of Plant Growth Regulators for Indirect Plant Regeneration in Rice Variety Nerica 3 Using Mature Seeds". The abstract is comprehensive and provides a clear summary of the study's objectives, methods, results, and conclusions. It effectively captures the key findings and significance of the research. Structure and Organization: The manuscript is well-structured with clearly defined sections, including Introduction, Materials and Methods, Results and Discussion, and Conclusion. Each section logically follows from the previous one, making the manuscript easy to follow. Subsections within the Materials and Methods and Results and Discussion sections are appropriate and help in organizing the content effectively. Scientific Accuracy: The manuscript appears to be scientifically accurate with well-supported findings. The use of statistical analysis to validate the results adds to the robustness of the study. References: The references cited are relevant and recent, covering a wide range of related studies in the field. If additional references are needed, they should be from recent advancements in the field of rice tissue culture and plant regeneration. Language Quality: The language and English quality are suitable for scholarly communication. However, minor improvements in grammar, sentence structure, and consistency can enhance clarity and readability. Ethical and Competing Interest Issues: No ethical issues are apparent in this manuscript. As a reviewer, I declare that I have no competing	

	interests. Minor Revisions: Ensure consistency in the use of units (e.g., mg/L). Improve clarity and readability in some sentences by revising for better flow and grammar. Confirm the accuracy of all references and include any recent studies that might be relevant. Overall, the manuscript is well-prepared and provides significant contributions to the field of plant regeneration in rice. With minor revisions, it will be suitable for publication in the Asian Journal of Biotechnology and Bioresource Technology.	

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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