

### Review Form 3

Journal Name:	<a href="#">Asian Research Journal of Agriculture</a>
Manuscript Number:	Ms_ARJA_124243
Title of the Manuscript:	Design Development and Performance Evaluation of Solar Operated Pigeon Pea (Cajanus cajan L. Millsp.) Pruner
Type of the Article	

#### **General guidelines for the 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 guidelines for the Peer Review process, reviewers are requested to visit this link:

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#### **Important Policies Regarding Peer Review**

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**PART 1: Review Comments**

<b>Compulsory</b> REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
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 authors developed and evaluated the performance of a solar-operated pruner for pigeon peas, featuring a cutting blade, DC motor, solar panel, battery, and charge controller. The pruner has a 12 V DC motor, a 7.2 Ah battery, and a lightweight PVC frame. Its performance was evaluated, achieving 81% field efficiency and 76% pruning efficiency which is a remarkable and environmentally friendly solution at a low cost. I will recommend it for many farmers and laborers to address the challenges of manual pruning, such as labor intensity, time consumption, and costs.	
Is the title of the article suitable? (If not please suggest an alternative title)	The author can rewrite the title as:  " System Design and Evaluation of Solar Operated Pigeon Pea ( <i>Cajanus cajan</i> L. Millsp.) Pruner: A Sustainable Solution"	
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.	Yes, the abstract is appropriate and comprehensive as it emphasizes the main points discussed in the articles.	
Are subsections and structure of the manuscript appropriate?	Yes, it is.	
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.	The manuscript is well structured but shows a lot of typo errors and grammatical mistakes to correct as indicated (in red). The author provided good calculation and performance evaluation but did not a graph characteristic of the performance evaluation. They should provide the I-V and P-V characteristics for the solar panel and discuss the real behavior of the used solar Cell	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. :	No. The references provided are very limited. The authors must strengthen their manuscript quality. They should use and cite the following research papers to improve the introduction section and discussion on the I-V and P-V characteristics requested.  [1] Manfo, T. A. and Sahin, M. E. "Development of an Automatic Photovoltaic Cell Battery Powered Water Irrigation System Incorporated with Arduino Software for Agricultural Activities. Gazi Journal of Engineering Sciences, 10(2): 314-328, 2024. doi:10.30855/gmbd.0705A07. [2] Theodore, A.M. and Şahin, M.E. Modeling and simulation of a series and parallel battery pack model in MATLAB/Simulink. Turk J Electr Power Energy Syst, 4(1), 2-12, 20. DOI: 10.5152/tepes.2024.23024 [3] Badi, N., Theodore, A.M., Alghamdi, S.A., Alatawi, A.S., Almasoudi, A. and Lakhouit, A., 2022. Thermal effect on curved photovoltaic panels: Model validation and application in the Tabuk region. <i>PLoS ONE</i> , 17(11), p.e0275467.	
<b>Minor</b> REVISION comments  Is the language/English quality of the article suitable for scholarly communications?	Yes, the language used is suitable but needs to be improved before publication. The manuscript communicates in such a good way to allow scholars to understand the scientific contents.	
<b>Optional/General</b> comments	The manuscript is good in general. However, it requires revision and additional references as suggested	

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**PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> <i>(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)</i>
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

**Reviewer Details:**

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Department, University & Country	<b>Sharda University, India</b>