

Review Form 1.7

Journal Name:	International Journal of Environment and Climate Change
Manuscript Number:	Ms_IJECC_111947
Title of the Manuscript:	Genetic Diversity and Principal Component Analysis for Yield and its Attributing Traits in Rice (Oryza sativa L.)
Type of the Article	Original Research 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)
<p>Compulsory REVISION comments</p> <ol style="list-style-type: none"> Is the manuscript important for scientific community? (Please write few sentences on this manuscript) Is the title of the article suitable? (If not please suggest an alternative title) Is the abstract of the article comprehensive? Are subsections and structure of the manuscript appropriate? Do you think the manuscript is scientifically correct? Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form. <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>Accepts</p> <p>The research paper, titled "Genetic Diversity and Principal Component Analysis for Yield and its Attributing Traits in Rice," presents a comprehensive investigation carried out at the Crop Research Station in Masodha, within the GPB farm of Acharya Narendra Deva University of Agriculture and Technology, Kumarganj, Ayodhya (U.P.) during the Kharif season spanning from June 2022 to February 2023. The study, focusing on 72 rice germplasm lines and three checks, employs Non-hierarchical Euclidean cluster analysis to evaluate genetic diversity and pseudo F-test to categorize the 75 genotypes into six distinct clusters.</p> <p>The abstract effectively outlines the primary objectives, methodology, and key findings of the research, clearly highlighting significant variation in both agronomic and morphological traits among the studied rice germplasm lines. The utilization of sophisticated statistical analyses, such as cluster analysis and pseudo F-test, adds depth and reliability to the investigation.</p> <p>While the technique is effective and warrants publication, there are some suggestions for improvement:</p> <ol style="list-style-type: none"> Incorporate Visual Elements for PCA: Principal Component Analysis (PCA) is a powerful statistical method for dimensionality reduction and data visualization. Consider incorporating visual aspects such as scree plots and heat maps to provide a clearer understanding of the results. Justification for Non-hierarchical Euclidean Cluster Analysis: Provide an explanation for the choice of Non-hierarchical Euclidean cluster analysis over other methods, such as K-means clustering. Additionally, cite relevant literature supporting this technique. Citation of Additional Papers: Expand the reference list by citing more papers that are pertinent to the employed techniques, enhancing the academic rigor of the research. Clarify Societal Impact: Elaborate on the potential impact of the research on society. Clearly state why this research is conducted and how it contributes to the broader understanding of rice genetics and agricultural practices. Grammatical Improvements: Address grammatical mistakes present in the paper to enhance its overall quality and professionalism. Add more Papers: Research more on this topic you find more knowledge of domain. Paper Format: Long sentences, remove grammatical errors. <p>After these changes it would be published.</p>	
<p>Minor REVISION comments</p> <ol style="list-style-type: none"> Is language/English quality of the article suitable for scholarly communications? 		

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Optional/General comments		
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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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

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