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Carcass characteristics of landrace pigs reared under extensive system

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ABSTRACT

Aim: The study was aimed to identify different values of the carcass characteristics at the slaughter age for the indigenous pigs.
Method and materials: Study was conducted on various carcass traits such as live weight at slaughter, carcass weight, dressing percentage, carcass length, back fat thickness and loin eye area in landrace pigs raised under extensive system of production.
Results: The Least square means for various carcass traits were found to be 23.75 ± 0.29kg, 14.03 ± 0.20kg, 58.85 ± 0.24 percent, 49.69 ± 0.38cm, 1.75 ± 0.03cm and 18.98 ± 0.29square centimeters for live weight at slaughter, carcass weight, carcass length, back fat thickness and loin eye area respectively.
Conclusion: It was concluded that the sex of the animal has no significant effect on the various carcass traits studied.

Keywords: Carcass characteristics, economic traits, landrace pigs.

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Introduction

Pig production is an important source of livelihood. The indigenous pigs are medium sized with mostly black in colour. They have small sized ears, long face tapering towards the snout and their body is covered by rough and coarse hairs which are sparsely distributed. They are usually reared for meat. Pork from indigenous pig is more expensive from crossbred pigs especially in urban areas because they are more preferred by the customers.

The economics of pork production depends on the carcass traits and therefore efforts to improve carcass traits are of utmost importance. Objectives of the study beacons on carcass traits such as live weight at slaughter, carcass weight, carcass length, back fat thickness and loin eye area in indigenous pigs. The information generated from the study can be used for development of a suitable breeding plan for improvement of these pigs.

Materials and Methods

The Data utilized for the study were collected from 41 animals that were aged between 6-8months and slaughtered in some weekly markets. Data were recorded on traits as Live weight at slaughter (kg), Carcass weight (kg), Dressing percentage (%), Carcass length (cm), Back fat thickness(cm) and Loin eye area (sq. cm).

Carcass Weight

The weight of the carcass was measured in kg.

Carcass Length

The carcass was first split into two equal halves by cutting from belly to sternum on the ventral side and cutting the vertebral column longitudinally on the dorsal side. The carcass length was then measured as a straight line distance from the anterior edge of the first rib to the front edge of the aitch bone (symphysis pubis).The measurements were taken for each half of the carcass separately and average value was recorded (cm) as the carcass length.

Dressing Percentage (DP)

The dressing percentage was recorded as a ratio of the dressed carcass weight (without head) to live weight and expressed in percentage.

Loin Eye Area (LEA)

The loin eye area is the cross section of *longissimus dorsi* muscle at the position between the10th and

Table 1: Mean ± SE for different carcass characteristics traits of indigenous pigs of Assam

Sex	Live weight at slaughter (kg)	Carcass weight (kg)	Dressing percentage (%)	Carcass length (cm)	Back Fat thickness (cm)	Loin eye area (Sq. cm)
Male	3.97±0.25	14.22±0.17	59.01±0.24	50.40±0.33	1.79±0.03	18.93±0.27
Female	23.53±0.53	13.83±0.36	58.68±0.51	48.97±0.69	1.71±0.06	19.02±0.51
Overall	23.75±0.29	14.03±0.20	58.85±0.24	49.69±0.38	1.75±0.03	18.98±0.29

11th rib which was traced with tracing paper and the area measured with the help of a polar planimeter and recorded as square centimeter.

Back Fat Thickness (BFT)

The thickness of back fat was measured on the half carcass at 3 points as 1st rib, last rib and last lumber vertebra. The measurements were recorded in centiments by use of a scale. The mean value of the three measurements was noted.

Statistical Analysis

The data were classified according to the sex of animal. Statistical analysis of data was done by Least Squares Technique of Harvey (1975).

Results and Discussion

The mean values for various carcass traits as live weight at slaughter, carcass weight, dressing percentage, carcass length, back fat thickness and loin eye area of indigenous pigs were found to be23.75±0.29 kg, 14.03±0.20 kg, 58.85±0.24 percent, 49.69±0.38 cm, 1.75±0.03 cm and 18.98±0.29 square cm respectively (Table 1). Comparable averages were reported by Jogi et al. (1993); Lakhani and Jogi (1999) for dressing percentage.

Values reported by Kalita (1995); Sangma et al. (2000) for carcass lengths were also in accordance with the present finding. Chhabra et al. (1999) and Sangma et al. (2000) also reported similar values for back fat thickness. In contrast to the present study, higher values for live weight at slaughter were reported by Sangma et al. (2000) and Thomas et al. (2016).

Gopinathan and Usha (2011); Thomas et al. (2016) reported higher values for carcass weight. Similarly, Sangma et al. (2000); Gopinathan and Usha (2011) reported higher values for dressing percentage and Thomas et al. (2016) for carcass length. Gopinathan and Usha (2011); Thomas et al. (2016) reported higher values for back fat thickness while Singh et al. (1997) and Thomas et al. (2016) for loin eye area in indigenous pigs. However, compared to the present findings, Gopinathan and Usha (2011) reported lower carcass length and loin eye area in exotic pigs and Sangma et al. (2000) reported lower loin eye area in indigenous pig. The variation in values of different traits with the present finding may be due to difference in breed, location, feeding habit and management practices.

Least squares analysis of variance revealed sex has non-significant effect on all the carcass traits understudy. Similar observation were reported by Jogi et al. (1993) on dressing percentage, carcass length and back fat thickness; Samanta et al. (1995) on dressing percentage; Lakhani et al. (1997) on back fat thickness and loin eye area and Thomas et al. (2016) on back fat thickness and loin eye area in indigenous pigs. On the contrary, Chhabra et al. (1999) reported a non-significant effect of sex on various carcass traits except on carcass length where males were reported to have significantly longer carcass length than females and Thomas et al. (2016) reported highly significant effect of sex on live weight at slaughter and carcass weight and carcass length in pigs where the values were significantly higher in males than females.

Conclusion

It was concluded different values of the carcass characteristics at the slaughter age for the indigenous pigs. It was also found that the sex of the animal has no significant effect on the various carcass traits studied.

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