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Journal Name:	**Journal of Energy Research and Reviews**
Manuscript Number:	**Ms_JENRR_124886**
Title of the Manuscript:	**Evaluating the Combustion Performance and Energy Potential of Groundnuts Vines and Pumpkin Straws**
Type of the Article	

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PART 1: Review Comments

Compulsory REVISION 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. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	The article titled *"Evaluating the Combustion Performance and Energy Potential of Groundnuts Vines and Pumpkin Straws"* offers an insightful investigation into the potential of agricultural waste, specifically groundnut vines and pumpkin straws, as alternative energy resources	
Is the title of the article suitable? **(If not please suggest an alternative title)**	The current title of the article, *"Evaluating the Combustion Performance and Energy Potential of Groundnuts Vines and Pumpkin Straws,"* is clear and descriptive but could be improved to make it more engaging and accurately reflect the content. Like following title can be offered: *Biomass Energy from Agricultural Waste: Evaluating Groundnut Vines and Pumpkin Straws for Combustion Performance*	

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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.	The abstract of the article is fairly comprehensive, covering the key aspects of the research, such as the objective, methods (proximate and ultimate analysis, calorific values, density, compressive strength, and thermogravimetric analysis), and results (moisture content, fixed carbon, ash content, calorific value, and burning characteristics). However, there are areas where it could be improved for clarity, completeness, and conciseness. **Strengths:** 1. The abstract clearly states the objective of the study, which is to evaluate the combustion performance and energy potential of groundnut vines and pumpkin straws. 2. Important results such as calorific values, burning time, burning rate, and specific fuel consumption are highlighted, giving readers an overview of the outcomes. 3. The focus on using agricultural waste to replace conventional energy sources is both timely and significant, aligning with global trends toward renewable energy. **Areas for Improvement:** 1. The abstract is somewhat wordy and can be condensed for greater impact. Certain phrases are repetitive or unclear, such as “to add on available resources and replace conventional ones” and “thermogravimetric analysis graph portrayed.” Streamlining the language will enhance readability. 2. While the abstract touches on the environmental benefits, a more explicit mention of the specific environmental or economic impact of using these biomass materials could strengthen the relevance of the study. 3. The methods are described in a general manner, but more precise wording or a clearer summary of the experimental techniques could improve the abstract. For example, stating briefly that "standard methods for proximate and ultimate analysis were used" would be clearer than listing out each result. 4. The conclusion could be more explicit. The current text concludes that groundnut vines and pumpkin straws "are potential energy resources" but doesn’t strongly emphasize the broader implications of this research for energy sustainability or how it compares to other biofuels. **Suggested Additions/Deletions:** • **Add**: A brief statement on the potential environmental and socio-economic benefits of using agricultural waste for energy generation. • **Add**: A more explicit statement of the research methods used (e.g., proximate and ultimate analyses using ASTM standards). • **Add**: A summary of the key recommendations, such as further research or potential applications. • **Delete**: Some redundant phrases that don’t add clarity, such as "to add on available resources" (this is implied by the replacement of conventional resources).	
Are subsections and structure of the manuscript appropriate?	The subsections and structure of the manuscript are generally appropriate but can be improved for clarity and flow. **Current Structure Review:** 1. **Abstract**: Covers key points but could be more concise and structured, especially in summarizing the conclusion. 2. **Introduction**: Sets the context well but could benefit from a clearer problem statement and a more detailed literature review. 3. **Methodology**: The section is detailed but would benefit from clearer subsections (e.g., raw material preparation, analysis methods, briquette making, and combustion testing). 4. **Results and Discussion**: It’s better to separate results from the discussion. Adding more specific subsections under results (e.g., Proximate Analysis, Calorific Value, Combustion Characteristics) would enhance clarity. 5. **Conclusion and Recommendations**: This section should be split into two parts: **Conclusion**	

