

Review Form 3

Journal Name:	Journal of Advances in Biology & Biotechnology
Manuscript Number:	Ms_JABB_124874
Title of the Manuscript:	Restoration of degraded land using VEAZCOMUTECH: case of Maroua I Municipality, Far North Region of Cameroon
Type of the Article	

[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>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.</p>	<p>The manuscript presents a relevant study, especially for regions facing severe soil degradation, like the Sahelian zone of Cameroon. It focuses on an environmentally friendly technique, VEAZCOMUTECH, which employs local and biodegradable materials to restore soil fertility. The technique holds promise for both land restoration and economic empowerment of local communities. This is important as it provides a sustainable approach to combat desertification and support agricultural productivity in vulnerable regions.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>Current Title: The current title is generally descriptive but could benefit from being more specific and catchier. It does not adequately reflect the uniqueness of the technique described or its broader relevance.</p> <p>Suggestions:</p> <ul style="list-style-type: none"> • Innovative Soil Restoration in Cameroon Using VEAZCOMUTECH: A Sustainable Approach for Arid Regions. • Restoring Degraded Lands in Maroua I Municipality, Cameroon: Application of VEAZCOMUTECH Technique. 	
<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>Abstract</p> <ul style="list-style-type: none"> • Strengths: The abstract provides a concise overview of the experimental setup, aims, and results. The innovative VEAZCOMUTECH technique is mentioned, and some metrics like plant growth are included. • Areas for Improvement: <ul style="list-style-type: none"> ○ Lack of Focus: The abstract delves too much into technical aspects (e.g., P1B1M6 and Morelle) that may confuse the reader without proper context. These details could be saved for the results section. ○ Findings and Significance: The abstract doesn't emphasize key findings strongly enough. More emphasis should be placed on the impact of the findings. For example, stating how much soil fertility improved compared to controls or previous techniques. ○ Conclusion: The abstract ends abruptly without a clear summary of how significant the findings are or how they advance the field of land restoration. <p>Suggested Improvements:</p> <ul style="list-style-type: none"> ○ Streamline the abstract to focus on the objectives, results, and conclusions. Avoid technical details that are best left for the main text. ○ Incorporate key quantitative results (e.g., percentage increase in plant growth, soil fertility improvement). ○ Highlight how VEAZCOMUTECH could be applied to other regions with similar soil degradation problems. 	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The structure is appropriate, with sections for introduction, materials and methods, results, and discussion. However, the following suggestions could improve flow:</p> <ul style="list-style-type: none"> • Results: Ensure the results section is focused on significant findings without too many procedural details (those could go in supplementary materials or the methods section). 	

Review Form 3

	<ul style="list-style-type: none"> • Discussion: The discussion section could be expanded to connect the findings to broader agricultural practices or restoration techniques used in other regions. 	
<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 appears scientifically robust, with sound experimental design and thorough data collection. However:</p> <ul style="list-style-type: none"> • Statistical Analysis: It would be helpful to include a more detailed analysis of the data (e.g., standard deviations, confidence intervals) to enhance the scientific rigor. • Comparison to Other Techniques: A comparison of VEAZCOMUTECH to other land restoration methods would strengthen the argument for its uniqueness and effectiveness. 	
<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>While the manuscript includes a reasonable number of references, many are over a decade old. More recent studies (from the last 5 years) on land restoration techniques, soil degradation, and sustainable agriculture could be incorporated to update the literature review and demonstrate the relevance of the study in the current scientific landscape.</p>	

