

Review Form 3

Journal Name:	Asian Journal of Agricultural and Horticultural Research
Manuscript Number:	Ms_AJHR_124301
Title of the Manuscript:	Effect of Seed Priming on Adaptive Morphological Traits of Anaerobic Germination Tolerant Upland Rice Genotypes
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 experiment at Yezin Agricultural University (September–October 2023) tested seed priming methods (non-priming, hydro-priming, on-farm priming, and osmo-priming) on upland rice genotypes under control and anaerobic germination (AG) conditions. Priming improved survival, growth, and seedling vigor compared to non-priming. Pin To Yin had the highest survival rate with hydro-priming (control) and osmo-priming (AG), while Inpara-3 had the lowest survival in non-priming treatments under both conditions.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>Effect of Seed Priming on Anaerobic Germination in Upland Rice Genotypes</p> <p>Alternate title</p>	
<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>yes</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>Short and specific</p>	
<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 is scientifically sound because it uses a well-designed experiment with proper replication to ensure reliable results. It compares multiple seed priming methods on different rice genotypes, providing a clear evaluation of their effects under both control and anaerobic conditions. The use of relevant parameters, such as survival rate and seedling vigor, makes the findings meaningful. Including both tolerant and susceptible check genotypes adds credibility to the conclusions.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p>	<p>Reference needs to be updated 2024, suggest to add latest references</p>	

Review Form 3

<p>Minor REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>yes</p>	
<p>Optional/General comments</p>	<p>The paper results discuss, Survival Percent At 21 days, hydro-priming showed the highest survival (94.33%) under control conditions, while osmo-priming (72.11%) performed best under anaerobic germination (AG). Tolerant genotypes like Pin To Yin had the highest survival, with Inpara-3 (susceptible) showing the lowest under both conditions. The effects of seed priming varied by genotype, with Pin To Yin and osmo-priming performing best under AG.</p> <p>Days of Leaf Tip Reaching Flood Water Surface (DLTRS) On-farm priming resulted in the shortest DLTRS (9.17 days). Among genotypes, Khao Mon Hom Kyae had the shortest DLTRS (8.83 days). The interaction between priming and genotype significantly influenced DLTRS under AG conditions.</p> <p>Shoot and Root Length Hydro-priming resulted in the longest shoot length under control (33.66 cm), while osmo-priming performed best under AG (33.33 cm). San Shwe Ni had the longest shoots under control (35.56 cm), and Khao Mon Hom Kyae had the longest shoots under AG (35.48 cm). Root length trends were similar to shoot length, with priming treatments enhancing both traits.</p> <p>Shoot and Root Dry Weight Hydro-priming had the highest shoot dry weight under control (0.433 g), while osmo-priming performed best under AG (0.166 g). San Shwe Ni showed the highest shoot dry weight under both conditions. Root dry weight followed similar patterns, with priming significantly enhancing weight.</p> <p>Seedling Vigour Index (SVI)-I On-farm priming had the highest SVI-I under control (40.47), and osmo-priming performed best under AG (32.16). San Shwe Ni had the highest SVI-I under control (42.15), while Pin To Yin had the highest under AG (32.70).</p> <p>Seedling Vigour Index (SVI)-II Hydro-priming had the highest SVI-II under control (0.558), and osmo-priming performed best under AG (0.191). San Shwe Ni showed the highest SVI-II under control (0.564), while Pin To Yin had the highest under AG (0.176). Seed priming increased SVI-II across all genotypes and conditions.</p> <p>Authours could have considered performing the Physiological Measurements: Assess physiological traits like chlorophyll content and photosynthetic rates to explain growth outcomes. Additionally could test, Soil and Environmental Factors: Analyze soil properties and environmental conditions to provide context for the results and identify confounding variables.</p> <p>The methods provide clear details on the experimental design, treatments, measurements, and statistical analysis, allowing for reproducibility. The results are presented with specific data on survival rates, growth metrics, and genotypic performance, supported by statistical significance. However, including more contextual discussion linking results to existing literature could enhance the overall impact.</p>	

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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:	Bipin Deochand Lade
Department, University & Country	Virginia Tech University, United States