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**A note on growth of some different types of Sudan lambs from birth to weaning.**

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The most common measure of growth is the increase in liveweight during specified period of time. However, various measures of size such as height and length are also used. A combination of liveweight and measures of size is more informative than liveweight alone, because it records the changes in shape which occur during normal growth.

The objective of this study was to determine differences between various types of Sudan lambs with respect to liveweight and body measurements during the preweaning period.

The animals used in the present study consist of 44 male lambs of the same age born at El Huda Sheep Research station. These lambs consisted of 19 Shugor, 15 Dubasi and 10 Watish types.

The lambs were identified soon after birth using plastic ear tags. Birth weights and body measurements were recorded within 24 hours after birth. Lambs were kept with their mothers for 60 days at which time they were weaned. During the preweaning period natural pasture, sorghum straw and concentrate feeds were available for the ewes daily.

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Body weights and body measurements were taken every two weeks until weaning. Body measurements included, body length (point of shoulder to pin bone), heart girth, height at withers and depth of chest. The measurements were taken to the nearest half centimetre.

Statistical analysis used were one-way analysis of variance with unequal subclass numbers (Steel and Torrie, 1980).

### Results and Discussion

Table 1 shows the mean values of birth weights and body measurements at birth for Shugor, Dubasi and Watish lambs. The results of birth weight showed highly significant ( $P < 0.01$ ) differences between the three types. The Dubasi lambs were heavier at birth than Shugor and Watish lambs.

Body measurements at birth showed significant differences between the three types. Shugor lambs significantly ( $P < 0.05$ ) excelled the Dubasi and Watish in body length and heart girth, while Dubasi lambs were significantly ( $P < 0.001$ ) superior to Shugor and Watish lambs in height at withers and chest depth (Table 1).

The present results agree with those reported by El Amin and Sulieman (1979) for Sudan Desert lambs at birth.

When liveweight and body measurements were taken at two weeks intervals starting from birth to eight weeks of age, the results indicate that the Shugor excelled the Dubasi and Watish types in body weight, body length and heart girth. These parameters are usually considered acceptable predictors of growth.

**Table 1: Mean values of traits taken at birth for Sudan Desert lambs.**

<b>Breed</b>	<b>No. of animals</b>	<b>Birth weight (kg)</b>	<b>Body length (cm)</b>	<b>Heart girth (cm)</b>	<b>Height at withers (cm)</b>	<b>Chest depth (cm)</b>
Shugor	19	4.30	25.95	37.10	39.30	12.60
Dubasi	15	4.50	25.60	36.50	41.10	12.70
Watish	10	3.30	23.50	33.30	35.40	13.40
S.E.		0.19	0.37	0.56	1.74	0.35

Table 2 shows the mean values for liveweight and body measurements of Sudan Desert lambs at eight weeks of age. These results also show that the Shugor type excelled the Dubasi and Watish lambs in body weight, body length and heart girth. The mean values of these three traits for Shugor lambs were respectively 16.13 kg, 42.0 cm and 60.0 cm. The Shugor lambs however, were similar to Dubasi in wither height and chest depth. The values of these two characters for Shugor lambs were respectively 56.0 and 20.0 cm. The Watish type is inferior in all liveweight and body measurements from birth to weaning.

This inferiority might be attributed to the inherited small frame size of the Watish type, a fact that agrees with results reported by Sulieman *et al.* (1988).

**Table 2: Mean values of traits measured at eight weeks of age.**

<b>Breed</b>	<b>No. of animals</b>	<b>Live body weight (kg)</b>	<b>Body length (cm)</b>	<b>Heart girth (cm)</b>	<b>Height at withers (cm)</b>	<b>Chest depth (cm)</b>
<b>Shugor</b>	<b>19</b>	<b>16.13</b>	<b>42.0</b>	<b>60.0</b>	<b>56.0</b>	<b>20.0</b>
<b>Dubasi</b>	<b>15</b>	<b>14.33</b>	<b>41.0</b>	<b>57.5</b>	<b>56.5</b>	<b>20.0</b>
<b>Watish</b>	<b>10</b>	<b>11.87</b>	<b>38.0</b>	<b>54.0</b>	<b>50.0</b>	<b>18.5</b>
<b>S.E.</b>		<b>0.95</b>	<b>0.97</b>	<b>1.23</b>	<b>1.09</b>	<b>1.58</b>
<b>P</b>		<b>**</b>	<b>*</b>	<b>**</b>	<b>**</b>	<b>NS</b>

In spite of the fact that the Shugor lambs were lighter at birth, nonetheless they had heavier liveweight and larger body measurements from 2 - 8 weeks of age. Based on the results of this study it is concluded that the maternity care of the Shugor type is far better than that of the other two types as indicated the faster growth rate of lambs during the preweaning period. It is logically recommended that further future studies should be carried out to investigate the performance of these three types after weaning.

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## References

- El Amin, F. M. and Sulieman, A. H. (1979).  
Observations on preweaning growth  
performance and size of desert lambs in  
Sudan. Egypt. J. Anim. Prod., 19 (2): 219 -  
226.
- Steel, R. G. D. and Torrie, J. H. (1980).  
Principles and Procedures of Statistics. A  
Biometrical Approach, 2nd ed. McGraw-Hill  
Book Company Inc. New York, U.S.A.
- Sulieman, A. H.; Sayers, A. R. and Wilson, R. T.  
(1988). Evaluation of Shugor, Dubasi and  
Watish sub-types of Sudan Desert sheep at El  
Huda Sheep Research Station, Gezira Province,  
Sudan. ILCA. 1988 Research Report.

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