

## REVIEWER'S REPORT

Manuscript No.: IJAR-55496

Date: 30.12.2025

**Title: COPROLOGICAL ASSESSMENT OF GASTROINTESTINAL PARASITE INFECTIONS IN CATTLE AND SHEEP UNDER SMALLHOLDER FARMING SYSTEMS IN BOUKOMBÉ MUNICIPALITY, NORTH-WESTERN BENIN**

### 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: **ANAPANA GOPAL**

### Reviewer's Comment for Publication.

#### General Comments

The manuscript presents a coprological assessment of gastrointestinal parasite infections in cattle and sheep reared under smallholder farming systems in Boukombé municipality, north-western Benin, using the Mini-FLOTAC technique. The topic is highly relevant to veterinary parasitology, livestock health management, and sustainable ruminant production in tropical regions. The study addresses an important knowledge gap by combining epidemiological surveillance with the application of a sensitive diagnostic technique under field conditions. Overall, the manuscript is scientifically sound and well documented; however, some improvements are required in clarity, conciseness, and balance between methodological justification and epidemiological interpretation.

#### Content and Originality

The study demonstrates good originality by focusing on spatial heterogeneity of gastrointestinal parasite infections in smallholder systems while simultaneously validating the operational suitability of the Mini-FLOTAC technique in northern Benin. Although Mini-FLOTAC has been previously evaluated, its application in this specific agroecological and management context adds regional value. The simultaneous assessment of prevalence and infection intensity in both cattle and sheep strengthens the contribution. However, the manuscript places excessive emphasis on reiterating the advantages of Mini-FLOTAC in the Discussion, sometimes at the expense of deeper epidemiological interpretation of parasite transmission dynamics and host-environment interactions.

#### Technical Quality

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The methodology is clearly described and appropriate for the stated objectives. Sample collection, preservation, and laboratory procedures are well detailed, ensuring reproducibility. The use of Mini-FLOTAC with a defined analytical sensitivity (5 EPG) is technically justified and consistent with international standards. Statistical analyses are generally appropriate, including data transformation, two-way ANOVA, and post-hoc testing.

Nevertheless, some technical aspects require attention:

- Sample size per locality and per species is not clearly stated and should be explicitly reported.
- The absence of some parasite groups (e.g., *Nematodirus* spp. and *Trichuris* spp.) should be interpreted cautiously, considering diagnostic limitations and seasonal effects.
- The rationale for focusing primarily on locality and sex, while excluding age, management practices, or deworming history, should be acknowledged as a limitation.
- Figures illustrating prevalence would benefit from clearer legends and improved visual consistency.

### Language and Presentation

The manuscript is generally well written and scientifically coherent, with appropriate use of technical terminology. However, there are several issues related to formatting, spacing, and minor grammatical inconsistencies (e.g., line breaks, repeated headings, inconsistent capitalization of parasite names). Some sentences are overly long and repetitive, particularly in the Introduction and Discussion sections.

The manuscript would benefit from professional language editing to improve readability, eliminate redundancy, and ensure consistency in terminology (e.g., "Mini-FLOTAC" vs "MiniFLOTAC").

### Structure and Organization

The manuscript follows a standard scientific structure and is logically organized. The Introduction provides strong background information but could be streamlined to avoid repetition, especially regarding diagnostic techniques. The Materials and Methods section is detailed and well structured.

The Results section is clearly presented, with tables effectively summarizing prevalence and egg count data. However, some tables are dense and could be simplified or supplemented with clearer explanatory captions. The Discussion is comprehensive but somewhat unbalanced, with disproportionate emphasis on methodological validation rather than biological and epidemiological implications.

### References and Citations

The reference list is extensive, relevant, and up to date, with strong representation of international literature on coprological diagnostics and parasite epidemiology. Citations are generally appropriate and well integrated into the text. Formatting of references is mostly consistent, though minor corrections are needed (spacing, punctuation, and consistency in journal naming). The inclusion of recent African and international studies strengthens the manuscript's credibility.

### Overall Recommendation

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## **REVIEWER'S REPORT**

The manuscript provides valuable epidemiological data and supports the use of Mini-FLOTAC as a sensitive diagnostic tool for gastrointestinal parasite surveillance in tropical smallholder systems. With moderate revisions to improve clarity, reduce redundancy, and strengthen epidemiological interpretation, the manuscript has good potential for publication.

### **Final Decision**

#### **Minor to Moderate Revision**

The manuscript is scientifically sound and relevant, but revisions are required to enhance clarity, balance the discussion, and improve presentation before acceptance.