Review Form 1.7

Journal Name:	**Journal of Advances in Biology & Biotechnology**
Manuscript Number:	**Original Manuscript_JABB_117517**
Title of the Manuscript:	**Performance of Different Varieties of Sponge Gourd (Luffa cylindrica L.) in Terms of Growth, Yield and Quality under prayagraj agro climatic condition**
Type of the 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. This manuscript is important for the scientific community for a few reasons: a. **Local Adaptation**: The study focuses on the performance of different sponge gourd varieties specifically under Prayagraj agroclimatic conditions. This information is valuable for farmers in that region as it helps them identify varieties that are most likely to thrive in their local climate, potentially leading to higher yields and better-quality produce. b. **Filling Knowledge Gaps**: While sponge gourds are a common crop, there might be limited data on optimal varieties for specific regions like Prayagraj. This study can contribute to the overall knowledge base on sponge gourd cultivation and inform future research or recommendations. c. **Breeding Programs**: By evaluating existing varieties, the research can provide insights into the genetic variability of sponge gourd in the region. This information is useful for breeding programs aiming to develop new varieties with desired traits suitable for Prayagraj's climate. Overall, this manuscript contributes to knowledge about sponge gourd cultivation in a specific region, potentially improving agricultural practices and yields for local farmers. 2. The title of the article is mostly suitable, but it could be improved for clarity and conciseness. Here's how: a. **Suitable aspects**: It accurately reflects the content - it mentions different varieties, their performance related to growth, yield, and quality, and the specific location (Prayagraj). b. **Areas for improvement**: ▪ Length: The title is a bit long. Consider shortening it while maintaining clarity. ▪ Technical terms: "Prayagraj agro climatic condition" can be simplified for a broader audience. **c. Here are some suggestions for improvement:** ▪ Shorter and clearer: "Performance of Sponge Gourd Varieties in Prayagraj" ▪ More specific: "Evaluating Sponge Gourd Varieties for Yield and Quality in Prayagraj" Ultimately, the best title depends on your target audience and publication. If it's for a scientific journal, the current title might be acceptable. But for a wider audience, a shorter and clearer version would be more impactful. 3. The abstract is mostly comprehensive, but it could be improved to provide a clearer picture of the research. Here's how: **a. Strengths:** ▪ It mentions the objective (evaluating variety performance). ▪ It briefly describes the methodology (location, design, number of varieties). ▪ It highlights the key findings (top performing variety and its characteristics). ▪ It includes relevant keywords. **b. Areas for improvement:** ▪ Focus on broader impact: While it mentions the best performing variety, it doesn't emphasize why this research is important. Consider mentioning the significance of studying performance under Prayagraj's conditions. 4. Yes, the subsections and structure of the manuscript appear to be appropriate for a scientific research paper. It follows a typical scientific paper format with the following sections: ▪ Abstract: Summarizes the research objectives, methodology, results, and conclusions. ▪ Introduction: Provides background information on sponge gourd and the research purposes. ▪ Materials and Methods: Describes the experimental design, materials used, and data	

collection methods.
- Results and Discussion: Presents the findings of the experiment and interprets the results in relation to previous studies.
- Conclusion: Summarizes the key findings and reiterates the most important points.
- The manuscript also includes tables that show the data collected during the experiment.

Here are some additional observations:

- There seems to be a typographical error in the title. "Performance of Different Varieties of Sponge Gourd (Luffa cylindrica L.) in Terms of Growth, Yield and Quality under Prayagraj Agro Climatic Conditions" has extra spaces.
- In the results section, some of the in-text citations are missing references. For example, "...earlier by Reddy et al., in sponge gourd...".
- The cost analysis section (Table 3) might be more suitable for a separate publication focusing on the economic aspects of sponge gourd cultivation under Prayagraj agroclimatic conditions.

5. The manuscript appears to be based on a scientific study but it's difficult to definitively say whether it's entirely scientifically correct without a deeper look into the methodology and data analysis. Here's why:
   - Missing Details: The manuscript doesn't mention the specific statistical tests used to analyze the data (mentioned as 'F test' but without details). Details on replication and randomization are also not provided. These details are crucial to assess the validity of the results.
   - Citations: Some results mention citations without providing references (e.g., "earlier by Reddy et al., in sponge gourd..."). Citations are essential to support claims based on previous research.
   - Cost Analysis: While the cost analysis (Table 3) might be relevant, it's not directly related to the varietal evaluation and might be better suited for a separate study on economic aspects.

   Here are some aspects that seem scientifically sound:

   - Structured format: The manuscript follows a logical structure with an abstract, introduction, methods, results and discussion, and conclusion sections.
   - Data presentation: The data on growth parameters, yield, and quality is presented in tables for easy comparison between varieties.
   - Conclusion based on findings: The conclusion seems to be derived from the results presented, highlighting the best performing variety.
   - Inconsistent reference writing, especially in the introduction compared to other sections.
   - Spelling and spacing errors in several sentences need correction.
   - It would be better to conduct a post hoc test to see the differences between varieties after conducting the Fisher and Yates test.
   - Some data in the tables should be presented in bar diagrams to facilitate understanding.
   - The study would be stronger if regression and correlation analyses were performed on several parameters in Table 2 and subsection 1.5 TSS [°Brix] and Vitamin C content (mg/100g).
   - Table 3 would benefit from including an economic analysis of the profit received for each treatment.

Overall, the manuscript has the potential to be scientifically sound but would benefit from a thorough review process to address missing details and ensure proper citation practices.

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Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	6. Reference Distribution Analysis Number and Percentage of References by Year Range: ▪ 2020 - 2024: 30.43% ▪ 2015 - 2019: 43.48% ▪ < 2014: 26.09% **Recommendation:** To achieve a reference list where over 80% of the references are from the last 10 years (2014-2024), you need to adjust the current references. Currently, 17 out of 23 references (about 73.91%) are from 2014 to 2024. You need at least 19 out of 23 references to be from this period to meet the 80% threshold. **Steps to Achieve This:** a. Replace or Supplement Older References: ▪ Look for more recent studies on sponge gourd, TSS, and ascorbic acid content. ▪ Specifically target research from 2014 onwards to replace the older references. b. Ensure Consistency and Quality: ▪ Ensure that all references are formatted consistently. ▪ Validate that new references are from reputable journals or sources. c. Suggested Newer References: ▪ Here are a few suggestions for newer references you can search for and possibly include: 1) Recent studies on the performance of different sponge gourd varieties. 2) Latest findings on the impact of nitrogen fertilizers on vegetable growth and yield. 3) New research on the nutritional content of sponge gourds, focusing on TSS and ascorbic acid. 4) Updated agricultural statistics and economic analysis related to sponge gourd cultivation. ▪ Example of Newer References to Replace Older Ones: 1) Instead of using Bouyoucos (1962) for particle size analysis, find a more recent reference on soil analysis techniques. 2) Replace McKay (1930) with a recent study on chromosome numbers or genetic studies in Cucurbitaceae. 3) Substitute Fisher & Yates (1936) with more recent statistical methods or publications on agricultural research statistics.	
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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