



**SDI Review Form 1.6**

**PART 1:**

Journal Name:	<a href="#"><u>American Journal of Experimental Agriculture</u></a>
Manuscript Number:	2013_AJEA_4929
Title of the Manuscript:	<b>The Relationship between Phenotypic, Testicular Traits and Serum Testosterone Levels in Pre-pubertal Male Boer Goat Crosses</b>
Type of the Article	<b>Research paper</b>

**General guideline for Peer Review process is available in this link:**

**[\(http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline\)](http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline)**

- This form has total 7 parts. Kindly note that you should use all the parts of this review form.



## SDI Review Form 1.6

### **PART 2: 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><u>Compulsory</u></b> REVISION comments	<p><b>ABSTRACT:</b> The use of 3 pairs of brackets depicting values for SC and BW at 6 and 12 weeks is unclear. Suggested revision and perhaps sentence restructuring.</p> <p><b>INTRODUCTION:</b> Line 58: Suggest revising the use of the term 'phenotypic'. The usage throughout the text seem to be used only when describing external body measurements, while not acknowledging that testicular traits is also considered a phenotype ("phenotypic and testicular traits" implies that external measurements are classed as a phenotype and that testicular traits are not). Perhaps the authors should choose the words more carefully, such as referring to the phenotypical traits of the body and testis. Decide upon terminology and stick to it (e.g. 'body conformation', 'phenotypic traits', etc.). Address this in the title as well. Also see Lines 67, 87, Line 158, etc.</p>	<p>Revision, including the restricting of the sentence was done. Brackets were eliminated.</p> <p><b>The omission of extra brackets does not make the meaning of the values more clear. Need more specific annotation of values. We could assume that cm is for SC and kg is for BW, but only week 6 and 12 mentioned, while three pairs of values are given sequentially. Correction is not sufficient.</b></p> <p><b>New corrections: (23.22± 0.86cm, 31.95 ± 2.64kg, and 24.53 ± 1.43cm) and BW (34.72 ± 2.98kg, 26.05 ± 1.35cm, and 37.46 ± 3.44kg)</b></p> <p>All references to the term "Phenotype" in the text, tables and title have been changed to "body conformation" to make the distinction between external body measurements and testicular trait (scrotal circumference).</p> <p><b>Still one oversight: Line 148</b> This change was made as show in Line 147-148 "The means and standard deviations for <b>body conformation</b>"</p>



**SDI Review Form 1.6**

	<p><b>MATERIAL AND METHOD</b> Line 76: Please specify the age of the animals classified as 'pre-pubertal', since these are different among breeds. Please define 'crosses', is it cross between high meat production and low meat production?</p> <p>Line 78: From where did the animals originate?</p> <p><b>RESULTS:</b> Line 135: Is week 0 the first week after quarantine or first week of age? Please specify in materials and methods section the age of animals at which 3-weekly measurements commenced.</p> <p>Lines 146-147: Please report the P-value for classifying the TT level as a 'slight increase'. There seems to be large variation in the TT levels, which is why P-values should be reported. This statement also applies to the 'decline' in TT levels at week 6, which seem to be very similar to week 3. It is suggested that the last sentence in Line 149 is placed before the sentence starting in Line 146 to avoid misleading the reader.</p>	<p>The issue of age was addressed as follows "The <b>body conformation</b> measurements recorded at 3-week intervals (wk 0-131 d, wk 3- 152 d, wk 6-173 d, week 9- 194 d, and wk 12-215 d of age).... <i>Approve information, but think that another annotation would display more clearly than a hyphen, since a hyphen is generally used to indicate a range of values (e.g. 3-12 weeks vs. wk 0: 131 days of age).</i></p> <p><b>Additional changes in lines 94-95"for 12 weeks (wk 0/31 d, wk 3/152 d, wk 6/173 d, week 9/194 d, and wk 12/215 d of age) to reflect the above comments.</b></p> <p>The origin of the animals "singled sourced from a local meat goat producer were used in this study. <i>Approve</i></p> <p><b>(wk 0-131 d, wk 3- 152 d, wk 6- 173 d, week 9-194 d, and wk 12-215 d of age)....</b> <i>Information is given in materials and methods, but would still suggest referring to weeks in terms of the age of the ANIMAL instead of stage of TRIAL. Allows for no ambiguity and easy interpretation.</i> <b>Additional changes in lines 94-95"for 12 weeks (wk 0/31 d, wk 3/152 d, wk 6/173 d, week 9/194 d, and wk 12/215 d of age) to reflect the above comments.</b></p>
--	--	--



