

**Review Form 1.7**

Journal Name:	<b>Annual Research &amp; Review in Biology</b>
Manuscript Number:	<b>Ms_ARRB_118772</b>
Title of the Manuscript:	<b>Literature review on dairy cow rearing in sub-Saharan Africa</b>
Type of the Article	

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**PART 1: Review Comments**

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p><b>Compulsory</b> REVISION comments</p> <ol style="list-style-type: none"> <li>1. <b>Is the manuscript important for scientific community?</b> (Please write few sentences on this manuscript)</li> <li>2. <b>Is the title of the article suitable?</b> (If not please suggest an alternative title)</li> <li>3. <b>Is the abstract of the article comprehensive?</b></li> <li>4. <b>Are subsections and structure of the manuscript appropriate?</b></li> <li>5. <b>Do you think the manuscript is scientifically correct?</b></li> <li>6. <b>Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</b></li> </ol> <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>The title "Literature Review on Dairy Cow Rearing in sub-Saharan Africa" is suitable as it clearly indicates the scope and focus of the paper. However, to make it more engaging and reflective of the paper's comprehensive nature, consider a slightly more descriptive and specific title. Here are a few suggestions:</p> <ol style="list-style-type: none"> <li>1. "A Comprehensive Literature Review on Dairy Farming Practices and Challenges in sub-Saharan Africa"</li> <li>2. "Economic, Social, and Environmental Aspects of Dairy Farming in sub-Saharan Africa: A Literature Review"</li> <li>3. "Dairy Farming in sub-Saharan Africa: Practices, Challenges, and Opportunities - A Literature Review"</li> <li>4. "Enhancing Dairy Cow Rearing in sub-Saharan Africa: A Review of Practices, Challenges, and Innovations"</li> <li>5. "Sustainable Dairy Farming in sub-Saharan Africa: A Comprehensive Review of Current Practices and Future Directions"</li> </ol> <p>These titles highlight the comprehensive and multifaceted nature of the review, making it clear that the paper addresses various aspects of dairy farming in the region.</p> <p><b>Introduction</b></p> <p><b>Issues:</b></p> <ol style="list-style-type: none"> <li>1. <b>Citation Style:</b> The reference to FAO (2021) is incomplete. It should be integrated more seamlessly into the text.</li> <li>2. <b>Repetition:</b> The role of the dairy sector in food security and job creation is mentioned twice.</li> <li>3. <b>Clarity:</b> The sentence structure can be more concise.</li> </ol> <p><b>Suggestions:</b></p> <ul style="list-style-type: none"> <li>• Combine the repeated ideas into a single, clear statement.</li> <li>• Ensure proper citation by providing full references at the end of the article.</li> </ul> <p><b>Revised Section:</b> "Dairy farming in sub-Saharan Africa plays a crucial role in the region's agricultural and food economy, providing livelihoods and significantly contributing to both local and national economies. This sector is vital for food security and job creation in rural areas (FAO, 2021). This literature review aims to consolidate existing knowledge on dairy farming in the region, better understand farming practices, identify challenges faced by farmers, and explore potential solutions to enhance the productivity and profitability of this sector."</p> <p><b>Objective of the Literature Review</b></p> <p><b>Issues:</b></p> <ul style="list-style-type: none"> <li>• Minor repetition in stating the aims.</li> </ul>	

