

INFLUENCE OF HOUSING CONDITIONS ON THE REPRODUCTIVE QUALITIES OF SOWS

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Introduction. Today in pig breeding it is important to study the influence of housing conditions on the productive qualities of pigs. This is due to the fact that reproductive qualities determine the volume of growth and fattening of animals, production indicators of the pig industry [1, 3]. The aim of the research was to study the reproductive qualities of sows of the Ukrainian meat breed depending on the conditions of their keeping on a commercial farm.

Materials and methods. To achieve this goal, the research was selected for the experiment of sows on the principle of analogues, which were divided into 4 groups: I control group - in one machine kept 5 sows; II experimental group - kept 10 heads; III experimental group - kept 20 heads; IV experimental group - kept 30 sows in one machine, in compliance with the standard floor area [2].

Results. Data on the basis of studies on the study of fertility and inbreeding of sows of experimental groups with different methods of retention show that in small group retention, ie sows are kept in one machine with 5-10 heads, the fertility rate was higher by 2-4%, in contrast to a similar rate of sows kept in larger groups, but the difference is not statistically significant. In our opinion, this is due to the fact that after insemination when the sow returned to the machine, where more queens were kept, their movement was more active, in contrast to small group keeping, so the establishment of hierarchical relationships between animals was more active. This fact, in turn, causes a violation of the normal course of pregnancy and, as a consequence, - an increase in idleness. One of the main indicators of sows' reproductive ability is fertility. The largest number of piglets at birth was obtained from animals that during the gestation period were kept in a small group method, if 5-10 heads in one machine. Thus, the indicator of sow fertility - I experimental group was dominated by analogues of II, III and IV groups by 0.4-0.7 heads, or 4-7.2%, with a statistically significant difference ($p < 0.05$), respectively. The average group fertility rate for sows was 9.98 ± 0.33 heads. The birth of dead piglets took place in animals of all groups, but most of them were in sows of III and IV experimental groups, which were kept in the gestation period for 20-30 heads per machine. In terms of groups, the percentage of stillborn piglets ranged from 7.1 to 11.7%, the highest value of this indicator was in sows - IV experimental group. The lowest number of stillborn piglets was characterized by sows of the first experimental group. As a result of studies on the indicator of high fertility, the difference between the animals of the experimental groups

with different numbers of animals in the machines was established, on average, the groups were characterized by a relatively high rate of high fertility - 1.29 kg. Thus, the fertility of sows of group I was 1.36 kg, and probably exceeded this indicator of sows of group III by 9.7% ($p < 0.01$), and sows of the fourth experimental group by 12.4% ($p < 0.001$). According to the number of piglets at weaning at 30 days, a similar trend was observed, sows kept in one machine for 20-30 heads were inferior to sows of groups I and II. Thus, sows of group I exceeded analogues of group III by 0.9 heads ($p < 0.05$). The difference between groups I and IV in favor of the first group was 1.3 heads ($p < 0.001$). Large-fruited and multi-fertile animals significantly affected the live weight of piglets at weaning. Thus, a relatively higher fertility and a larger number of live piglets obtained from sows of the I and II experimental groups led to a higher live weight of piglets at weaning. Regarding the indicator of live weight of piglets at weaning at the age of 30 days, a similar trend was observed, the average value of this indicator in terms of experimental groups was equal to - 5.76 kg. The greatest value of this indicator had sows of the I experimental group - 6.20 kg. Regarding the indicator of preservation of piglets, we note that on average in groups this indicator was - 91.7%, but the highest value of this indicator was sows of group I - 94.2%. To summarize the above research results and determine the most productive by a limited number of traits of reproductive qualities of sows in different ways of keeping presented for the study, the index of reproductive qualities (I) of sows was determined. The index of reproductive qualities was the highest in sows of group I, which were kept for 5 heads in the machine during the gestation period, and was - 35.60 points.

Conclusions. Thus, the analysis of the obtained data shows that small group keeping of sows during the gestation period increases fertility, high fertility and, accordingly, the weight of piglets at weaning compared to animals kept in larger groups.

Higher fertility rates of animals of group I indicate that more favorable conditions were created for intrauterine development of piglets than in sows of other groups. These conditions, of course, affected the reduction of embryonic mortality, stillbirth and subsequently led to increased growth of piglets.

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