

REVIEWER'S REPORT

Manuscript No.: **IJAR-55446**

Title: PROFITABILITY AND DETERMINANTS OF SESAME PRODUCTION IN SOUTHERN CHAD: AN ANALYSIS FOR STRATEGIC PROMOTION

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

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

Reviewer Name: **Dr.P.Manochithra**

Detailed Reviewer's Report

Manuscript Title

Profitability and Determinants of Sesame Production in Southern Chad: An Analysis for Strategic Promotion

General Assessment

The manuscript examines the economic and financial profitability of sesame production in Southern Chad and identifies its key socio-economic, institutional, and technical determinants using farm-level survey data and econometric analysis. The topic is **timely, policy-relevant, and aligned with current debates on agricultural diversification, rural livelihoods, and cash-crop promotion in Sub-Saharan Africa.**

The study is empirically rich, methodologically sound, and clearly written. The integration of profitability indicators with an OLS-based determinant model strengthens the analytical contribution. The sample size is robust, and the findings have **direct policy relevance** for agricultural development planning in Chad.

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However, the manuscript requires **moderate revisions** to improve clarity, methodological rigor, consistency in presentation, and academic precision before it can be considered for publication.

Recommendation

Major Revision

Strengths of the Manuscript

1. **Strong empirical foundation:** A large sample (459 producers) across two agricultural seasons enhances reliability.
2. **Clear policy relevance:** The findings directly inform strategies on input access, credit, producer organizations, and market infrastructure.
3. **Integrated analytical framework:** Combining profitability analysis with econometric determinants is a key strength.
4. **Well-structured results and discussion:** Tables are informative and interpretations are largely coherent.
5. **Use of recent and relevant literature,** including FAO, World Bank, and peer-reviewed journal sources.

Major Comments

1. Title and Scope

- The title is appropriate and informative.
- However, the phrase "*Strategic Promotion*" could be clarified by briefly indicating **whose strategy** (policy makers, farmers, institutions) in the introduction.

Suggestion:

Clarify the strategic angle explicitly in the introduction (policy, institutional, or value-chain perspective).

2. Abstract

- The abstract is informative and well structured.

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- However, it is **slightly long** and includes policy recommendations that could be more concise.

Suggestions:

- Reduce redundancy.
- Clearly separate: **objective – methods – key findings – implications**.
- Mention the **OLS model assumptions or robustness checks** briefly.

3. Introduction

- The introduction is comprehensive and logically developed.
- The research gap is clearly stated.

Concerns:

- Some background paragraphs are lengthy and descriptive.
- Citations are occasionally clustered without critical synthesis.

Suggestions:

- Reduce repetition related to African agriculture challenges.
- Strengthen the **novelty statement** by explicitly stating how this study differs methodologically or geographically from prior sesame studies.

4. Materials and Methods

4.1 Sampling and Data Collection

- Sampling strategy is well explained and justified.
- Cochran's formula is appropriately applied.

Minor issue:

- Inconsistency in year reporting (e.g., "2023–2014").

Suggestion:

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- Correct typographical errors in survey years throughout the manuscript.

4.2 Profitability Indicators

- Definitions of NM, GM, BCR, IRR, and ANLP are clear and well referenced.
- Use of family labour valuation is commendable.

Concern:

- The IRR formula is simplified and may be confused with return on investment.

Suggestion:

- Clarify that the IRR used is a **proxy profitability ratio**, not a discounted cash-flow IRR.

4.3 Econometric Model

- OLS is appropriate given the continuous dependent variable.
- Diagnostic tests (VIF, Breusch-Pagan, robust errors) strengthen credibility.

Concerns:

- Possible **endogeneity** (e.g., access to credit and improved seed adoption).
- No discussion of potential **selection bias**.

Suggestions:

- Acknowledge endogeneity as a limitation.
- Suggest alternative approaches (e.g., IV or propensity score matching) for future research.

Results and Discussion

5. Descriptive Statistics

- Clear and informative.
- Socio-economic profile aligns with regional realities.

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Minor improvement:

- Compare descriptive statistics briefly with similar studies in neighbouring countries.

6. Profitability Results

- Results convincingly demonstrate profitability.
- Interpretation of NM, BCR, and ANLP is accurate.

Suggestion:

- Explicitly discuss **risk and price volatility** alongside profitability to avoid overly optimistic conclusions.

7. Econometric Results

- Model fit (Adjusted $R^2 = 0.58$) is satisfactory.
- Key determinants are logically interpreted.

Concerns:

- Significance levels in Table 3 are inconsistently marked.
- Non-significant variables deserve a more concise explanation.

Suggestions:

- Standardise significance notation.
- Avoid over-interpreting insignificant coefficients.

8. Constraints Analysis

- Well-structured and clearly ranked.
- Strong linkage between qualitative perceptions and quantitative findings.

Suggestion:

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- Include a short paragraph linking constraints directly to proposed policy interventions.

9. Comparative Analysis (Adopters vs Non-Adopters)

- This section is a **major contribution**.
- Clear evidence of technology-driven profitability gains.

Suggestion:

- Clarify that causality cannot be fully inferred due to observational data.

Conclusion and Policy Implications

- Conclusions are consistent with results.
- Policy recommendations are relevant and actionable.

Suggestions:

- Avoid repetition of numerical results.
- Add a short subsection on **study limitations and future research directions**.

Minor Comments

1. Correct typographical and formatting errors (spacing, year ranges).
2. Ensure consistency in abbreviations (e.g., NM, GM, BCR).
3. Improve figure and table captions for standalone readability.
4. Check referencing style consistency (journal abbreviations, DOIs).
5. Ensure all in-text citations appear in the reference list and vice versa.

Overall Verdict

The manuscript is **methodologically sound, empirically rich, and policy-relevant**. With revisions addressing methodological transparency, clarity, and minor presentation issues, it will make a **valuable contribution to agricultural economics and development literature**.

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