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	<ul style="list-style-type: none"><li>• Slightly redundant phrasing.</li></ul> <p><b>Suggestions:</b></p> <ul style="list-style-type: none"><li>• Combine sentences to avoid redundancy and make the objectives more straightforward.</li></ul> <p><b>Revised Section:</b> "The aim of this literature review is to synthesize available information on dairy farming in sub-Saharan Africa, analyze the related issues, and highlight opportunities and challenges. It also seeks to identify gaps in current knowledge and propose recommendations for future research and interventions."</p> <p><b>Methodology</b></p> <p><b>Issues:</b></p> <ul style="list-style-type: none"><li>• Passive voice usage could be made more active for clarity.</li></ul> <p><b>Suggestions:</b></p> <ul style="list-style-type: none"><li>• Use active voice to describe the methodology.</li></ul> <p><b>Revised Section:</b> "We conducted an in-depth search for relevant sources, consulting specialized books, scientific articles, government reports, case studies, and academic databases to gather accurate and reliable information on dairy farming in sub-Saharan Africa. We critically analyzed these sources and selected the most relevant and up-to-date information for this review, providing a comprehensive overview of the region's dairy farming situation."</p> <p><b>Economic and Social Importance of Dairy Farming</b></p> <p><b>Issues:</b></p> <ul style="list-style-type: none"><li>• Section headings need to be consistent in style.</li><li>• Some data needs to be updated or verified for accuracy.</li></ul> <p><b>Suggestions:</b></p> <ul style="list-style-type: none"><li>• Ensure consistency in headings and subheadings.</li><li>• Verify all data and update where necessary.</li></ul> <p><b>Revised Section:</b> "Dairy farming significantly contributes to the local economy in sub-Saharan Africa, being a major income source for many rural households. It not only provides milk for consumption and sale but also creates direct and indirect employment, promoting local economic development."</p> <p><b>Contribution to the Local and National Economy</b></p> <p>"Dairy farming contributes significantly to the GDP of sub-Saharan African countries, such as Kenya, Ethiopia, and Uganda. According to FAO estimates, milk production can account for 4-8% of agricultural GDP in some of these countries (Staal, Pratt, and Jabbar, 2008)."</p> <p><b>Job Creation and Income Generation</b></p> <p>"The dairy sector offers direct employment for farmers and indirect employment in the value chain, including transport, processing, and marketing of milk. For instance, around 1.6 million households</p>	
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	<p>in Tanzania rely on dairy production for their livelihoods (Otte and Upton, 2005)."</p> <p><b>Multiplier Effects on the Economy</b></p> <p>"Milk-producing households often reinvest their income in local goods and services, stimulating the rural economy. In Kenya, profits from milk are frequently used to educate children, improve housing, and purchase other livestock (Wambugu, Kirimi, and Opiyo, 2011)."</p> <p><b>Impact on Food Security and Poverty Reduction</b></p> <p><b>Issues:</b></p> <ul style="list-style-type: none"><li>• Repetition in emphasizing the importance of dairy farming.</li></ul> <p><b>Suggestions:</b></p> <ul style="list-style-type: none"><li>• Consolidate repetitive statements to enhance readability.</li></ul> <p><b>Revised Section:</b> "Dairy farming plays a crucial role in improving food security and reducing poverty in sub-Saharan Africa. It provides a regular source of nutritious dairy products and generates stable income, enabling households to diversify their diets and invest in better living conditions."</p> <p><b>Existing Dairy Farming Systems</b></p> <p><b>Issues:</b></p> <ul style="list-style-type: none"><li>• The transition between different farming systems can be smoother.</li><li>• Some technical terms may need further explanation for clarity.</li></ul> <p><b>Suggestions:</b></p> <ul style="list-style-type: none"><li>• Improve transitions and add brief explanations for technical terms.</li></ul> <p><b>Revised Section:</b> "Dairy farming systems in sub-Saharan Africa vary based on resources and traditional practices. Extensive farming relies on abundant grazing resources, semi-intensive farming combines traditional and modern techniques, and intensive farming, though less common, is found in urban areas with high milk demand."</p> <p><b>Factors Influencing Farming Systems</b></p> <p><b>Issues:</b></p> <ul style="list-style-type: none"><li>• Some factors are not fully elaborated.</li><li>• Citations should be uniformly formatted.</li></ul> <p><b>Suggestions:</b></p> <ul style="list-style-type: none"><li>• Expand on each factor to provide a clearer understanding.</li><li>• Ensure all citations follow a consistent format.</li></ul> <p><b>Revised Section:</b> "Several factors influence dairy farming systems in sub-Saharan Africa, including the availability of natural resources, market access, government policies, and breeders' knowledge and skills. Climate variations and proximity to urban markets play significant roles in determining</p>	
