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REVIEWER'S REPORT

Manuscript No.: IJAR-55300

Title: Performance Evaluation of an Indirect Natu-ral-Convection Solar Dryer for Beef Drying in Abéché, Chad

Recommendation:
Accept as it is …
Accept after **minor revision**……
Accept after major revision ……
Do not accept (*Reasons below*) ……

Rating	Excel.	Good	Fair	Poor
Originality	Excel			
Techn. Quality	Excel			
Clarity		Good		
Significance		Good		

Dr Thirunahari Ugandhar
Reviewer Name:

Detailed Reviewer's Report

Recommendation

Accept with minor revisions

Title Evaluation

The title is clear, precise, and accurately reflects the objectives, methodology, and geographical focus of the study. It appropriately highlights the performance evaluation, dryer type, product (beef), and study location. Only a minor correction is suggested:

- Replace *"Natu-ral"* with **"Natural"** for consistency and correctness.

General Assessment

The manuscript presents a well-structured and practically relevant investigation into the design and performance of an indirect natural-convection solar dryer under Sahelian climatic conditions. The study addresses an important issue of meat preservation in regions lacking cold-chain infrastructure, making the research socially and economically significant.

Scientific Merit and Methodology

- The experimental setup is clearly described and technically sound.
- Monitoring of temperature, relative humidity, and drying kinetics is appropriate for evaluating dryer performance.
- The comparison with traditional open-air drying effectively demonstrates the advantages of the proposed system.

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- The use of locally available materials enhances the applicability and sustainability of the technology.

Results and Discussion

The results clearly show a significant reduction in drying time and improvement in hygienic quality of dried beef. Achieving internal temperatures up to 58 °C and reducing moisture content to 18–26% confirms the efficiency of the dryer. The discussion is relevant, though it could be strengthened by a deeper comparison with similar studies from other Sahelian or arid regions.

Presentation and Language

The manuscript is generally understandable; however, **minor grammatical and typographical corrections** are required. Improving sentence structure and consistency in terminology will enhance clarity and readability.

Tables, Figures, and Data Presentation

- Tables and figures are relevant and support the findings effectively.
- Figure captions should be slightly expanded to be self-explanatory.
- Units, symbols, and formatting should be standardized throughout the manuscript.

Ethical and Conflict of Interest Statements

No ethical concerns or conflicts of interest are evident in the study.

Conclusion

The study provides valuable experimental evidence supporting the use of indirect natural-convection solar dryers for meat preservation in Chad. With minor revisions related to language and presentation, the manuscript is suitable for publication and will contribute meaningfully to the fields of renewable energy applications and food preservation technologies.