



SDI Review Form 1.6

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Title of the Manuscript:	PERFROMANCE OF BROILERS FED GRADED LEVELS OF BIO-DETHEOBROMISED COCOA BEAN SHELL IN THEIR DIETS
Type of the Article	Original Research Article

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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.

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PART 1: Review Comments

	Reviewer's comment	Author's comment <i>(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)</i>
Compulsory REVISION comments	Line 41 = Was the 60-65% moisture content verified? If it was not, then it is better to just report how you checked for dryness manually. Do not report a moisture number that you did not verify. Line 97-99 = Either remove these "observed" differences between treatments since they were not significant, or make it more obvious that these are none significant observations: e.g., use the phrase "numerically highest" or put the specific p-value for the non-significant results in parenthesis. Line 112 = The difference in fiber between the 10 and 30% treatments does not seem to be something that would significantly impact growth (3.8% vs 5.2%), especially when compared to the unmentioned high-rang differences in the Ca content of the diets (ranging from 1.2% - 2.5% in the starter and 0.8% - 2.3% in the finisher diets). Also, protein and energy vary greatly across the 7 treatments, which is something that could have also impacted growth. Was an attempt made to formulate the diets to be isocaloric and isonitrogenous within the phases? Is all that extra Ca coming solely from the cocoa bean shell? I think this Ca difference between treatment diets (and the protein and energy differences) and the potential effect that could have had on the birds needs to at least be mentioned in both the material and methods (say why there was such a difference between treatment diets in	The issue raised has been addressed; the statement has been modified to accommodate the reviewer's comment. Suggestion taken and applied Attempts were not made to make the diets isocaloric and isonitrogenous within the phases but we certainly ensured that the recommended energy and crude protein requirements range for the 2 phases were met. I quite agree that differences in Ca content between treatment diets could impact on the performance.



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	Ca, energy, and protein within each phase) and again in the discussion (say if you think it impacted your results, or defend why you think it didn't impact them). Line 127-131 = Your conclusion hinges quite a bit on the theobromine content and the need to do further research on processing techniques to reduce it. Are the fermentation methods used in this study not sufficient to reduce theobromine content? What were the levels of theobromine in the treatment diets (could be analyzed or simply calculated from the inclusion rate of the ingredient)? Are the levels in your diets anywhere near an accepted "limit" for theobromine in chicken feeds? I think these are the kinds of questions that should be addressed in the discussion section if the take-home message in the conclusion section is going to be about theobromine content adversely affecting growth after 10% inclusion of cocoa bean shell. Line 180 = Put units for the weight and feed variables. I am obviously assuming that it is kg, but it needs to be made explicit. Line 182 = Take the abbreviation "CBS" out of the table heading, or else put an explanation of the abbreviation in a footnote. Tables need to be able to stand alone.	The techniques employed reduced the theobromine content. Line 72-74 addresses well the issue raised here Units already appropriately placed CBS written in full has been inserted
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<u>Minor</u> REVISION comments	Line 12 = make "Gut weight" a lower-case "g". Line 27 = write citation as "(4, 5)" instead of using the word "and". Line 29 = rewrite the sentence and the citation so that you do not begin a sentence with the number "7". Line 29-30 = You already described theobromine as anti-nutritional, so take out the phrase "anti-nutritional compound" and just write, "... indicated that the theobromine present ..." Line 34-35 = add parenthetical commas around the specific enzymes: "... contains enzymes, mainly LAC and MnP, that degrade ..." Line 38 = change "into" to "to" Line 41 = add a hyphen to "inside out" Line 43 = "methods" should not be plural Line 43-46 = If citation #8 covers all three sentences, then there is no need to put a cite for it twice. Just put the citation at the end of the sentence that ends on line 47 to cover all three sentences. Line 46-47 = combine these two sentences, so it reads, "... water and heat throughout, and also uniform ..." Line 50 = Report the temperature and time used for sterilization. If that wasn't measured, then report how sterilization was verified.	Done Done, but now line 33 Re-written now in line 35-36 Done, now line 36 Done, line 40 Done, now line 44 Done, line 47 Done, line 49 Done, line 52 The two sentences have been combined in line 50-52 Temperature already included line 56
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	Line 56 = make "condition" plural	Done, line 62
	Line 59 = change to read, "1 gram of <i>Aspergillus niger</i> spores."	Done, line 65
	Line 63 = change to read, "(196) day-old Ross broiler ..."	Done, line 69
	Line 71 = "there after" needs to be one word	Done, line 77
	Line 79 = This is worded awkwardly, consider something like, "were determined using AOAC methodology (10)."	Done, line 85
	Line 79-80 = shorten the sentence to read, "Content of theobromine was determined ..."	Done, line 85-86
	Line 81-83 = Since p-values are established <i>a priori</i> , report it here in the Statistical Analysis section.	Level of significance indicated line 90
	Line 107-109 = This remark about lower body wt. being the result of lower wt. gain seems unnecessary. Of course if birds gain less weight then they are going to weigh less. It hardly seems worth discussing that point. If they weighed less, then they gained less – so you only need to discuss why you think they gained less, which you began to do in 110.	Your point is noted and taken
	Line 120 = write citation as "(5, 12)" instead of using the word "and".	Done, line 124
	Line 121 = put a comma after "10%."	Done, line 125



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<u>Optional/General</u> comments	Line 120 = In my opinion, if you fed the diet <i>ab libitum</i>, then it is not correct to call it a “ration” because that word implies you “rationed” the feed they had access to. It is better to just call them “feeds” or “diets”. Line 122-125 = So you saw a growth reduction that you attributed (in part) to increased fiber (line 111-112), but then you saw no effect on GI weight/length/etc. I wondered, as a general question, if you are thinking that fiber content of these diets had an effect on the birds, then wouldn't that also have had an effect on these gut variables too?	Yes, you are right and correction is done line 124 The fiber content of the diets did have an effect on the gut as shown in table 5 but no significance was established at $P \geq 0.05$ but numerically the highest value was observed in diet with the highest content of Cocoa bean shell of 30%
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