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	<p>the profitability and sustainability of farming systems."</p> <p><b>Constraints and Challenges for Dairy Farmers</b></p> <p><b>Issues:</b></p> <ul style="list-style-type: none"><li>• Some challenges are briefly mentioned without much detail.</li><li>• The language could be more specific.</li></ul> <p><b>Suggestions:</b></p> <ul style="list-style-type: none"><li>• Provide more detail on each challenge.</li><li>• Use precise language to describe the constraints.</li></ul> <p><b>Revised Section:</b> "Dairy farmers in sub-Saharan Africa face numerous constraints, including economic challenges, natural resource management issues, limited access to veterinary services, feed resources, and a low level of farmer training. Addressing these constraints requires comprehensive support programs and targeted interventions."</p> <p><b>Good Practice and Innovation in Dairy Farming</b></p> <p><b>Issues:</b></p> <ul style="list-style-type: none"><li>• Some sections overlap with earlier parts of the article.</li><li>• The structure could be more logical.</li></ul> <p><b>Suggestions:</b></p> <ul style="list-style-type: none"><li>• Avoid repetition by cross-referencing earlier sections.</li><li>• Arrange the content to flow logically from one point to the next.</li></ul> <p><b>Revised Section:</b> "Adopting good practices and innovations in dairy farming is essential to improve productivity and profitability. Key strategies include improving cow nutrition, utilizing advanced reproductive techniques, and implementing modern milking technologies."</p> <p><b>Environmental Impact of Dairy Farming</b></p> <p><b>Issues:</b></p> <ul style="list-style-type: none"><li>• Some impacts are not discussed in depth.</li><li>• Potential solutions to mitigate environmental impact are not mentioned.</li></ul> <p><b>Suggestions:</b></p> <ul style="list-style-type: none"><li>• Discuss each environmental impact in detail.</li><li>• Suggest mitigation strategies.</li></ul> <p><b>Revised Section:</b> "Dairy farming in sub-Saharan Africa has significant environmental impacts, including greenhouse gas emissions, land and water degradation, and waste management challenges. Strategies to mitigate these impacts include improving cow feeding practices, adopting sustainable land management techniques, and implementing effective waste management systems."</p>	
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	<p><b>Policies and Programs to Support Dairy Farming</b></p> <p><b>Issues:</b></p> <ul style="list-style-type: none"><li>• More examples of successful programs would be beneficial.</li><li>• The impact of these policies needs to be more clearly stated.</li></ul> <p><b>Suggestions:</b></p> <ul style="list-style-type: none"><li>• Provide additional examples of successful policies and programs.</li><li>• Clearly state the positive impacts of these initiatives.</li></ul> <p><b>Revised Section:</b> "Policies and programs play a crucial role in supporting dairy farming in sub-Saharan Africa. Subsidies, financial incentives, and farmer training programs have been implemented to encourage investment and improve productivity. Successful initiatives, such as Ethiopia's 'National Livestock Development Plan' and AfDB's financial support programs, have significantly benefited the dairy sector."</p> <p><b>Conclusion</b></p> <p><b>Issues:</b></p> <ul style="list-style-type: none"><li>• The conclusion is somewhat repetitive and could be more concise.</li></ul> <p><b>Suggestions:</b></p> <ul style="list-style-type: none"><li>• Summarize the key points more succinctly.</li><li>• Avoid repetition of information already covered in the article.</li></ul> <p><b>Revised Section:</b> "This literature review highlights the crucial role of dairy farming in sub-Saharan Africa's economy, food security, and rural development. Despite significant challenges, opportunities for growth and investment exist. To achieve sustainable development in the dairy sector, coherent government policies, strategic investments, and active stakeholder engagement are essential."</p> <p><b>Recommendations for Improving Dairy Cow Breeding</b></p> <p><b>Issues:</b></p> <ul style="list-style-type: none"><li>• Recommendations could be more specific and actionable.</li></ul> <p><b>Suggestions:</b></p> <ul style="list-style-type: none"><li>• Provide clear, actionable recommendations.</li></ul> <p><b>Revised Section:</b> "To improve dairy cow breeding in sub-Saharan Africa, it is crucial to enhance access to feed resources, strengthen disease prevention and control measures, develop infrastructure and technologies, and improve farmer training and education. Implementing these recommendations will promote sustainable improvements in dairy farming across the region."</p>	
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<b>Minor</b> REVISION comments		
1. <b>Is language/English quality of the article suitable for scholarly communications?</b>	I recommend the paper for publication with minor revisions. The content is strong and relevant, but the issues related to source consistency, methodology details, minor redundancies, and typographical errors need to be addressed before publication. Once these revisions are made, the paper will be a valuable contribution to the literature on dairy farming in sub-Saharan Africa.	
<b>Optional/General</b> comments		

**PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

**Reviewer Details:**

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