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REVIEWER'S REPORT

Manuscript No.: IJAR-55170

Title: Evaluation of the physicochemical quality of milk from DjallonkÃ¨ goats fed silage made from Pennisetum pedicellatum Trin in Burkina Faso

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 investigates the effect of *Pennisetum pedicellatum* silage–based diets on the physicochemical quality of milk from Djallonké goats in Burkina Faso. The topic is relevant to animal nutrition, small ruminant production, and sustainable livestock feeding in West African agro-pastoral systems. The study addresses a locally important forage resource and provides experimental data under real farming conditions. However, while the objectives are clear and the experimental effort is appreciable, the manuscript requires improvements in clarity, methodological justification, data interpretation, and language quality before it can be considered for publication.

Content and Originality
The study offers moderate originality, as information on goat milk composition under silage-based feeding systems in Burkina Faso is limited. The evaluation of *Pennisetum pedicellatum* barrel silage and its impact on milk quality in Djallonké goats adds regional value and practical relevance. However, the conceptual novelty is limited, as similar studies on tropical grass silage and milk composition have been reported elsewhere. The manuscript would benefit from a clearer articulation of how this study advances existing knowledge beyond confirming previously reported trends.

Technical Quality
The experimental design (Latin square with four diets) is appropriate in principle, but several technical concerns need attention:

- The **sample size (12 goats)** is relatively small, which may limit statistical power and generalizability.
- The inclusion of both **lactating and pregnant goats** in the same design is problematic, as physiological status strongly influences milk yield and composition; this should be better justified or controlled statistically.

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- The **feed conversion ratio (FCR)** interpretation is confusing, particularly when negative or zero weight gain is observed.
- The use of **Poisson models for milk composition data** (fat, protein, lactose) is questionable, as these variables are continuous and typically modeled using Gaussian or Gamma distributions.
- Some reported values (e.g., milk density of 0.69) appear biologically unrealistic and should be rechecked.
- Statistical outputs are extensive but not always clearly interpreted in relation to biological meaning.

Overall, while modern statistical tools are used, the **choice and interpretation of models need clarification and justification**.

Language and Presentation

The manuscript contains numerous grammatical errors, awkward phrasing, and inconsistencies in terminology, which significantly reduce readability. There are issues with:

- Long and repetitive sentences
- Inconsistent use of units and symbols
- Typographical errors (e.g., spacing, missing words, inconsistent capitalization)
- Mixing of English and French terms in figures and tables

Professional English language editing is strongly recommended. Improving clarity and conciseness would greatly enhance the manuscript's impact.

Structure and Organization

The manuscript generally follows a standard scientific structure, but several organizational issues are evident:

- The **Abstract** is overly long and contains methodological details better suited for the Methods section.
- The **Introduction** could be more concise and focused, with a clearer statement of the research gap.
- Some **figures and tables are redundant**, overly complex, or insufficiently explained in the text.
- The **Discussion** is informative but occasionally repetitive and sometimes restates results rather than critically interpreting them.
- Transitions between sections could be smoother to improve overall coherence.

Reorganization and condensation of some sections would improve readability.

References and Citations

The reference list is **generally adequate and up-to-date**, with several recent (2023–2025) studies included. However:

- Some references are **incompletely formatted** or contain broken URLs.
- Citation styles are inconsistent across the list.
- A few references appear tangential and could be replaced with more directly relevant literature.
- Greater emphasis on **African and goat-specific milk composition studies** would strengthen contextual relevance.

Overall, references are sufficient but need formatting and consistency corrections.

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Overall Recommendation

The manuscript addresses an important applied research question and provides useful regional data. However, **substantial revisions** are required to improve methodological rigor, statistical justification, clarity of interpretation, and language quality.

Final Decision

Minor Revision Required

The authors are encouraged to revise the manuscript by:

- Clarifying experimental design limitations,
- Revising statistical methods and interpretations,
- Improving biological interpretation of results,
- Thoroughly editing the language and presentation,
- Ensuring consistency and accuracy in tables, figures, and references.

With these improvements, the manuscript could make a valuable contribution to the field of small ruminant nutrition and dairy science.