

Review Form 3

| | |
|--------------------------|--|
| Journal Name: | Journal of Advances in Biology & Biotechnology |
| Manuscript Number: | Ms_JABB_129117 |
| Title of the Manuscript: | Enhancing Agricultural Resilience Through Seed Priming: A Review |
| Type of the Article | |

General guidelines for the 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 guidelines for the Peer Review process, reviewers are requested to visit this link:

<https://r1.reviewerhub.org/general-editorial-policy/>

Important Policies Regarding Peer Review

Peer review Comments Approval Policy: <https://r1.reviewerhub.org/peer-review-comments-approval-policy/>

Benefits for Reviewers: <https://r1.reviewerhub.org/benefits-for-reviewers>

Review Form 3

PART 1: 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. A minimum of 3-4 sentences may be required for this part. | This manuscript provides a comprehensive review of seed priming techniques, highlighting their role in enhancing agricultural resilience and productivity under adverse environmental conditions. By detailing various priming methods such as hydro-priming, halo-priming, and nano-priming, it offers valuable insights into improving seed germination, crop establishment, and stress tolerance. The study's focus on sustainable, cost-effective, and ecologically friendly practices is particularly significant for addressing global food security challenges. Its relevance to cereals, vegetables, and fruit crops ensures broad applicability, making it an essential resource for researchers, agronomists, and policymakers. | |
| Is the title of the article suitable? (If not please suggest an alternative title) | The current title, " Enhancing Agricultural Resilience Through Seed Priming: A Review, " is suitable as it accurately conveys the manuscript's focus on the role of seed priming in improving agricultural resilience. It is concise, descriptive, and relevant to the scientific community. If you prefer a more detailed or targeted title, an alternative could be: " Seed Priming Techniques: A Sustainable Approach to Boost Agricultural Resilience and Crop Productivity. " | |
| 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. | The abstract effectively underscores the importance of seed priming in bolstering agricultural resilience, especially in the face of climate change, insufficient rainfall, and challenges related to crop productivity. It delineates the advantages of seed priming, such as enhanced germination rates, increased drought tolerance, and improved yields, while also referencing various methods of priming. Nonetheless, certain enhancements could render it more thorough: Suggestions for Improvement: Clarify Objectives: Clearly articulate the primary aim of the review, such as assessing and contrasting different seed priming techniques applicable to a range of crops. Highlight Key Findings: Incorporate one or two concrete examples demonstrating the significant effects of priming methods on crops, such as notable improvements in germination rates or stress resilience in specific species. Address Practical Applications: Discuss the wider implications of the findings, including how they can inform future research directions or influence agricultural practices. Remove Redundancy: Eliminate repetitive mentions of general benefits associated with seed priming, such as drought resistance, and instead provide a concise summary of these advantages. | |
| Is the manuscript scientifically, correct? Please write here. | Based on the provided content, the manuscript appears to be scientifically correct, presenting established concepts and methods in seed priming supported by relevant literature and citations. It discusses the biochemical and physiological mechanisms of seed priming, various priming techniques, and their benefits with references to credible studies. | |
| Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. | The manuscript includes a substantial number of references that cover various aspects of seed priming, its techniques, and applications across multiple crops. While the references provide a strong foundation, some of them are relatively older, dating back to the early 2000s. | |
| Is the language/English quality of the article suitable for scholarly communications? | The language quality of the manuscript is generally suitable for scholarly communication, as it employs technical terms and follows an academic tone. | |
| Optional/General comments | Based on the provided content of the manuscript, there are no apparent competing interest issues. | |

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: | Aashish Gyawali |
| Department, University & Country | Institute of Agriculture and Animal Sciences, Tribhuvan University, Nepal |