Review Form 3

<p>Minor REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p><input type="checkbox"/> Language and Grammar: The manuscript's English is generally understandable but could benefit from minor edits to improve fluency and academic tone. For example, sentences like The vetiver system is very simple, practical, and cheap could be improved for readability.</p> <p><input type="checkbox"/> Figures and Tables: Ensure all figures and tables are clearly labeled and referenced in the text. Some of the images could benefit from higher resolution for better clarity.</p>	
<p>Optional/General comments</p>	<p>1. Title</p> <ul style="list-style-type: none">• Current Title: The current title is generally descriptive but could benefit from being more specific and catchier. It does not adequately reflect the uniqueness of the technique described or its broader relevance. <p>Suggestions:</p> <ul style="list-style-type: none">○ Innovative Soil Restoration in Cameroon Using VEAZCOMUTECH: A Sustainable Approach for Arid Regions.○ Restoring Degraded Lands in Maroua I Municipality, Cameroon: Application of VEAZCOMUTECH Technique. <p>2. Abstract</p> <ul style="list-style-type: none">• Strengths: The abstract provides a concise overview of the experimental setup, aims, and results. The innovative VEAZCOMUTECH technique is mentioned, and some metrics like plant growth are included.• Areas for Improvement:<ul style="list-style-type: none">○ Lack of Focus: The abstract delves too much into technical aspects (e.g., P1B1M6 and Morelle) that may confuse the reader without proper context. These details could be saved for the results section.○ Findings and Significance: The abstract doesn't emphasize key findings strongly enough. More emphasis should be placed on the impact of the findings. For example, stating how much soil fertility improved compared to controls or previous techniques.○ Conclusion: The abstract ends abruptly without a clear summary of how significant the findings are or how they advance the field of land restoration. <p>Suggested Improvements:</p> <ul style="list-style-type: none">○ Streamline the abstract to focus on the objectives, results, and conclusions. Avoid technical details that are best left for the main text.○ Incorporate key quantitative results (e.g., percentage increase in plant growth, soil fertility improvement).○ Highlight how VEAZCOMUTECH could be applied to other regions with similar soil degradation problems. <p>3. Introduction</p> <ul style="list-style-type: none">• Strengths: The introduction outlines the scope of the issue (soil degradation), focusing on the Sahelian region and Cameroon, setting a strong contextual basis. It cites relevant statistics and previous research to emphasize the importance of soil restoration.• Weaknesses:<ul style="list-style-type: none">○ Literature Gap: While it discusses global soil degradation, the introduction lacks a clear explanation of how VEAZCOMUTECH differs from existing soil restoration methods. More recent studies (from 2015 onwards) on sustainable land management	

Review Form 3

	<p>in Africa should be cited to better position the innovation in context.</p> <ul style="list-style-type: none">○ Objective Statement: The objectives should be more specific. Currently, it states the goal of restoring degraded lands, but what exactly differentiates this method from others? Is it cheaper, faster, or more efficient? <p>Suggested Improvements:</p> <ul style="list-style-type: none">○ Include a brief comparison between existing land restoration techniques (e.g., agroforestry, bioengineering, chemical amendments) and the VEAZCOMUTECH method to justify its innovation.○ Clarify the contribution of the study to land restoration techniques. Why is it a breakthrough for Cameroon and other Sahelian regions? <p>4. Materials and Methods</p> <ul style="list-style-type: none">● Strengths: The materials and methods section is highly detailed, providing a clear explanation of the steps involved in preparing and applying the VEAZCOMUTECH technique. This level of detail is commendable for replicability.● Weaknesses:<ul style="list-style-type: none">○ Experimental Design: The design, though described in detail, lacks a rigorous statistical framework. The number of replicates, controls, and statistical methods used to analyze the data (such as ANOVA, t-tests, etc.) should be mentioned. Without statistical validation, the robustness of the results remains questionable.○ Control Plot Justification: The control plot dimensions are significantly smaller than the experimental plot (22.5 m² vs. 103.5 m²). This could introduce bias, as smaller plots may be more affected by local environmental variations.○ Site Selection: The rationale for choosing Maroua I municipality for this study needs more detail. Was the site selected due to severe degradation, easy access, or some other criteria? <p>Suggested Improvements:</p> <ul style="list-style-type: none">○ Include a statistical analysis plan with more detail on the statistical tests used to validate results. For example, a two-sample t-test to compare plant growth in the control and VEAZCOMUTECH plots.○ Justify the smaller control plot size and how this could affect data interpretation.○ Explain why Maroua I municipality was chosen, particularly in the context of soil degradation severity or socio-economic need. <p>5. Results</p> <ul style="list-style-type: none">● Strengths: The results are presented in a clear, detailed manner with several relevant metrics, including plant growth, leaf size, number of flowers, and yield. The use of figures to illustrate plant growth and comparison with the control is beneficial.● Weaknesses:<ul style="list-style-type: none">○ Inconsistent Measurements: The growth parameters (leaf length, plant height, number of flowers) are presented but lack statistical consistency. Were all plants in both plots monitored for the same period under the same conditions? This is not clearly explained.○ Missing Statistical Data: There are no p-values, confidence intervals, or measures of variance (such as standard deviation) reported, which raises questions about the scientific robustness of the findings. The absence of this data weakens the conclusions drawn from the experiment.○ Discussion of Outliers: Several plants in the experimental plot significantly outperformed those in the control plot. Are there any biological or environmental factors (like shade, watering frequency, soil microclimate) that could explain these	
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Review Form 3

