

Review Form 3

Journal Name:	Journal of Scientific Research and Reports
Manuscript Number:	Ms_JSRR_125395
Title of the Manuscript:	Bio-agents: A Source for Enhancing Enzymatic Activity in Tomatoes Infected with Root-knot Nematodes (<i>Meloidogyne javanica</i>)
Type of the Article	

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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 presents significant findings for the scientific community, particularly in the field of plant pathology and sustainable agriculture. The research highlights the potential of bio-agents, such as <i>Trichoderma harzianum</i> and <i>Bacillus subtilis</i> , in managing root-knot nematodes and improving enzymatic activity in tomatoes. This is crucial, as it offers an environmentally friendly alternative to chemical nematicides, addressing the increasing need for sustainable plant protection strategies. I appreciate the manuscript for its practical implications, as it provides a promising approach to enhancing crop resilience against nematodes. However, the lack of detailed discussions on possible field applications may leave room for further elaboration.	
Is the title of the article suitable? (If not please suggest an alternative title)	The title of the article, "Bio-agents: A Source for Enhancing Enzymatic Activity in Tomatoes Infected with Root-knot Nematodes (<i>Meloidogyne javanica</i>)," is appropriate as it reflects the core focus of the study. However, it could be refined for clarity and impact, making it more precise and reflective of the study's main findings. The current title emphasizes the general role of bio-agents but does not specifically highlight the context of the study, which involves enzymatic defense mechanisms (PPO, PAL, phenol) and the suppression of nematode populations in tomato plants. Here is a suggested improvement: "Effect of Bio-agents on Enzymatic Activity and Nematode Management in Tomato Plants Infected with <i>Meloidogyne javanica</i>" This revised title highlights both the enhancement of enzymatic activity and the management of root-knot nematodes, which are the key aspects of the study.	

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<p>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.</p>	<p>Clarity and Completeness: The abstract presents a clear summary of the study but could benefit from a more concise structure. Repetitive phrases such as "in pot conditions" and "20 percent concentration" could be consolidated to enhance readability. Additionally, the introduction of enzymes (PPO, PAL, and phenol) and their role in defense should be explained briefly for clarity.</p> <p>Experimental Details: The abstract provides substantial details regarding the bio-agents used, but it could also mention the control treatments more succinctly to focus on key findings. For instance, rather than listing all bio-agents twice, once for the experiment and again for results, it might be more effective to combine these into one section.</p> <p>Statistical Findings: Although the abstract states that "all bio-agents significantly increased" the levels of certain enzymes and improved plant growth parameters, the magnitude of these changes should be summarized with more statistical rigor (e.g., percentage increases or specific values where relevant).</p> <p>Conclusion and Practical Implications: The conclusion can be expanded to address the practical implications of these findings for nematode management in agricultural practice. What are the broader applications of using <i>Trichoderma harzianum</i> and other bio-agents, and how do they compare to conventional treatments? This would provide more value for practitioners reading the paper.</p> <p>Repetitive Information: The abstract repeats some information (e.g., bio-agents and concentrations), which could be avoided for better brevity.</p> <p>Enzyme Role Clarification: The role of PAL, PPO, and phenol accumulation in the defense response should be briefly contextualized, as readers unfamiliar with plant-pathogen interactions may not fully grasp their significance.</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The manuscript's structure appears logical, with clear sections for the abstract, introduction, materials and methods, results, and discussion, facilitating easy navigation and comprehension. The subsections under "Materials and Methods" and "Results" are well-defined, allowing for a systematic presentation of experimental procedures and findings.</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 titled "Bio-agents: A Source for Enhancing Enzymatic Activity in Tomatoes Infected with Root-knot Nematodes (<i>Meloidogyne javanica</i>)" demonstrates a solid scientific foundation and technical rigor. The authors conducted comprehensive experiments to assess the effectiveness of various bio-agents in enhancing enzymatic activity in tomato plants under nematode stress, utilizing well-established methodologies for enzyme assays and statistical analyses. The results clearly indicate that the bio-agents not only boosted enzyme levels specifically polyphenol oxidase (PPO) and phenylalanine ammonia lyase (PAL) but also improved plant growth parameters and reduced nematode populations, providing a multifaceted approach to addressing nematode infestations. Moreover, the use of controls and replication strengthens the reliability of the findings, making this study a robust contribution to sustainable agricultural practices against root-knot nematodes.</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 provided offer a solid foundation, but some are outdated, with several from the early 2000s. Incorporating more recent studies, particularly from the last five years, would enhance the manuscript's relevance and rigor.</p>	

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Minor REVISION comments Is the language/English quality of the article suitable for scholarly communications?	The language quality of the article is generally suitable for scholarly communication, with clear descriptions of the methodology and results. However, there are some grammatical errors, inconsistencies in terminology, and awkward phrasings that could be improved for clarity and precision in a formal academic context.	
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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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