



SDI Review Form 1.6

Journal Name:	Current Journal of Applied Science and Technology
Manuscript Number:	Ms_CJAST_48413
Title of the Manuscript:	Biometrical Relationship between Body Weight and Body Measurements of Black Bengal Goat (BBG)
Type of the Article	Original research article

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:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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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)
Compulsory REVISION comments	<p>Although not explicit, the authors hypothesize a <u>linear</u> relationship between body weight and measures such as body length, chest girth, etc. Unfortunately, this relationship <u>cannot be linear</u>. A simple example is that of the cube: if the edge increases from 1 to 5, then 10, the volume (mass, weight) increases from 1 to 125, then 1000, i.e. as the edge at power 3.</p> <p>In the case of growing animals, the relationship is a little more complicated, because the different parts of the body grow differently (allometry). See for ex. Hammond, J. (1950). "Measuring Growth in Farm Animals." <i>Proceedings of the Royal Society of London. Series B, Biological Sciences</i> 137(889): 452-461 http://www.jstor.org/pss/82596</p> <p>The authors would probably have avoided this pitfall if they had started with a graphical analysis of the data, by plotting the body weight against the body length, chest girth, etc.</p> <p>An element that should have alerted the authors is visible in Table 4: whatever the explanatory variable considered, the reported constant value (or intercept) ranges from -11 to -15 kg, whereas it should not differ by 0. By definition, the intercept is the value taken by the dependent or explained variable when the explanatory variable(s) are set to 0.</p>	<p>In our study, we found linear relationship between body weight and body measures (length, chest girth etc.) with best fitted in the model (as obtained higher value of coefficient of determination). So, did not think to go for cubic or quadratic model.</p>
Compulsory REVISION comments	<p>The authors say that they monitored each animal monthly from birth to 15 months of age. This implies that they are able to draw, for each individual, the curves of weight, body length, chest girth, etc., according to age. It is a pity not to make full use of all this information. In my experience, the best way to value these data is to make a <u>non-linear adjustment using a mixed model</u> that takes into account the fact that each animal has been measured several times. Several non-linear models can be tested, with the help of graphic representations. See for ex. Mahieu, M., M. Navès and R. Arquet (2011). "Predicting the body mass of goats from body measurements." <i>Livestock Research for Rural Development</i> 23: article #192. http://www.lrrd.org/lrrd23/9/mahi23192.htm If the authors are not familiar with non-linear mixed models, they are strongly encouraged to approach a skilled bio-statistician.</p>	<p>As we found best goodness of fit in linear model, we did not think to go for non-linear mixed model.</p>
Compulsory REVISION comments	<p>The statistical models used must be clearly described in the "data analysis" section.</p>	<p>Statistical model has been described clearly in the data analysis section.</p>
Minor REVISION comments	<p>In Tables 1 to 4, R² and R provide the same information, R being always positive for the type of variables studied. It would be desirable to replace column R by the number of data used for Tables 1, 2 and 3</p>	<p>Replaced as per the reviewer's comment.</p>
Optional/General comments	<p>The type of study presented is not very original. So we can ask:</p> <ul style="list-style-type: none"> • the use of a good quality experimental design, which seems to be the case here • the correct use of statistical tools adapted to the data structure, which remains to be done. • an in-depth literature review, which would likely have avoided the use of inappropriate methods • a more in-depth reflection on practical applications on the farm or by extension operators (understanding of the technique, need for calculation, ease of measurement, cost, accuracy) 	

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