

Review Form 1.7a valuable

Journal Name:	Journal of Advances in Biology & Biotechnology
Manuscript Number:	Ms_JABB_114676
Title of the Manuscript:	GENETIC VARIABILITY STUDIES IN SWEET SORGHUM (<i>Sorghum bicolor</i> L.) GENOTYPES FOR SUGAR AND BIOMASS RELATED TRAITS
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> <p>1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript)</p> <p>2. Is the title of the article suitable? (If not please suggest an alternative title)</p> <p>3. Is the abstract of the article comprehensive?</p> <p>4. Are subsections and structure of the manuscript appropriate?</p> <p>5. Do you think the manuscript is scientifically correct?</p> <p>6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</p> <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>Yes, the present manuscript holds relevance for the scientific community. The studied species, sweet sorghum (<i>Sorghum bicolor</i> L.), is a significant and resilient global crop, serving as a primary cereal crop cultivated in tropical and subtropical regions, with substantial potential for bioenergy production. This study makes contribution towards understanding its genetic variability for sugar and biomass-related traits, and its potential applications in the context of bioenergy production.</p> <p>Yes, the title of the manuscript accurately reflects the content of the manuscript.</p> <p>Some improvements should be made to make it more comprehensive, and fluent.</p> <p>The subsection 'Analysis of variance' of 'results and Discussion', should be replaced by a short subtitle indicating the studied variables.</p> <p>The manuscript is scientific correct but improvements are required.</p> <p>The references are sufficient, but additional and more recent ones could enhance the manuscript (the newest is from 2020). The manuscript could benefit from additional references, such as:</p> <ul style="list-style-type: none"> • SAMI, R. A., et al. Studies on genetic variability in some sweet sorghum (<i>Sorghum bicolor</i> L. Moench.) genotypes. Academic Research Journal of Agricultural Science and Research, 2013, 1.1: 1-6. • BAHADURE, D. M., et al. Assessment of genetic diversity for biomass related traits in Sweet Sorghum (<i>Sorghum Bicolor</i> (L.) Moench.). IOSR Journal of Agriculture and Veterinary Science, 2014, 7.8: 32-34. • ELANGO VAN, M., et al. Genetic diversity and heritability characters associated in sweet sorghum [<i>Sorghum bicolor</i> (L.) Moench]. Sugar Tech, 2014, 16.2: 200-210. • KHANDELWAL, Vikas; KEERTHIKA, A.; DHOOT, Meenakshi. Genetic Divergence Studies for Morphological Traits in Sorghum [<i>Sorghum bicolor</i> (L.) Moench] over the Environments. <p>Additionally, more recent references could improve the manuscript:</p> <ul style="list-style-type: none"> • DE OLIVEIRA, Leandro Pavani, et al. Performance and genetic diversity of pre-commercial sweet sorghum hybrids in Central-Western and Southern Brazil. Renewable Energy, 2022, 182: 992-997. • YANG, Lin, et al. Harnessing the Genetic Basis of Sorghum Biomass-Related Traits to Facilitate Bioenergy Applications. International Journal of Molecular Sciences, 2023, 24.19: 14549. <p>Additional Required Revisions</p>	

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	<p>Abstract</p> <ul style="list-style-type: none">• Clarify the statement "Sweet sorghum is characterized by more rapid growth, higher biomass production, wider adaptation, and greater potential for ethanol production", by providing a comparison, and include the corresponding reference(s).• Provide full forms upon first use of "DAS". <p>Keywords</p> <ul style="list-style-type: none">• Correct "key words" to "keywords."• Expand abbreviations GCV, PCV, and GAM to their full forms: genotypic coefficient of variation (GCV), phenotypic coefficient of variation (PCV), and genetic advance as a percentage of mean (GAM).• You could include additional keywords representative of the work to improve the manuscript indexing. <p>Introduction</p> <ul style="list-style-type: none">• Vary the use of "Sweet sorghum" at the beginning of paragraphs.• Use only SI units; replace "feet" and "acre" with appropriate units.• Remove "from all over the world" from the sentence "Sweet sorghum is a non-food feedstock that can complement local energy sources and lower greenhouse gas emissions and as such, it has drawn attention from all over the world (...)".• Add references to support statements regarding sweet sorghum's cost-effectiveness and adaptability. <p>Material and Methods</p> <ul style="list-style-type: none">• Ensure sufficient information is provided for reproducibility.• Include the country in location descriptions.• In the sentence "All the genotypes were assessed for the physiological traits such as, (...)", 'such as' should not be used, and the complete number of traits should be specified."• In the sentence "The analysis of variance for individual character (...)", replace "The analysis of variance" with "This analysis".• Structure the section with appropriate subsections as per journal "author guidelines". <p>Results and Discussion</p> <ul style="list-style-type: none">• Improve structure, clarity, and conciseness of this section.• Correct table references to follow the correct order of appearance and format table citations according to the journal's guidelines; Tables 7 and 8, first mentioned in the manuscript, were not included.• As mentioned in the "guide for authors", table or figure numbers should be mentioned in parentheses for better understanding.• Remove the "@" symbol from "PH @ 30 DAS," etc.• Provide justification for the sentence "demonstrating that the investigation's material choice was acceptable".• The reference to "Table 1" should be in the Materials and Methods section.• Please include the calculations for PCV, heritability, and GAM in the Materials and Methods section.• In the sentence "Stem girth, nodes per plant, biomass weight, cane weight, juice content and total soluble solids, total sugars were recorded high PCV and GCV", please specify the comparison group or standard against which the recorded values are considered "high".• In the sentence "High broad sense heritability was observed for fourteen traits", it would be clearer if you add out of the total number of traits studied.• In the sentence "The amount of genetic advancement that would occur from the selection of the fittest individuals cannot be determined by heritability value alone", please include the corresponding reference.• Specify which genotypes are more suitable for sugar and biomass production purposes, and ensure that this information is also included in the abstract. <p>Other Changes</p> <ul style="list-style-type: none">• Modify the title of Table 2: "Comparision of mean performances of all the genotypes for plant height at 30 DAS, 60 DAS, 90 DAS (DAS-Days after sowing), cane height at 110 DAS and nodes per plant.", to "Comparison of mean performances of all the genotypes for plant height at 30, 60, and 90 DAS, cane height at 110 DAS and nodes per plant".• In Table 6, "Range" should include both 'Min and "Max" and not the "Mean".	
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	<ul style="list-style-type: none">• Figures as Plate 1, 2, and 3, are not mentioned in the text. Please correct it. Also, "Plate 3" (controls) should be included in "Plate 2".• Place tables and figures within the text and adhere to their order of appearance.• List non-standard abbreviations and provide full forms upon first use in the text.	
Minor REVISION comments 1. Is language/English quality of the article suitable for scholarly communications?	The language is in general suitable for scholarly communications, but some editing changes are required.	
Optional/General comments		

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>	

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