**Predication of body weight using body measurement of sekota sheep**

The knowledge of weight estimation in sheep is paramount in sheep production as it is useful in the control and management of the herd during the entire rearing process. It has been used in administering medications, nutritional rationing and marketing of sheep. The prices of animals depend mainly on body weight. In sekota ,don’t have only the large-scale livestock farms have proper weighing scales or bridges and market their animals based on weight. Within the rural communities, proper weighing scales or bridges are neither available nor affordable, but even if they were, it would be inconveniencing and a huge task to carry and assembly them, each time to weigh animals especially during marketing. Middlemen and butchers therefore move around the villages buying animals from farmers whose pricing system is often based on visual appraisal, a practice which does not favors farmers.

**Measurement of linear body parameters have been used to estimate necessary information (like weight and size) in sheep, while other information are estimated by observing certain parameters such as age estimation from the number and shape of teeth (incisors) (P.T. BIRTEEB1, 2012).** **Linear body measurements (LBM) can also be used to assess growth rate, feed utilization and carcass characteristics in farm animals(Brown et al., 1973).**

**According to Essien and Adesope (2003), LBM are divided into two groups; these include skeletal and tissue measurements. Skeletal measurements include all the height and length measurements while tissue measurements include heart girth, chest depth, punch girth and width of hips. Live weights and body measurements taken on live animals have been used expansively for a diversity of**

**reasons both in experiments and in breeding and selection procedures** (P.T. BIRTEEB1, 2012)**. The accuracy of functions used to predict live weight or growth characteristics from live animal measurements is of immense financial contribution to livestock production enterprises. When the producers and buyers of livestock are able to relate live animal measurements to growth characteristics, an optimum production and value-based trading systems will be realized from accurate predictions. This will ensure that livestock farmers are adequately rewarded** **rather than the middlemen and/or livestock product processors that tend to gain more profit in livestock production business, especially in the rural areas of developing countries (Afolayan et al., 2006; Safu et al., 2009).**

**A number of studies have been carried out on linear measurements in several African sheep breeds but little is known about the breeds available in Ghana. It is therefore important to study linear body measurements of local sheep breeds in sekota, because most traditional farmers lack weighing scale/bridge and adequate knowledge to understand its manipulation. Besides, little is known about works done with regards to the local breeds in sekota. This study was therefore undertaken to develop models for predicting the weight of the sekota local sheep at market ages**

* **Objectives of the study**
* **To predicate the live weight using measurements**
* **To evaluate the relationship of body weight and linear measurements**
* to develop a regression equation model for estimating the live weight of sekota sheep using linear body measurements.

* **Materials and methods**

The study will be conducted in dehana asketema, and lalibela

Animal management and methods of data collection

A total of 903 Abergelle goats (664 females and 239 males) will be used. Age and sex will be considered as independent variable that could substantially determine these body traits. The animals will be classified in to two sex groups as male and female and five age groups as 0PPI, 1PPI, 2PPI,3PPI and 4PPI which refer for no pair of permanent incisor (6month-1 year), 1PPI (1-2 years), 2PPI (2-3 years), 3PPI(3-4 years) and greater than 4 Years (Solomon G, 2009).

Collection of data will be focused on recording the sex, age, body weight, body length and height at withers, Heart girth, Rump height, Hip width, Neck length, Neck Circumference, Horn Length, ear length and Tail length (FAO, 2012). LW was measured using a hanging scale(capacity 50 kg). Measuring tapewas used for body measurement. Data on body measurements will be taken with the goats being kept comfortably and quietly at standing position on a flat surface(Hassan and Ciroma, 1991; Khan et al., 2006). Physically healthy and free of signs of disease goats will be included in this study. Pregnant animals will be excluding because pregnancy has effect on some morphometric parameters especially those of the thoracic and rump regions (Yakubu et al., 2011).

**Reference**

P.T. BIRTEEB1, \*. M. (2012). PREDICTION OF LIVE BODY WEIGHT FROM LINEAR BODY MEASUREMENTS OF WEST AFRICAN LONG-LEGGED AND WEST AFRICAN DWARF SHEEP IN NORTHERN GHANA. *Online Journal of Animal and Feed Research*.

Brown JE, Brown CJ and Butts WT (1973). Evaluating relationships among immature measures of size, shape and performance on beef bulls 1; principal component as measures of size and shape in young Hereford and Angus bulls. Journal of Animal Science, 36: 1010-1020

Essien A and Adesope OM (2003). Linear body measurements of N’dama calves at 12 months in a South Western zone of Nigeria. Livestock Research for Rural Development, 15: http://www.cipav.org.co

P.T. BIRTEEB1, \*. M. (2012). PREDICTION OF LIVE BODY WEIGHT FROM LINEAR BODY MEASUREMENTS OF WEST AFRICAN LONG-LEGGED AND WEST AFRICAN DWARF SHEEP IN NORTHERN GHANA. *Online Journal of Animal and Feed Research*.

Olatunji-Akioye AO and Adeyemo OK (2009). Liveweight and chest girth correlation in commercial sheep and goat herds in southwestern Nigeria. International Journal of Morphology, 27: 49-52.

Safu K, Apori SO, Elijah-Mensah A and Oppong-Anane K (2009). Livestock Entrepreneurs from Northern Ghana: Their Motivations and Challenges. Proceedings of the 10th Annual Conference, IAABD, pp. 171- 179.

Afolayan RA, Adeyinka IA and Lakpini CAM (2006). The estimation of live weight from body measurements in Yankasa sheep. Czech Journal of Animal Science, 51: 343-348