RESEARCH REGARDING REPRODUCTION ACTIVITY OF SOWS DURING THE GESTATION PERIOD ANT THE INFLUENCE OF THE MAINTENANCE SYSTEM

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Abstract
The reproduction activity of sows implies the development of the entire technological production process. Within this experiment there have been used biological material taken from the Landrace sows and the Great White males. The maintenance system has an important role on the reproduction activity during gestation period.

Key word: reproduction, maintenance system, sows

INTRODUCTION

The reproductive activity in swine represent de first step for the entire production technology, inducing a continuous, rhythmic and uniform character.

The main factors that influence the reproduction process are: choosing and introducing the youth in reproduction, maintenance and rational exploitation of the breeding, detection of females in oestrus, mating in the right time, knowing and removing the causes that have a negative influence on the swine's fertility.

Sows have a great importance for the reproductive activity and for amelioration, because they ensure normal condition for the evolution of the piglets.

MATERIALS AND METHODS

The study follows the correlation between the maintenance system for sows, gestation period and the results.

The biological material used was composed of Landrace sows in second calving. Seminal material from Great White males was artificially inseminated. The sows were under observation during the entire gestation period until the age of 42 days of piglets. The next features analyzed: fecundity, prolificacy, average birth weight, number of piglets/ sow at 21 days, average weight/ lot at 21 days, number of piglets/ sow at 42 days, average weight/ lot at 42 days.

Number of animals per lot was 8.

A control (C) lot from 8 animals has been used. The animals were kept in common stalls throughout the period of gestation. The first experimental lot L1 was formed from 8 animals kept in individual stalls for the first 8 days of gestation, then in common stalls. The second experimental lot L2 was formed from 8 animals kept in summer stalls. The allocation is presented in table 1.

Table 1

Maintenance period of sows

Character	**Lots**		
	LC	**L1**	**L2**
No. of sows per lot (head)	8	8	8
Keeping in individual stalls (days)	-	18	+
Keeping in common stalls (days)	114	96	-
Summer stalls	-	-	114

RESULTS AND DISCUSSIONS

Regarding the maintenance of sows, the next factors have a bigger impact on the reproduction activity: fecundity, prolificacy, average birth weight less than average weight of piglets at 21 and 42 days. In the maintenance process an import role is held by the quality of feed.

Keeping sows for the first 18 days in individual stalls and than in common stalls, had a increase effect on fecundity compared to the control lot (LC).

The highest prolificacy was obtained in L2 – sows kept in summer stalls, with a result of 9.36±0.25 piglets. Similar results were registered in lot L1. (table 2)

Table 2

Reproduction indices

Index	**Statistical indices**	**Lot**		
		LC	**L1**	**L2**
Fecundity	%	81.00	82.00	98.76
	% to LC	100.00	103.65	100.00
Prolificacy	$x \pm s_x$	8.5±0.30	9.30±0.40	9.30±0.25
	% to LC	100.00	108.40	110.20**
Average piglets birth weight	$x \pm s_x$	1.01±0.10	1.8±0.08	1.075±0.15
	% to LC	100.00	107.90**	105.90**
No. of piglets/ sow at 21 days	$x \pm s_x$	8.0±0.10	8.20±0.17	7.50±0.20
	% to LC	100.00	103.20	92.00
Average piglets weight/ lot at 21 days	$x \pm s_x$	4.02±0.17	4.15±0.18	2.20±0.15
	% to LC	100.00	103.25	104.40
No. of piglets/ sow at 42 days	$x \pm s_x$	8.20±0.20	8.50±0.20	7.90±0.20
	% to LC	100.00	104.20	95.20
Average weight/ lot at 42 days	$x \pm s_x$	8.30±0.50	8.04±0.50	9.26±0.23
	% to LC	100.00	95.50	99.10

** Highly significant

CONCLUSIONS

The prolificacy is influenced by the maintenance system, especially for the animals kept in summer stalls.

Fecundity is positively influenced if the sows are kept initially in individual stalls.

Birth weight presents variations: the best results are registered for sows kept first in individual stalls and then in summer stalls.

Weight and number of piglets are influenced by environmental factors.

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