EVALUATION OF CERTAIN CARCASS CHARACTERISTICS OF LARGE WHITE YORKSHIRE AND DESI PIGS

The carcass characteristics of a particular species of animal vary from breed to breed and between each cross. These variations are based on numerous factors like nutrition, environment and genetic factors. Even though many of the modern technologies currently being used to improve the accuracy of prediction of various carcass characteristics are successful, they still rely on the slaughter weight of the animal. However, the growth potential of exotic breeds is higher than that of country pig breeds and the slaughter weight is taken as an indicator of carcass characteristics like carcass weight, dressing percentage, hot boned meat yield percentage and meat-bone ratio. Comparison of different carcass characteristics between the pigs of different breeds are of great value in small as well as large slaughter houses where scientific and hygienic method of slaughter is practiced. This would help in predicting the dressing percentage and hot boned meat yield percentage of pigs and thereby the profit and also in fixing the price of pigs on live body weight basis. No published data of carcass characteristics on Desi Pigs (Black Country pigs) is available. Therefore, with current perspectives of competitive pork marketing industry and the necessity of profitability, this work is carried out and is aimed at the evaluation of important carcass characteristics of Large White Yorkshire (LWY) and Desi pigs (DP) belonging to different slaughter weight groups.

The slaughter data of 50 each of Large White Yorkshire (LWY) pigs of slaughter weight ranging from 44 to 111 kg and Desi pigs (DP) from 23 to 68 kg were obtained. Following are the parameters taken in to consideration *viz.* slaughter weight, hot carcass weight, dressing percentage, hot boned meat yield percentage and meat-bone ratio. The pigs were reared on concentrate feed in the Centre for Pig Production, Mannuthy.

After the overnight pre-slaughter starvation in the farm, the pigs were slaughtered at the Centre of Excellence in Meat Science & Technology, Mannuthy. The pigs were slaughtered hygienically and humanely. LWY pigs were grouped into four on the basis of slaughter weight, *viz.,* 30 to 50, 50 to 70, 70 to 90 and >90 kg. Similarly, DP were divided into three groups, viz., 20 to 40, 40 to 60 and >60 kg. The carcass characteristics of the different groups in LWY and DP were compared. Statistical comparison of the data was done by ANOVA test (Snedecor and Cochran, 1992).

Certain carcass characteristics of four different slaughter weight groups of LWY pigs such as slaughter weight, hot carcass weight, dressing percentage, hot boned meat yield percentage, meat: bone ratio are presented in Table 1.

The findings showed that the hot carcass weight significantly increased with the corresponding increase in the slaughter weight. There was significant difference in dressing percentage among different weight groups. The pigs above 90 kg did not show any significant difference corresponding to the increase in live weight. The meat : bone ratio values showed a significant increase with the increase in slaughter weight.

The study revealed that hot carcass weight, dressing percentage, hot boned meat yield percentage, meat-bone ratio were favourable and profitable for weight group 70 to 90 kg compared to the other three groups. This is in agreement with Ramaswami *et al.* (1985) and Garcia *et al.* (1994) who reported that the pigs which had higher slaughter weight showed significant increase in carcass characteristics up to 90 kg. The dressing percentage did not show any significant difference between the groups but it decreased above 90 kg. This is in agreement with Linton (1971) who observed that the increase in dressing percentage is up to 100 kg bodyweight only. Therefore, it is ideal to choose healthy LWY pigs of 70 to 90 kg for slaughter to get maximum saleable meat and profit.

Similarly, the same carcass characteristics of three different slaughter weight groups of Desi pigs are presented in Table 2.

All the three groups showed an increase in hot carcass weight which increased in the order of increasing slaughter weight. Similar

Table 1. Important carcass characteristics of Large White Yorkshire pigs

Carcass Characteristics	Live weight group (kg)			
	30-50	50-70	70-90	>90
Slaughter weight (kg)	46.5±2.5	59.98±10.41	76.2±4.4	104.3±5.6
Hot carcass weight (kg)	35±2	44±4.6	54.8±4.16	75±2.4
Dressing %	71.25±0.15 [b]	73±4.56 [ab]	74.82±5.7 [a]	71.93±2.38 [b]
Meat Yield %	55.84±1.3 [bc]	54.5±3.93 [b]	58.4±8.01 [ac]	59.75±1.07 [a]
Meat: bone ratio	8.95±0.35 [a]	9.04±1.12 [a]	10.44±0.80 [ab]	13.23±0.53 [b]

Table 2. Important carcass characteristics of Desi Pigs

Carcass Characteristics	Live weight group (kg)		
	20-40	40-60	>60
Slaughter weight (kg)	31.45±5.56	47.68±5.56	63.57±2.5
Hot carcass weight (kg)	20.82±4.12	33.68±1.93	45.14±2.02
Dressing %	66.38±5.02 [a]	70.3±1.54 [b]	71.03±2.33 [b]
Meat Yield %	48.84±4.20 [a]	53.34±2.92 [ab]	55.46±4.2 [b]
Meat: bone ratio	5.63±1.24 [a]	7.35±0.50 [ab]	8.51±0.73 [b]

is the case of hot boned meat yield percentage which also showed a proportional increase. The slaughter weight, hot carcass weight, dressing percentage and hot boned meat yield percentage, meat: bone ratio of the three groups of Desi groups had showed an increase with increasing live weight. But this increase in carcass characteristics was proportionately higher in 40 to 60 kg weight group only.

Summary

The work is aimed at the evaluation of certain carcass characteristics like slaughter weight, hot carcass weight, dressing percentage, hot boned meat yield percentage and meat: bone ratio of Large White Yorkshire (LWY) and Desi Pigs (DP) belonging to different slaughter weight groups. Statistical analysis of the slaughter data of 50 pigs from each group showed that LWY pigs of the weight group 70 to 90 kg would be ideal for slaughter as the dressing percentage (73.82) and the hot boned meat yield percentage (58.4) were significantly higher than in other weight groups. In the case of DP, the animals in weight group 40 to 60 kg would be profitable for slaughter, since the carcass characteristics like dressing percentage (70.3) and hot boned meat yield percentage (53.34) were significantly higher were only upto 60 kg slaughter weight. On comparison, LWY pigs are more profitable for slaughter than DP.

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