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	(focused summary of findings) and **Recommendations** (future work or applications). **Suggested Structure:** 1. **Abstract** 2. **Introduction** Literature Review Problem Statement and Objectives 3. **Methodology** Raw Material Preparation Analysis Methods Briquette Production Combustion Testing 4. **Results** Proximate and Ultimate Analysis Briquette Characteristics Combustion Characteristics Thermal Stability 5. **Discussion** 6. **Conclusion** 7. **Recommendations** 8. **References** This structure will make the manuscript clearer, more organized, and easier to follow.	
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.	This manuscript is scientifically robust and technically sound because it employs well-established methods such as proximate and ultimate analysis, thermogravimetric analysis (TGA), and calorific value measurement, which are standard in evaluating biomass fuels. The results are presented in a clear and quantitative manner, allowing for objective comparisons with other biomass materials. Additionally, the manuscript addresses a relevant and timely topic—utilizing agricultural waste for energy—which contributes to the broader field of renewable energy research. The experimental setup is thorough, and the findings align with existing literature, further supporting its scientific validity.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. -	The references in the manuscript provide a solid foundation, but several of them are outdated, with some dating back to the 1990s and early 2000s. While older references can be useful for foundational knowledge, the manuscript would benefit from incorporating more recent studies to reflect the latest advancements in biomass energy research. Many recent studies have explored advancements in agricultural waste utilization, improved biomass combustion technologies, and environmental impacts, which could enhance the relevance of the manuscript.	

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Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	The language quality of the article is generally suitable for scholarly communication, but there are several areas that need improvement for clarity, precision, and professionalism. While the article conveys the key ideas effectively, the following issues should be addressed to ensure it meets the standards of academic writing: **Strengths:** • The manuscript uses appropriate technical terms related to biomass energy, combustion performance, and proximate/ultimate analysis, which is expected in scholarly work. • The tone is formal, aligning with the requirements of academic papers. **Areas for Improvement:** 1. There are frequent issues with run-on sentences, missing commas, and incorrect subject-verb agreement, which can obscure meaning and make the text harder to read. 2. Some sentences are too wordy or complex, which reduces the overall readability. Simplifying sentence structures and eliminating redundancy would enhance clarity. 3. The manuscript can benefit from more concise phrasing, especially in the abstract and discussion sections, to improve flow and avoid unnecessary repetition. 4. The use of commas and other punctuation marks is inconsistent, which occasionally makes the text confusing. The article's language is appropriate for scholarly communication but requires revision to improve grammar, clarity, and conciseness. With careful proofreading and editing, the manuscript can meet the expectations of academic publication.	
Optional/General comments	1. The manuscript addresses a timely and relevant issue—utilizing agricultural waste for energy production—which is particularly important for developing countries. The study provides valuable data on the combustion characteristics of groundnut vines and pumpkin straws, contributing to the growing body of research on renewable energy sources. 2. The inclusion of detailed tables and graphs is a strength of the manuscript, but improving the clarity and labeling of these figures would enhance the reader's ability to interpret the data quickly. 3. The manuscript would benefit from a stronger emphasis on the practical applications of the findings. For instance, discussing how these biomass fuels could be scaled up for use in rural or peri-urban areas would add depth to the research's real-world relevance. 4. It might be useful to suggest specific directions for future research beyond blending with other agricultural residues. For example, investigating the economic feasibility of producing these briquettes or assessing the long-term environmental benefits would strengthen the conclusion. Overall, the study is sound and offers valuable insights, but improving the presentation and adding more recent references will further elevate the manuscript's impact. There are no apparent competing interest issues in the manuscript. However, it is recommended that the authors include a standard declaration, such as "The authors declare no competing interests," to ensure transparency. This reassures readers that the research is unbiased. There do not appear to be any ethical issues in this manuscript. The research focuses on the combustion performance of agricultural waste materials, which is a standard topic in the field of biomass energy. No human or animal subjects are involved, and the environmental implications discussed in the study aim to promote sustainability and reduce environmental degradation. Therefore, the study seems ethically sound in its design and execution. • The study is scientifically robust and technically sound, with relevant experimental data and methodologies. • The language and structure need improvement for better clarity, conciseness, and readability. • The manuscript requires more recent and comprehensive references to strengthen the literature review. • No ethical or competing interest issues are evident, but these should be clearly declared. With revisions, this manuscript has the potential to be published, but it requires significant improvements in grammar, structure, and literature context.	

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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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