SDI Review Form 1.6

	<p>The authors mention that age and climate may affect TT levels, but make no mention of the age and climate of the animals used in this study. Indeed TT levels rise with sexual development (from ~12 weeks of age) and growth of testis, while declining after reaching a peak (peak at ~18 weeks of age). One should also take into account the seasonal reproductive cycle of these animals and their age. Use reference to time according to the age of animals.</p> <p>Lines 151-152: Please reconsider sentence structure so that the values given in brackets are more clearly defined. Suggest mentioning rainy vs. dry, respectively, before giving values.</p>	<p>“with a slight increase into week 3 (<math>8.74 \pm 11.26 \text{ ng/ml}</math>, <math>P = 0.09</math>).</p> <p>Correction incomplete. However, the P-value for the ‘slight decline’ in weeks 6 is not given.</p> <p>See lines 162-163 “Also, there was a decline (<math>P = .11</math>) in TT level at week 6 or 173 d of age</p> <p>“It is speculated that the week 9 peak of serum testosterone levels obtained in this study represents the attainment of sexual maturity (puberty) in Boer male crosses” This sentence was relocated.</p> <p>Lines 168-177: All males in the study were pre-pubertal and were approximately <math>110.11 \pm 20.1</math> days old at the start of the study.</p> <p>The authors did not address these issues. There is no mention of the AGE at which a rise and decline is expected in these animals, only references to the trends of TT levels. The reference to Bezerra (2009) gives TT levels and age on animals, but in relation to environment rather than sexual maturity. Again it would be more suitable to refer to the age of animals rather than the time relative to the start of the trial. This will allow direct comparison of age of animals in other studies (rather than referring back to materials and methods again).</p>
--	--	---



**SDI Review Form 1.6**

	<p>Line 155: check grammar: use 'decline' instead of "declined"</p> <p>Line 159: check grammar: "...a low to moderate correlations..."</p> <p>Line 136: Please define the use of the term 'masculinity'. Is there a set of measurements referred to or one specific measure? The authors did not specify the measure of this term in their own materials and methods, and should therefore define this measure of [9].</p> <p>Lines 167-168: Reference needed.</p> <p>Lines 173-175: use abbreviations for continuity. This also applies to other terms in text where the abbreviation is not used throughout (e.g. Line 158 for TT levels).</p> <p>Lines 175-176: The last fragment of the sentence does not make sense. Possibly referring to another study in young Boer bucks, compared to the study by [12] (or study of adults vs. yong)?</p> <p>Lines 161-162 vs Lines 171-172: SW is slightly negatively</p>	<p>The sentence was restructured as shown in the revised text.</p> <p><b>No revision indicated.</b></p> <p><b>Line 179-180 "TT levels recorded a low to moderate correlation with most of the body conformation traits measured"</b> Also, the season in the study location is neither rain nor dry, but winter, spring, summer, and fall. The study period span early spring and midsummer. Animals were in an intensive production system where seasonal variations in climatic conditions are minimal.</p> <p>Both Lines 155 and 159 grammar issues are resolved in the text. <b>Approve</b></p> <p>Masculinity = <b>(muscle score)</b> <b>Move definition to first usage in Line 47.</b></p> <p>Reference <b>"Coulter and Foote (1976)"</b> <b>Approve</b></p> <p>Abbreviations are now in common use throughout the body of the text. <b>This still requires some attention. For instance throughout the text of the</b></p>
--	--	---



**SDI Review Form 1.6**

	<p>correlated (-0.08) with TT levels, which is correlated with SC (0.18). However, SC is positively correlated with SW (0.33). A discussion of why SC, and not TT, is correlated with SW would be interesting, especially since the correlation between SC and SW seems to have been found in other studies as well.</p> <p>Line 184: It is more correct to use 'scrotal circumference' than 'testicular size', since SC is what was measured in this study. The same for Line 215.</p> <p>Lines 185-187: The results indicate that SC is the best measure to use as tool for selecting breeding animals, rather than TT. The authors are right to suggest a combination of measurements, but when considering the practicality of it and the suggestions to breeders, it should be highlighted that SC seems to be the best measure.</p> <p>Lines 199-200: Revise sentence structure. It would also be redundant to state the well-known fact that testosterone plays a role in reproductive functions.</p> <p>Lines 217-220: Revise sentence and its fragmentation. <b>Accepted</b></p>	<p>manuscript the use of 'TT' or 'serum testosterone levels' or 'testosterone levels' differ. It might be a minor detail, but is necessary for continuity in the style of writing.</p> <p>The use of TT was made more common in the abstract and results portions of the manuscript.</p> <p>The sentence was revised to reflect changes recommended by this referee. <b>Reject change, meaning still not clear due to sentence structure towards the end of the sentence.</b></p> <p>We still think that the option of using a combination of tools (TT levels and SC) will enhance early selection bucks</p> <p>This portion was revised according to suggestions and/or comments of this referee. <b>Where is the additional discussion?</b> Further studies on the activity of testosterone receptors in the caprine testis around and after puberty are needed to better understand the functional role of testosterone.</p> <p>Done. <b>Insufficient correction with some oversights,</b></p>
--	---	--



**SDI Review Form 1.6**

		<p>see comments.</p> <p>Done in the text. <b>Accept</b></p> <p>The sentence was put in there for general readers who are unaware of some basic concepts of male reproductive biology. <b>This revision (corrected sentence in Line 228) conveys the message of the authors better: to give reference to current progress on this subject.</b></p>
--	--	---



