Review Form 1.7

Journal Name:	**Asian Journal of Research in Biochemistry**
Manuscript Number:	**Ms_AJRB_118334**
Title of the Manuscript:	**Assessing Chilli Genotypes: A Study of Morphological and Nutritional Traits**
Type of the Article	**Original Research 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:

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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)*
Compulsory REVISION comments **1. Is the manuscript important for scientific community?** (Please write few sentences on this manuscript) **2. Is the title of the article suitable?** (If not please suggest an alternative title) **3. Is the abstract of the article comprehensive?** **4. Are subsections and structure of the manuscript appropriate?** **5. Do you think the manuscript is scientifically correct?** **6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.** **(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)**	1. Similar to this research, a lot has been done in different parts of the world and on different genotypes and accessions. As such, the article has no innovation. Unless the evaluation of genotypes is completed with different multivariate analyses so that the results can be used in breeding programs. 2. The title "Assessing Chilli Genotypes: A Study of Morphological and Nutritional Traits" is clear and appropriate, effectively summarizing the focus of the research. 3- The abstract provides a concise summary of the study, including the species studied, key findings, and the significance of the research. However, it could benefit from a brief mention of the methods used. 4. The article adheres to standard structural conventions, including sections such as Introduction, Materials and Methods, and Results. However, the Results and Discussion sections could be more clearly delineated. The text is generally clear and well-organized. However, some sentences are lengthy and could be broken down for better readability. For example, the sentence in the Introduction about the historical spread of chilli could be simplified. The text is mostly free of grammatical errors. However, there are minor issues such as inconsistent use of hyphens (e.g., "high - yielding" should be "high-yielding"). Additionally, some sentences could be rephrased for better clarity. 5- No. The provided methodology outlines the basic steps and locations involved in the study of chilli genotypes, focusing on both morphological and nutritional traits. However, the depth of research and analysis presented in the Methodology is somewhat superficial and lacks detailed information that would be expected for a scientific article with the given title. Here are some specific areas that need improvement: - While it is mentioned that yield and plant height were analyzed using RBD (Randomized Block Design) and biochemical analysis using CRD (Completely Randomized Design), there is no information on the specifics of these designs. Details such as the number of blocks, plot size, and randomization process should be included - The methodology mentions harvesting upon red coloration and shed drying, but it lacks specifics on the duration of drying, temperature conditions, and any pre-treatment steps - The number of fruits harvested per genotype and the criteria for selecting these fruits should be detailed. - Information on the statistical software used and the specific tests applied for data analysis should be provided - It is mentioned that there were three replications, but more details on how these replications were handled in both RBD and CRD contexts would enhance clarity. - There is no information on the environmental conditions during the cultivation period (e.g., temperature, rainfall, soil type, irrigation practices). These factors can significantly influence both morphological and biochemical traits. By incorporating these details, the methodology section will provide a comprehensive and clear framework for replicating the study, thus enhancing its depth and reliability. 6- The number of references after 2020 should be more.	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	1. Yes.	

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Optional/General comments	Suggestions for Improvement the manuscript: - Provide a detailed description of the experimental design, including block numbers, plot sizes, randomization methods, plot layout, replication, and plant spacing. Example: "The experiment was laid out in a randomized complete block design with three replications. Each plot measured 3m x 3m with a spacing of 50 cm between plants and 75 cm between rows." - Specify the stages or intervals at which yield and plant height were measured. Example: "Plant height was measured at 30, 60, and 90 days after planting, while yield data were collected at the end of the growing season." - Include details on the statistical methods used to analyze the data. Example: "Data were analyzed using ANOVA followed by Tukey's HSD test for mean comparison at a significance level of p < 0.05. Statistical analyses were performed using SPSS (SAS or R) software version XX." - Use multivariate analysis such as: PCA, Hierarchical clustering, Variance components (Genotypic, Environmental and Phenotypic variance), Broad-sense heritability, Genotypic coefficient of variation, Environmental coefficient of variation, Phenotypic coefficient of variation. - Include information on environmental conditions during the study period. Example: "The study was conducted during the summer season with average temperatures ranging from 25°C to 35°C. The soil type was sandy loam with pH 6.8. Irrigation was provided through drip system twice a week." Here are some suggestions for improvement the conclusion section: - Explain the significance of the observed ranges in yield, plant height, and biochemical traits. How do these findings compare to existing literature or industry standards? - Discuss the potential implications of these findings for breeders, farmers, and the food industry. For example, which genotypes might be most suitable for certain climates or agricultural practices? - Acknowledge any limitations of the study that might affect the interpretation of the results. This could include sample size, geographic scope, or specific conditions under which the study was conducted. - Suggest areas for future research that could build on these findings. What additional traits or genotypes should be studied? Are there any new methodologies that could provide deeper insights? - End with a strong concluding statement that encapsulates the overall importance of the study.	

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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