Review Form 1.8

Journal Name:	**Biotechnology Journal International**
Manuscript Number:	**Ms_BJI_120082**
Title of the Manuscript:	**PRODUCTION OF LIQUID BIOFERTILIZER USING SPENT MUSHROOM SUBSTRATE AND WATERMELON PEELS**
Type of the Article	

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)*
Is the manuscript important for scientific community? (Please write few sentences regarding this manuscript to justify your answer)	The study demonstrates the production of a liquid biofertilizer through the use of spent mushroom substrate (SMS) and watermelon peels by liquid state fermentation. The two waste materials were combined, mixed with water, and allowed to ferment anaerobically for 3 weeks.Microbiological analysis identified the following bacterial species in the final biofertilizer product: Pseudomonas aeruginosa, Stenotrophomonas geniculata, Sphingobacterium daejeonense, and Alcaligenes faecalis. The fermentation process led to a reduction in the concentrations of total nitrogen, phosphorus, magnesium, and potassium, while iron content increased.A pot experiment was conducted to compare the effects of the liquid biofertilizer, a chemical fertilizer, and no fertilizer on the growth of bean and groundnut plants. The results showed that the liquid biofertilizer treatment performed comparably to the chemical fertilizer treatment, and the biofertilizer also acted as a biocontrol agent as the leaves were not eaten by caterpillars in that setup.The authors conclude that the liquid biofertilizer produced from spent mushroom substrate and watermelon peels can be a viable alternative to chemical fertilizers, providing nutrients to plants while also serving as a biocontrol agent.	
Is the title of the article suitable? (If not please suggest an alternative title)	The paper describes the production of a liquid biofertilizer through the use of two waste materials - spent mushroom substrate (SMS) and watermelon peels. The title clearly conveys this central objective of the research.	
Is the abstract of the article comprehensive?	The abstract effectively captures the purpose, methodology, key findings and conclusions of the research in a concise manner.	
Are subsections and structure of the manuscript appropriate?	The manuscript is well-structured and follows a logical flow, making it easy to follow and understand the research.	
Do you think the manuscript is scientifically correct? (Please write few sentences regarding this manuscript to justify your answer)	**The subsections and structure of the manuscript "PRODUCTION OF LIQUID BIOFERTILIZER USING SPENT MUSHROOM SUBSTRATE AND WATERMELON PEELS" are appropriate and well-organized. Here are the key points:** **1. Abstract: The abstract provides a concise overview of the study, including the objective, methodology, key findings, and conclusions. It effectively summarizes the main points of the research.** **2. Introduction: The introduction sets the context for the study by explaining the importance of biofertilizers, the problems associated with excessive use of inorganic fertilizers, and the potential of spent mushroom substrate and watermelon peels as waste materials.** **3. Materials and Methods: This section provides detailed information on the materials used, the study area, sample collection, microbiological analysis, physicochemical analysis, and the fermentation process.**	

	4. **Results and Discussion: The results section presents the findings of the study, including the microbiological and physicochemical analysis of the biofertilizer, the pot experiment, and the growth parameters measured. The discussion section interprets these results and provides insights into the implications of the study.** 5. **Conclusion: The conclusion summarizes the main findings and highlights the significance of the study, emphasizing the potential of the liquid biofertilizer as a sustainable and environmentally friendly alternative to chemical fertilizers.** 6. **Tables and Figures: The inclusion of tables and figures, such as the biochemical test results, DNA quantification, and evolutionary relationships, supports the text and provides visual aids for understanding the data.**	
Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.	**YES**	
Minor REVISION comments **Is language/English quality of the article suitable for scholarly communications?**	The language and English quality of the manuscript is suitable for scholarly communications, with only minor revisions needed to improve clarity, consistency, and active voice usage. The technical content and scientific rigor appear to be strong, which is the primary concern for a research publication.	
Optional/General comments		

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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