

REVIEWER'S REPORT

Manuscript No.: IJAR-58720

Title: Technological upgrading and performance comparison of artisanal, semi-industrial, and industrial cashew processing systems in Benin, West Africa

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

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

Reviewer's ID: JPR-171

Detailed Reviewer's Report

This manuscript provides a timely and valuable comparative analysis of three cashew processing systems in Benin, addressing an important gap in the literature on technological upgrading pathways in West African agro-industrial value chains. The study employs a comprehensive methodological framework combining process mapping, material flow analysis, and statistical comparison of technical, productivity, and quality indicators across nine processing units. The results demonstrate a clear technological gradient, with industrial processors achieving significantly higher kernel recovery rates (33.1%), whole kernel rates (78.6%), and processing efficiencies while recording lower losses and defective kernel rates compared to artisanal systems. The finding that semi-industrial processors occupy an intermediate position, achieving substantial improvements over artisanal systems with moderate investment requirements, is particularly valuable for policy guidance. However, several issues require revision. The sample size (n=3 per category) is small, limiting statistical power and generalizability; the authors should acknowledge this limitation more prominently and discuss its implications for the robustness of conclusions. The statistical analysis relies solely on one-way ANOVA without addressing potential confounding factors such as raw nut quality or worker experience, which could influence performance outcomes independently of technology level. The manuscript would benefit from a clearer articulation of the economic implications of observed performance differences, including cost-benefit analysis or investment recovery periods for different processing systems. The references contain formatting inconsistencies and one entry (Yepie et al., 2026) with incomplete journal information. With these revisions, the paper will provide a significant contribution to understanding technological upgrading in the cashew processing sector.