BODY SCORE EFFECT ON THE FARROWING INTERVAL IN SOWS

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Introduction

Backfat thickness is the principal production trait in pigs especially in sows. It express their body fat proportion and so presents their body score, which influence the adequacy of sows´ feeding during their reproduction cycle.

Objective

This work is concerned with the influence of the body score in sows on the farrowing interval lenght.

Materials and Methods

The P2-backfat thickness before parturition as well as the P2-backfat thickness decline level during lactation were monitored in 840 sows of three genotypes. Their reproduction potential were divided into groups in accordance with P2-backfat thicknesses as well as parity. The division criterion in sows was the standard division value of the monitored variables.

The following reproduction variables (number of total bor nand alive piglets; their average live resp. weaned weight; litter weight after parturition and the farrowing interval) were assessed using the GLM procedure of SAS (SAS Institute Inc., 2001). Fixed effects of backfat thickness (S_i) and parity (P_j) were used, and differences between the means were tested by Tukey's method. The following model was used $Y_{ij} = \mu + S_i + P_j + e_{ij}$

Conclusions

On the base of the results obtained, it can be stated that backfat thickness level before parturition significantly influenced the subsequent farrowing interval lenght, respectively the weaning-estrus interval. It was found that lean sows showed the longest farrowing interval. When the body score was better, a shorter weaning-estrus interval, respectively farrowing interval (from 159.61 days in the leanest sows up to 146.21 in animals with the highest P2-backfat thickness) was shown. Also, it was found that the farroving interval is influenced by the backfat thickness decline level during lactation. Those animals with marked fat decline showed a longer farrowing interval (151.89 days). Sows with no bacfat thickness decline subsequently demonstrated a shorter farrowing interval (148.99 days) as well as a shorter weaning-estrus interval.

Results

Table 1. Distribution of sows in accordance with level of backfat thickness ante partum and parity.

Group	Indicator	N	Mean	Minimum	Maximum	SD
1	P2 (mm)	39	10,90	8	12	0,119
	Parity	39	4,92	1	10	2,785
2	P2 (mm)	257	15,10	12,5	17	0,129
	Parity	257	4,18	1	13	2,693
3	P2 (mm)	279	19,60	17,5	22	0,139
	Parity	279	4,23	1	13	2,712
4	P2 (mm)	207	24,70	22,5	27,5	0,159
	Parity	207	4,02	1	11	2,620
5	P2 (mm)	47	30,20	28	32,5	0,140
	Parity	47	3,72	1	9	2,123
6	P2 (mm)	11	35,10	33	37	0,164
	Parity	11	3,73	1	8	2,533

Table 2. The influence of the ante partum backfat thickness of sows on its reproduction level of the subsequent litter

Indicator/Group	Groups of sows dividing according to P2												F value	α
	1 (N=39)		2 (N=257)		3 (N=279)		4 (N=207)		5 (N=47)		6 (N=11)			
	μ	SE	μ	SE	μ	SE	μ	SE	μ	SE	μ	SE		
Total piglets born/♀/litter	11,51	0,511	10,87	0,286	10,58	0,283	10,49	0,307	9,94	0,481	10,47	0,888	1,78	0,115
Alive piglets born/♀/litter	10,48	0,484	9,85	0,270	9,81	0,267	9,78	0,291	9,37	0,455	9,77	0,841	0,75	0,586
Ø piglet birthweight	1,22	0,038	1,26	0,021	1,25	0,021	1,26	0,023	1,33	0,036	1,23	0,066	1,51	0,185
Litter weight at birth	12,75	0,653	12,38	0,365	12,18	0,361	12,11	0,393	12,23	0,615	12,17	1,135	0,30	0,912

Table 3. The influence of the body score ante partum on the farrowing interval in sows.

Indicator / Group	Groups of gilts dividing according to P2					
	1 μ	2 μ	3 μ	4 μ	5 μ	6 μ
Farrowing interval (days)	159,61	152,02	149,68	149,01	148,29	146,21

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