



**SDI Review Form 1.6**

Journal Name:	<a href="#">Asian Journal of Research in Animal and Veterinary Sciences</a>
Manuscript Number:	Ms_AJRAVS_47943
Title of the Manuscript:	Comparison of the Fitting of Two Mathematical Models to Describe the Ruminant Fermentation Parameters of Some Sources of Plant and Animal Protein Using In Vitro Gas Method
Type of the Article	<u>Original Research Article</u>

**General guideline for Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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**PART 1: Review Comments**

	<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>Compulsory</b> REVISION comments	<p>This Journal article is scientifically sound and technically acceptable. The Topic, Abstract, Keywords, Introduction Materials and Methods, Results and Discussion, 7 Tables, Conclusion and References are of acceptable standard. However, a lot of minor corrections need to be effected and some suggestions are made as outlined below. There is a lot of language interpretation barrier which are not easy to correct, but could try the best possible.</p> <ol style="list-style-type: none"> <li>1. The references numbering within the write up and thereafter in the References column need to be correctly made according to this Journal's Required standard. Need to start from [1] and not [4].</li> <li>2. Could check to ensure the word 'in vitro' is put in italics as '<i>in vitro</i>' through out this manuscript.</li> <li>3. Need to stick to the use of 'Ørskov and McDonald' and not 'McDonald and Ørskov' as in Line 37.</li> </ol>	
<b>Minor</b> REVISION comments	<ol style="list-style-type: none"> <li>1. Lines 4 – 7: Could delete 'of the Fitting' 'from the topic and change 'ruminal' to 'rumen' as follows - Comparison of Two Mathematical Models to Describe the Rumen Fermentation Parameters of Some Sources of Plant and Animal Protein Using <i>In Vitro</i> Gas Method</li> <li>2. Between Lines 13 and 15: could be put as – <b>Aim:</b> In this study of two mathematical models were used to describe the rumen fermentation parameters of some plant and animal protein sources  (c) in both models of EXP and FRC was the same and had no significant difference. However, the two models at the lag phase (T lag) had the significant differences such that the amount in the lag phase in the model EXP was higher than in the model FRC. <b>Conclusion:</b> Therefore, the FRC model instead EXP model could often be a more useful model to describe the gas production profiles of feeds. <i>Keywords:</i> <i>In vitro</i> fermentation, Mathematical models, Protein sources.</li> <li>3. Lines 20 -21: Could be slightly corrected as follows – Gas production <i>in vitro</i>, is related to fermentation parameters, and rumen digestion kinetics are valuable descriptions in the evaluation feeds [1]. in this <i>in vitro</i> gas production fermentation, a certain amount of feed in the rumen fluid was incubated and</li> <li>4. Line 32: Could be put as - been reported [4]. but some other of models like the model of</li> <li>5. Line 37: Could put as -</li> <li>6. Lines 50 – 52 : <b>methods in terms of goodness of fit and to describe the ruminal fermentation parameters</b> <b>In some plant and animal protein sources evaluated using the gas production method.</b></li> <li>7. In lines 62 -63: Could put as - two models of digestion by France et al [5] and Ørskov and McDonald [7] with regard</li> <li>8. In Line 66: Could put as - their means for each parameter of the two models.</li> </ol>	



	<p>9. In Lines 70, 73 and 79: Could put as – Ørskov and McDonald model [7] with regard to the lag phase  France et al.[5] (ml at ½ h),</p> <p>10. In Lines 88 – 90: Could effect corrections as – crude fat 31.3% for poultry offal meal (POM) and highest ash content of 20% was observed for fish meal (FM). Highest of NDF and ADF (70.6% and 58.4%) for cotton seed meal (CM) and the lowest NDF and ADF were obtained 45.7 and 33.3% for soybean meal (SM) respectively.</p> <p>11. Line 99: Could replace individual ‘feed was’ with individual ‘protein sources were’</p> <p>12. Lines 105 – 107: Could be corrected as – [13]. There was less time to start the colony by the France model for all plant and animal protein sources. The lag phase for the France was 0.44 hours as against 1.96 hours for the Ørskov and McDonald Model observed as shown in Table 2.</p> <p>13. Between Lines 112 and 113: Could effect correction in Table 2, Table 3, and Table 4 headings; and change ‘Total feeds’ to ‘Plant and animal protein sources’ <b>Table 2, 3, 4. Comparison of two models (France and Ørskov and McDonald) based on the estimated parameters between the plant and animal protein sources</b></p> <p>14. <b>Lines 115 -117: Could effect correction as –</b> Among the studied protein sources, cotton seed meal had the lowest T lag (Table 7) in both models. However, other sources of plant and animal protein in this study, despite their high fiber and cell wall structure (NDF) had less T lag than that of cottonseed meal but the two models</p> <p>15. Line 122. Could change – model ‘has’ to - model ‘could have’ an over estimate</p> <p>16. Line 124: Could replace (2016) with [14]</p> <p>17. Line 126: Could correct as - differences in this relation could be due to the model used for the</p> <p>18. Line 134: Could change to - phase have shown higher</p> <p>19. Line 136: Could change to - each feed serve as an energy substrate for rapid fermentation by attached</p> <p>20. Line 138: Could change to - reduced lag phase</p> <p>21. Lines 144, 145, Could change headings of Tables 5, 6, 7 as – <b>Table 5. Comparison of France and Ørskov and McDonald models based on the estimated potential gas production parameters of the individual protein sources</b> Could delete ‘<i>c = constant rate gas production (ml per hour) T lag = lag phase (hours)</i>’ from Table 5. foot note -</p> <p><b>Table 6. Comparison of France and Ørskov and McDonald models based on the estimated constant rate gas production parameters of the individual protein sources</b> Could delete ‘‘<i>A = potential gas production (ml) and T lag = lag phase</i>’ from Table 6. foot note –</p>	
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	<p><b>Table 7. Comparison of France and Ørskov and McDonald models based on the estimated lag phase parameters of the individual protein sources</b>                  Could delete – ‘ <i>A = potential gas production (ml) c = constant rate gas production (ml per hour)</i> ‘                  from Table 7. foot note –                  22.Line 149: Could remove ‘is’ between fitness and done</p> <p>23. Line 152: Could be put as - production time. Also, ‘ the use of the French model could’ not lead                  24. Line 153: Could change - degradability ‘and’ the potential to - degradability of the potential                  25. Line 164: Could change – Br J to - Brit J                  26. Line 171: Could change spelling of Steingass to Steingass</p>	
<p><u>Optional/General</u> comments</p>	<p>There was minor language translation barrier.</p>	

**PART 2:**

	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>Are there ethical issues in this manuscript?</b></p>	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p>	

As per the guideline of editorial office we have followed VANCOUVER reference style for our paper.

Kindly see the following link:

<http://sciencedomain.org/archives/20>

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