## SDI Review Form 1.6

<p><b>Minor</b> REVISION comments</p>	<p><b>INTRODUCTION:</b> Line 37: Grammar – ‘meat animals sire’</p> <p>Line 49: define “linear shape type score”</p> <p>Lines 55-57: Revise sentence structure (especially line 56).</p> <p><b>MATETERIAL AND METHODS:</b> Lines 88-97: Revise sentence structure, with particular emphasis on the use of commas, semi-colons and brackets.</p> <p>Line 89: what is defined as a ‘standard scale’? (e.g. is it a commercial weighing crate?)</p> <p>Line 99: What is the interval for testicular measurements? Might be useful to state that measurements were taken every 3 weeks for 12 weeks in the ‘Animal Management’ section.</p> <p>Line 105: Correct language for ‘blood drawn via’ would be to ‘collect blood by means of’.</p> <p>Line 112: Please restructure sentence, since here the immunoassay is described as being solid-phase and enzyme-labeled (used as adjectives), rather than these techniques being employed within the immunoassay.</p>	<p>Line 39: Changed to breeds of <b>sires</b></p> <p><b>Fourie et al. (2005)</b> did not provide additional definition for “linear shape type score” <b>If this measurement is unknown or not understood, then why use it as reference? We still stand by our earlier observation.</b></p> <p>Done. <b>Reject, no real improvement.</b> <b>Whole paragraph needs revision of the way in which information is given.</b></p> <p><b>Lines 93 – 103 was revised to present the same information in a slightly different format.</b></p> <p>Done. Changed to <b>MTIAHS500 Sheep and Hog Scale System.</b> <b>Accept information, but not format in which information is given (see note in previous comment above)</b></p> <p>Done. <b>Accept</b></p> <p>Done. <b>Accept</b></p> <p>Done. <b>No apparent improvement</b></p>
---------------------------------------	---	--



**SDI Review Form 1.6**

<p><b><u>Optional/General</u></b> comments</p>	<p><b>INTRODUCTION:</b></p> <p>Line 18: End list of breeds with an “and” before “Spanish”, and “goats” after “Spanish”.</p> <p>Line 19: ‘indigenous’ rather than ‘common’ goats?</p> <p>Line 21: Grammar - ‘identify’ rather than ‘determine’; too many adjectives to describe ‘sires’.</p> <p><b>MATERIAL AND METHODS</b></p> <p>Line 107: is -4°C correct?</p> <p>Lines 46 &amp; 39: number format different, please check. Line 39: “10-12 months”; Line 46: “five and seven” &amp; “two and four”; Line 53: “seven to eight months”</p> <p>Line 122: grammar error, “...these intermediate...”</p> <p>Line 127: Report that values given in text is mean +/- SD.</p> <p>Line 142: Place in same paragraph as Lines 135&amp;136 for coherent discussion.</p> <p>Line 144: check journal format for correctness of “(P=.15)”</p>	<p>Done. <b>Accept</b></p> <p>Yes. <b>Accept</b></p> <p><b>No apparent improvement</b></p> <p>Done If samples were frozen only at -4°C, for how long was it stored before analyses? If samples aren’t stored at low temperatures their reliability will decline quicker. Therefore please state storage time. Beacuse of space limitations we did not present this information “The storage times were uniform i: e. Each assay was done at approximately 48 hours after sample collection (wk o, wk 3, wk 6, wk 9 and wk 12).”</p> <p>Done <b>Issue not addressed.</b></p> <p>Done <b>Accept</b></p> <p>Done This is not addressed in the Statistical Analyses section of the Materials and Methods section as requested. <b>Lines 139-140: Descriptive statistics [14]</b></p>
--	--	--



**SDI Review Form 1.6**

	<p>Line 145: suggest placing first set of brackets after 'week 6', rather than placing next to second set of brackets ('week 12').</p> <p>The authors might reconsider the information given by Table 1 and within the text, because the text seem to repeat the information given in the table.</p> <p><b>REFERENCES:</b> Lines 286-287; 241-242; 243-244: Line spacing revision.</p> <p>Referencing format not complete, with some errors in the referencing style. Please see journal referencing style and address these errors accordingly.</p> <p><b>General Comment:</b> The authors presented an interesting study and the scientific content is good. However, the way in which the manuscript was written and presented requires serious attention. Key information that was left out is for instance the age of the animals. Otherwise the authors need to decide upon a set of terminologies and abbreviations, which they should stick to throughout the text. The most serious erroneous use of the term 'phenotypic traits'. Some attention to sentence structure is needed throughout the manuscript, as well as some spelling errors (e.g. body confirmation instead of conformation).</p>	<p>was performed on the data to determined individual buck differences (means and standard deviations) in selected body conformation, testicular traits, and serum testosterone profiles</p> <p>Done No improvement Line spacing changed 1.5</p> <p>Done Accept</p> <p>Done Accept</p> <p>Done</p> <p>No corrections made Please see lines 93 – 95 and 164-165 provided key information on the ages of the animals.</p>
--	---	---