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| Book Name: | [Current Research Progress in Agricultural Sciences](https://www.bookpi.org/bookstore/product/current-research-progress-in-agricultural-sciences-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_4081** |
| Title of the Manuscript: | **CHARACTERIZATION, BREEDING AND SELECTION OF PANELS OF RICE GERMPLASM UNDER LOW AND HIGH SOIL PHOSPHOROUS (P) AND NITROGEN (N) ENVIRONMENTS IN KENYA** |
| Type of the Article | **Book chapter** |

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| PART 1: Comments | | |
|  | Reviewer’s comment | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **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 chapter on "Characterization, Breeding, and Selection of Panels of Rice Germplasm Under Low and High Soil Phosphorus and Nitrogen Environments in Kenya" is of great importance because it addresses multiple agricultural challenges related to soil fertility, sustainable farming, food security, and climate resilience. By developing rice varieties that are better suited to varying nutrient conditions, the study can support sustainable agricultural practices, improve productivity, and enhance the economic well-being of farmers in Kenya and beyond. This work will help in identifying rice varieties that perform well in both nutrient-poor and nutrient-rich soils, helping farmers optimize fertilizer use and reduce the environmental impact of over-fertilization. |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | "Genetic Characterization and Selection of Rice Varieties for Soil Nutrient Efficiency in Kenya's Variable Phosphorus and Nitrogen Environments" |  |
| 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. | Conciseness: The abstract is quite long and contains some repetitive or overly detailed information that could be streamlined for clarity. For example, the listing of data (e.g., "the degree of genetic determination (H2) ranged from 6.8% for P tolerance to 36.5% for above ground biomass") could be summarized to focus on the most important findings, while still conveying the significance of the results.  Clarity and Flow: Some sentences are a bit complex and could be simplified for better readability. For example, the sentence: "There was high variability in the genotypes to warrant rice improvement for yield" could be rephrased for clarity, such as: "The high variability observed in the genotypes suggests significant potential for improving rice yield."  Typographical Issues: Some phrases, like "economic solution without much application of fertilizers," could be slightly reworded for clarity. Consider: "a sustainable economic solution that reduces the need for excessive fertilizer use."  Conclusion: While the abstract touches on the importance of the findings for food security in sub-Saharan Africa, it could be enhanced by a more direct emphasis on how this research specifically contributes to the development of rice varieties that can thrive under low P and N conditions, which is the central focus of the study. |  |
| **Is the manuscript scientifically, correct? Please write here.** | While the manuscript presents a valuable study on rice breeding for low soil fertility conditions, it requires substantial revisions to improve its clarity, scientific rigor, and presentation. Addressing the grammar, expanding on the experimental design, and providing clearer explanations of statistical measures and breeding strategies will help strengthen the manuscript and make it more scientifically robust. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.**  **-** | Moderately Sufficient  Better to include few more recent references |  |
| Is the language/English quality of the article suitable for scholarly communications? | Yes.  The manuscript has several grammatical issues, such as incorrect verb forms ("aimingaim to attain" should be "aims to attain"), missing punctuation, and awkward phrasing (e.g., "in it’s pursuit" should be "in its pursuit," and "towards this goal" can be simplified to "to achieve this goal").  The sentence structure could be improved for better readability. Some sentences are long and complex, which can confuse the reader.  Check spelling and grammar and correct. (I have corrected only in first few pages). |  |
| Optional/General comments | **Recommendations for Improvement:**   1. **Grammar and Clarity:**    * Revise the manuscript to correct grammar and sentence structure issues.    * Simplify and clarify complex sentences to improve readability. 2. **Experimental Details:**    * Provide more detail on the experimental design, including the methods used to measure and analyze key traits such as yield, biomass, and root architecture.    * Explain how heritability and other genetic parameters were calculated in the context of the study. 3. **Contextualize Breeding Strategies:**    * Better integrate the discussion of breeding strategies with the broader goal of food security and sustainable agriculture in Kenya and sub-Saharan Africa.    * Discuss the practical implications of breeding for low N and P tolerance and its potential impact on local rice production. 4. **References and Citations:**    * Ensure consistent and correct citation formatting throughout the manuscript.    * Add missing references and ensure all cited studies are listed in the reference section. 5. **Conclusion:**    * Shorten and clarify the conclusion, focusing on the implications of the study’s findings for future rice breeding efforts. |  |

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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?** | ***(If yes, Kindly please write down the ethical issues here in details)*** |  |

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| **Reviewer Details:** | |
| **Name:** | **Duwini Padukkage** |
| **Department, University & Country** | **Sri Lanka** |