

SP 62 Effect of slaughter weight on growth performance and carcass traits in pigs. Oliveira, E.A., Bertol, T.M., Santos Filho, J.I., Guimarães, A.K., Natel, J.C.C., Sterzelecki, R.J., Scandolera*, A.J. and Warpechowski, M.B. Mestrandos em Ciências Veterinárias – UFPR, Curitiba, PR. Pesquisadores da Empresa Brasileira de Pesquisa Agropecuária (EMBRAPA), Concórdia, SC. Graduando em Zootecnia – UFPR, Curitiba, PR. Instituto Paranaense de Assistência Técnica e Extensão Rural – Curitiba, PR. Docentes do Departamento de Zootecnia – Universidade Federal do Paraná, Curitiba, PR. *ajscandolera@ufpr.br

Efecto del peso al sacrificio en el rendimiento y la calidad de la canal en cerdos

This study was carried out to evaluate the effect of slaughter weight (SW) on growth performance and carcass quality in pigs. It was used 194 females and 196 barrows from Agrocercos PIC line, from 80 kg live weight, housed in two commercial farms, in pens separated by sex, with 10 or 11 animals. The supply of food was restricted (2.8 kg / animal / day) until slaughter at 100, 115, 130 or 145 kg of live weight. The animals were weighed at the beginning of the experiment and one day before slaughter for the calculation of average daily gain (ADG). Carcass dressing percentage (CDP) was calculated by dividing hot carcass weight by SW, multiplied by 100. Twelve hours after the slaughter back fat thickness (BF) and loin eye area (LEA) were measured in the left half part of the carcass, between the last thoracic and first lumbar vertebra, according to the Brazilian Method of Carcass Classification. The drawings were scanned to obtain the LEA and fat area (FA) in full scale by means of specific software. Data were subjected to analysis of covariance, considering the effects of sex, SW (linear and quadratic) and their interactions. There was no interaction between sex and SW ($p > 0.05$). Barrows had higher values of FA and BF ($p < 0.001$) and females had higher LEA and CDP ($p < 0.001$). The ADG, FA, BF and LEA increased linearly with increasing the SW ($p < 0.05$), while feed conversion rate (FCR) decreased linearly ($p < 0.05$). The CDP showed negative quadratic effect ($p < 0.05$). It was observed a moderate relationship between CDP, FA, BF and AOL with SW (r^2 between 31 and 45%) and a low relationship of ADG and FCR with SW (r^2 between 1 and 3%).

Table 1: Analysis of variance and regression of the growth performance traits and carcass traits

Dependent variables	Effect of sex (estimated means at 100 kg SW)				Effect of SW, value/kg)		Model	
	Barrows	Females	Mean	Significance	Linear	Quadratic	r^2	SEM
ADG (kg)	-	-	0.82	NS	0.001**	-	3.46	0.14
FCR	-	-	3.12	NS	-0.004*	-	1.49	0.57
CDP (%)	79.69	80.28	-	**	0.292	-0.001**	31.48	1.76
FA (cm ²)	16.76	13.60	-	**	0.183**	-	45.42	4.51
BF (mm)	13.33	11.49	-	**	0.110**	-	32.55	3.46
LEA (mm ²)	36.21	39.64	-	**	0.311**	-	44.12	7.01

NS=not significant; * $p < 0.05$; ** $p < 0.01$; SEM=standard error of the mean

It was concluded that the slaughter of pigs over 100 kg live weight moderately affects the FA, BF and LEA and that the deposition of fat in the carcass is higher in barrows compared to females. The low relationship between ADG and FCR with SW shows that the adoption of the practice of controlled consumption for pigs with high live weights results in negligible effects on the growth performance of these animals.

Key words: feed restriction, heavy weight pigs, management.

Palabras clave: restricción de alimentación, cerdos pesados, manejo.