

## **A STUDY ON THE IMPACT OF PRE - SLAUGHTER LIVE WEIGHT (PSW) ON THE CARCASS TRAITS OF KANNI GOAT**

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**Abstract:** An experimental study was carried out in the Department of Livestock Products Technology, Veterinary College and Research Institute, Namakkal. The twelve uncastrated male kanni goats were divided into two different weight group basis on their live body weight. The Group I consisting of 6 goats with pre - slaughter live weight ranging from 12-15 and group II consisting of 6 goats with the pre - live weight of above 15 kg and up to 18 kg. The goats were slaughtered by Halal method and its carcass traits were studied. The study revealed that there was significant difference in the meat: bone ratio of breast and fore-shank, loin between ( $P < 0.05$ ) the two groups, however no significant difference was found in the meat: bone ratio of neck and shoulder, rack and leg.

**Keywords:** Pre - slaughter live weight - kanni goat – meat: bone ratio.

### **Introduction**

Kanni goat is one among the three recognized goat breeds in Tamil Nadu. The Kanni goats are widely distributed in virudhunagar, Tuticorin and Tirunelveli districts of Southern Tamil Nadu and act as a major livelihood for small and marginal farmers living in these districts. These goats are reared mainly for meat and the primary by-product is skin. Barring few morphological study, no detailed study on carcass traits were undertaken. Hence, the present study was undertaken to record the effect of Pre slaughter live (PSW) weight on carcass traits and meat: bone ratio in primal cuts of Kanni Goat.

Key words: Pre – slaughter live weight – kanni goat – carcass traits

### **Materials and Methods**

The study was carried out in the Department of Meat Science and Technology, Veterinary College and Research Institute, Namakkal. The 12 intact kanni male goats were divided into two different weight group basis on their body weight. The Group I consisting of 6 goats with pre slaughter live weight ranging from 12-15 and group II consisting of 6 goats with the live weight of above 15 kg and up to 18 kg. The goats were slaughtered by Halal

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method. Bleeding dressing and evisceration were done by the standard procedure. The head was removed at the atlanto-occipital junction and the deskinning was done by case-on method. The parameters like mean percent value of primal cuts *viz.*, Neck and Shoulder, Breast and fore shank, rack, loin and leg were recorded as per the method (ISI :1963). The meat and bone were separated from the primal cuts and the ratio of meat and bone for each primal cuts were recorded. The experimental data generated from this study were analyzed as per the method outlined by Sneath and Cochran (1994).

### **Results and Discussion**

The meat: bone ratio of neck and shoulder of Group-I was 2.39 and Group-II was 2.26. There was no significant difference found between these two weight groups. Whereas Agnihotri and Pal (1997) found significant difference in the Meat: Bone ratio of neck and shoulder cuts in Barbari male goats weighing 18.65 and 24.58 kgs respectively. Tahir et.al (1994) also observed a significant difference in meat: bone ratio of neck and shoulder in indigenous black goats of Iraq weighing of 18.5 kg and 24.5 kg. This difference might be attributed to age, breed and weight differences of the animals.

The mean: bone ratio of breast and fore shank of group-I was 1.60 and that of Group-II was 2.08. The Mean percent values obtained for meat: bone ratio of breast and fore shank between group-I and Group-II were significant ( $p < 0.05$ ). Agnihotri and Pal (1997) recorded a meat: bone ratio of 2.36, 2.30 for weighing 18.65 and 24.38 kg of Barbari male goats, respectively. The present study revealed that both the groups had lesser meat: bone ratio than Barbari male goats.

The mean meat: bone ratio of rack of Group I was 1.83 and the Group II was 2.03 and there was no significant difference found between the Group I and Group II. This study was similar to that of Tahir et al (1994) in indigenous black goats of Iraq. In contrary to the present findings Agnihotri and Pal (1997) observed a significant ( $p < 0.05$ ) difference in Barbari male goats weighing 18.65 and 24.58kg. The difference in present and previous findings might be due to difference in its frame size, age and body conformation of the animals. The meat: bone ratio of loin of Group I and Group II was 2.92 and 2.39, respectively and found the values obtained for meat: bone ratio for loin between group I and Group II were significant. However Tahir et.al (1994), Agnihotri and Pal (1997) observed a non-significant difference in the meat:bone ratio in the loin of indigenous black goats of Iraq and Barbari male goats, respectively. This attributes might be due to the difference in frame size, age, body conformation of the slaughtering animals.

The meat: bone ratio of leg portion recorded in this study was 2.32 and that of Group II was 2.42 and observed non-significant difference between the two weight groups. The present finding was in accordance with the previous findings made by Tahir et al (1994) in Indigenous black goats of Iraq.

**Mean ( $\pm$  SE) values of meat: bone ratio of primal cuts**

Cuts	Group I	Group II	Range	
			Group I	Group II
Neck and shoulder	2.39 $\pm$ 0.11 <sup>a</sup>	2.26 $\pm$ 0.05 <sup>a</sup>	1.98 to 2.67	2.14 to 2.39
Breast and foreshank	1.60 $\pm$ 0.13 <sup>a</sup>	2.08 $\pm$ 0.11 <sup>b</sup>	1.25 to 2.07	1.71 to 2.37
Rack	1.83 $\pm$ 0.25 <sup>a</sup>	2.03 $\pm$ 0.15 <sup>a</sup>	1.21 to 2.73	1.46 to 2.35
Loin	2.92 $\pm$ 0.12 <sup>a</sup>	2.39 $\pm$ 0.17 <sup>b</sup>	2.50 to 3.38	2.15 to 3.22
Leg	2.32 $\pm$ 0.10 <sup>a</sup>	2.42 $\pm$ 0.09 <sup>a</sup>	1.91 to 2.56	2.16 to 2.79

Means with same superscripts do not differ significantly

Means with lower case differ significantly at 5 % level (P<0.05)

**References**

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