

Review Form 1.7

Journal Name:	Archives of Current Research International
Manuscript Number:	Ms_ACRI_119561
Title of the Manuscript:	Examine the effects of various chemicals and different environmental conditions on the breakdown of dormancy of Dragon fruit (Hylocereus undatus var. White fleshed pitaya)
Type of the Article	

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

<https://www.journalacri.com/index.php/ACRI/editorial-policy>

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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)
<p>Compulsory REVISION comments</p> <p>1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript)</p> <p>2. Is the title of the article suitable? (If not please suggest an alternative title)</p> <p>3. Is the abstract of the article comprehensive?</p> <p>4. Are subsections and structure of the manuscript appropriate?</p> <p>5. Do you think the manuscript is scientifically correct?</p> <p>6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</p> <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>1. This manuscript has the potential to be important for the scientific community interested in dragon fruit cultivation. It investigates the effects of various treatments on seed germination and seedling growth, providing valuable insights for optimizing dragon fruit propagation methods.</p> <p>2. The current title, "Effects of Seed Treatments on Germination and Seedling Attributes of Dragon Fruit (Hylocereus spp.)", is clear and accurately reflects the study's content. However, a more concise title like "Citric Acid Treatment Enhances Germination and Seedling Development in Dragon Fruit" could be considered to highlight the key finding.</p> <p>3. The abstract could be improved by explicitly mentioning the most effective treatment (citric acid) and its positive impact on both germination and seedling growth. It should also mention the limitations, such as the trade-off between germination speed and final percentage observed with citric acid.</p> <p>4. The overall structure with separate sections for results on germination and seedling attributes seems appropriate. However, consider combining explanations for the positive effects of citric acid across seedling attributes to avoid repetition.</p> <p>5. The manuscript seems to follow a logical scientific approach. However, including information on statistical analysis (p-values) would strengthen the claims made.</p> <p>6. The reference list appears well-formatted and includes relevant sources. Consider including a few recent studies (2022-2024) on dragon fruit seed dormancy breaking or germination for a more up-to-date reference list. Additionally, ensure all references are directly cited within the manuscript.</p>	
<p>Minor REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>	<p>Overall, the language and English quality of the article are generally suitable for scholarly communication. The writing is clear, concise, and grammatically correct. However, there are a few areas where the language could be further refined to enhance its clarity and professionalism.</p> <p>Consider rephrasing or combining sentences that express similar ideas to avoid redundancy. Replace informal phrases or expressions with more formal language appropriate for scientific writing. Use a mix of sentence lengths and structures to create a more engaging and dynamic writing style.</p> <p>Examples of Specific Improvements: Instead of: "The results obtained from the study that was conducted are shown in Table 2." Use: "The results of the study are presented in Table 2." Instead of: "This finding is similar to that of Kalaji et al. (2018)." Use: "This finding aligns with the observations of Kalaji et al. (2018)."</p>	
<p>Optional/General comments</p>	<p>The study provides valuable insights into the effects of seed treatments on dragon fruit germination and seedling growth. The findings have practical implications for improving dragon fruit cultivation practices. The authors could further strengthen the manuscript by discussing the mechanisms by which citric acid enhances germination and seedling growth. Primarily regarding other treatments, both significant and not-significant.</p>	

Commented [SS1]: A. Abstract:
 The abstract clearly states the aim of the research, namely to increase seed germination in dragon fruit. It has mentioned the experimental design and treatments used, as well as highlighting the main findings, namely the germination percentage and seedling vigor index.
 There needs to be improvement in abstract writing so as not to focus on nutritional value which is not relevant to the study of seed germination. Not having a clear research question, even if the aim is implied, it is important to provide a clear research question about the reasons for the effects of different treatments on germination will strengthen the abstract. Too many details regarding the methodology such as a list of specific locations and dates may be omitted. Repetition of phrases such as "seed germination at 28°C" and "room temperature at 20-24°C" is repeated several times. It is important to mention the statistical analysis used to determine significant differences.

B. Introduction:
 Researchers have provided information about the benefits and nutrition of dragon fruit. Provides an overview of the concept of seed dormancy in dragon fruit. It is important to briefly mention some existing methods for breaking seed dormancy as a reason for the research, and clearly state the title of the research.
 Although the problem of seed dormancy has been mentioned, the specific question of how the selected treatment will address this problem is not clearly stated. Previous studies need to provide stronger justification for new things, the theory can explain clearly how this research builds on existing knowledge or offers new approaches. Too much general information about dragon fruit, including details of varieties and nutritional value is not directly relevant to seed dormancy and can be condensed into sentences.

C. Materials and Methods:
 It has clearly outlined the experimental design (CRD) with replications and the number of treatments in the study. Provides details of research implementation, namely regarding treatment, including concentrations and procedures. Explain the preparation of solutions (NP GA3 and TiO2). Determine various parameters of germination and seedling vigor that are precisely measured. However, it is also important to mention the statistical analysis used (ANOVA with Duncan's test).
 Redundant location and climate details, such as information about Gwalior's climate are not necessary and can be omitted. Excessive information regarding seed sources, and repeated mention of fruit varieties and their sources is unnecessary. This information can be condensed. The lack of literature approaches that strengthens the justification for some procedures, for example, freezing seeds in undescribed citric acid. Descriptions of data collection for some parameters (e.g., germination rate index) are lacking.

D. Results and Discussion:

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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:

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