

Review Form 3

Journal Name:	Journal of Advances in Biology & Biotechnology
Manuscript Number:	Ms_JABB_127237
Title of the Manuscript:	The combined effect of Arbuscular Mycorrhizal Fungi and Arsenic doses on Oxidative stress of Leuceana leucocephala in Nursery
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)
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.		
Is the title of the article suitable? (If not please suggest an alternative title)		
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.		
Are subsections and structure of the manuscript appropriate?		
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.		
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. :		

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Minor REVISION comments		
Is the language/English quality of the article suitable for scholarly communications?		
Optional/General comments	<p>This study investigates how <i>Leucaena leucocephala</i> reacts to arsenic stress when inoculated with Arbuscular Mycorrhizal Fungi (AMF). This is a relevant and novel area of research, particularly in the context of bioremediation and enhancing plant resilience to heavy metal stress. The focus on <i>Leucaena leucocephala</i> is notable since woody legumes are understudied in comparison to herbaceous species in this context. Highlighting this aspect strengthens the novelty.</p> <p>Your integration of physiological responses (oxidative stress indicators like MDA and H₂O₂) with AMF inoculation is impactful, providing both biochemical and ecological insights. The practical application of AMF for mitigating heavy metal toxicity aligns well with current global challenges in sustainable agriculture and environmental management.</p> <p>Suggestions for Improvement:</p> <ol style="list-style-type: none">The Introduction could more clearly highlight the gaps in previous research, specifically emphasizing why woody legumes like <i>Leucaena leucocephala</i> are an important model for such studies. For example, a comparison with existing studies on herbaceous plants could better underscore the novelty of your work.Mentioning why the specific AMF species (<i>Glomus macrocarpum</i> and <i>Glomus fasciculatum</i>) were selected would further strengthen the justification for your study.Some sentences are overly long and complex, making them difficult to follow. For example, this sentence from the introduction: “When electron loss (oxidation) outweighs electron gain (reduction), chemical (oxidative) damage to cell molecules results.” This could be simplified for better readability: “Oxidative damage occurs when electron loss (oxidation) exceeds electron gain (reduction).”Some ideas are repeated in the Introduction and Discussion sections. For instance: Both sections emphasize how heavy metals disrupt photosynthesis multiple times. Instead, one section could focus on oxidative stress and the other on photosynthesis.Some terms, such as "xenobiotics" and "phytomycoremediation," are introduced without sufficient explanation. Consider briefly defining these terms for a broader audience.Please write this statement clearly, for example 'The antioxidant response of <i>Leucaena leucocephala</i> to varying arsenic concentrations and inoculation with arbuscular mycorrhizal fungi (AMF) was evaluated to assess its protective role against oxidative stress'First time, use full form, but after that, use abbreviated form throughout the manuscript. For example “Reactive oxygen species (ROS) ”.Provide more recent references to strengthen the background, particularly regarding AMF applications in arsenic stress and phytoremediation.Avoid overloading the introduction with basic concepts. For instance, the definition of oxidative stress and antioxidants could be condensed or referenced to focus on arsenic and AMF. Please write like “Environmental stresses, including arsenic toxicity, induce oxidative stress, damaging cellular components and impairing physiological functions ”Explain why specific arsenic concentrations (0, 25, 50, and 100 mg/kg) were chosen.You mention how AMF inoculation improves antioxidant activity, but how do your findings quantitatively compare to studies on other plant species or heavy metals?How might AMF inoculation improve crop yields or reduce heavy metal contamination in polluted soils?Use shorter sentences and reduce technical jargon where possible.Avoid redundancy in the Introduction and Discussion.Address grammar issues: Focus on verb agreement, article use, and sentence clarity	

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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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