	<p>outliers?</p> <p>Suggested Improvements:</p> <ul style="list-style-type: none">○ Provide statistical analysis (ANOVA, standard deviations, p-values) to ensure the data is scientifically sound.○ Include a discussion on the sources of variation (outliers) in the experimental plot. Were some plants sheltered from the wind, or were they exposed to better sunlight?○ It would be helpful to see a comparison to existing land restoration methods, to quantify the specific benefits of VEAZCOMUTECH (e.g., plant growth was 30% faster compared to traditional techniques). <p>6. Discussion</p> <ul style="list-style-type: none">• Strengths: The discussion section appropriately highlights the benefits of the VEAZCOMUTECH technique in terms of plant growth and yield. It rightly emphasizes the use of biodegradable materials, such as banana peels and neem leaves, contributing to sustainability.• Weaknesses:<ul style="list-style-type: none">○ Weak Comparative Analysis: While the discussion touches on the importance of soil restoration, it does not thoroughly compare the findings to other restoration techniques. How does VEAZCOMUTECH perform compared to chemical soil amendments or more widely known agroforestry techniques?○ Mechanistic Explanation Missing: The discussion lacks an in-depth mechanistic explanation of why the technique works. For example, what specific chemical properties of the eggshells or banana peels improve soil quality? Why does the Neem leaf act as an insect barrier and soil amendment? <p>Suggested Improvements:</p> <ul style="list-style-type: none">○ Include a comparative discussion with other soil restoration techniques, using relevant literature. Discuss whether VEAZCOMUTECH is cost-effective, faster, or more efficient.○ Provide a mechanistic explanation of the technique, highlighting the role of each material (banana peel, neem leaves, eggshells) in enhancing soil fertility and plant growth. <p>7. References</p> <ul style="list-style-type: none">• Strengths: The manuscript includes key references that provide the reader with the necessary background on soil degradation and restoration efforts, particularly in African contexts.• Weaknesses:<ul style="list-style-type: none">○ Outdated References: Several of the references are outdated, with many predating 2010. The manuscript would benefit from more recent studies (published in the last 5 years) that reflect advancements in sustainable land management and soil restoration techniques.○ Missing Key Studies: Key references that examine the effectiveness of biodegradable materials in land restoration, or climate change adaptation in sub-Saharan Africa, are missing. <p>Suggested Improvements:</p> <ul style="list-style-type: none">○ Add recent references (2018 onwards) from journals focusing on sustainable agriculture, environmental science, and land restoration.○ Include studies comparing different land restoration techniques to provide a more	
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Review Form 3

	<p style="text-align: center;">balanced and rigorous review.</p> <p>8. Conclusion</p> <ul style="list-style-type: none"> • Strengths: The conclusion summarizes the positive impact of the VEAZCOMUTECH technique on soil restoration and plant growth. • Weaknesses: <ul style="list-style-type: none"> ○ Limited Generalization: The conclusion focuses narrowly on the study area without considering broader implications for other regions suffering from similar soil degradation issues. ○ Practical Applications: There is no mention of the potential scalability or applicability of the technique to larger land areas or other regions, which limits the practical utility of the research. <p>Suggested Improvements:</p> <ul style="list-style-type: none"> ○ Broaden the scope to include potential applications of VEAZCOMUTECH in other arid or semi-arid regions around the world. ○ Discuss the possibility of scaling up this technique for larger commercial agriculture or community-based land restoration projects. 	
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PART 2:

	Reviewer's comment	Author's comment <i>(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)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

Name:	Shoryabh Srivastava
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