

Review Form 3

Journal Name:	Asian Research Journal of Agriculture
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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PART 1: Review Comments

Compulsory 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.		
Is the title of the article suitable? (If not please suggest an alternative title)		
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.		
Are subsections and structure of the manuscript appropriate?		
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.		
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.		

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<p>Minor REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p>		
<p><u>Optional/General</u> comments</p>	<p>1. Relevance to the field</p> <ul style="list-style-type: none"><input type="checkbox"/> Not relevant<input type="checkbox"/> Somewhat relevant<input type="checkbox"/> Relevant<input checked="" type="checkbox"/> Highly relevant <p>Comments: The study addresses an important issue in pigeon pea cultivation, offering a sustainable mechanized solution for pruning. This is highly relevant to agricultural engineering and sustainable farming practices.</p> <p>2. Originality</p> <ul style="list-style-type: none"><input type="checkbox"/> Not original<input type="checkbox"/> Somewhat original<input checked="" type="checkbox"/> Original<input type="checkbox"/> Highly original <p>Comments: The integration of solar power into a pigeon pea pruner is an original approach. While solar-powered agricultural tools exist, this specific application to pigeon pea pruning is novel.</p> <p>3. Methodology</p> <ul style="list-style-type: none"><input type="checkbox"/> Poor<input type="checkbox"/> Fair<input checked="" type="checkbox"/> Good<input type="checkbox"/> Excellent <p>Comments: The methodology is well-described, including detailed calculations and design considerations. However, it could be improved by providing more rationale for component selection and including statistical analysis of performance data.</p> <p>4. Results and Discussion</p> <ul style="list-style-type: none"><input type="checkbox"/> Poor<input checked="" type="checkbox"/> Fair<input type="checkbox"/> Good<input type="checkbox"/> Excellent <p>Comments: The results provide useful metrics for assessing the pruner's efficiency. However, the presentation could be more structured, and a comparison with manual pruning or other mechanized methods would strengthen the discussion.</p> <p>5. Clarity of Presentation</p> <ul style="list-style-type: none"><input type="checkbox"/> Poor<input checked="" type="checkbox"/> Fair<input type="checkbox"/> Good<input type="checkbox"/> Excellent <p>Comments: The paper is generally well-structured, but there are areas where clarity could be improved, particularly in the presentation of results. Some minor grammatical errors need attention.</p>	

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6. Quality of Figures/Tables

- Poor
- Fair
- Good
- Excellent

Comments: The figures provided are helpful, but more visual aids (e.g., schematic diagrams, photos of the pruner in action) would enhance the paper. Consider adding tables to present performance data more clearly.

7. Literature Review

- Inadequate
- Adequate
- Thorough
- Excellent

Comments: The literature review provides context for the study, but could be expanded to include more recent research on mechanization in legume cultivation and solar-powered agricultural tools.

8. Overall Scientific Quality

- Poor
- Fair
- Good
- Excellent

Comments: The paper presents a valuable contribution to sustainable agricultural practices. With some improvements in data presentation and discussion, it could have a significant impact in the field.

9. Recommendation

- Accept as is
- Accept with minor revisions
- Major revisions required
- Reject

Comments: The paper addresses an important topic with a novel approach. With minor revisions to address the points raised above, particularly in results presentation and discussion, it would make a strong contribution to the field.

10. Additional Comments for Authors

Consider adding: 1. A cost analysis to highlight the economic benefits of the solar pruner. 2. Discussion on potential limitations of the solar-powered system (e.g., performance on cloudy days). 3. Suggestions for future research or improvements to the design. 4. More details on the global significance of pigeon pea cultivation to provide broader context.

Addressing these points will enhance the paper's impact and applicability in the field of sustainable agriculture and agricultural engineering.

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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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

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