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Modern pork production technologies are aimed at obtaining maximum productivity data, which are an indicator of the effectiveness of pig industry in general.

The aim of the research was to develop a biotechnological method of increase of prolificacy of sows with 1 and 2 farrowing, using biologically active medicines of the neurotropic-metabolic action – Glyutam 1M and Nanovulin-BA.

On the day of weaning, all the experimental sows were injected with vitamins Introvit in a dose of 10 ml/head. The sows in the research groups received Glutam 1M and Nanovulin-BA for three days in the morning in stern balls, which contained 100 grams of feed and 20 ml of medicine. The sows of the II and III experimental groups received Glutam 1M starting from the day of weaning. Nanovulin-BA was fed to the sows of the III and IV research groups at 0-2 day of sexual cycle. The females of the control group were fed by 20 ml of saline during these periods of reproductive cycle.

In the II and III research groups the live weight of hypertrophous and normal piglets was bigger compared with the control one by 7.7%, 9.2% and 9.7%, 8.6% respectively. The weight of hypertrophous animals of the I group exceeded data of the control one within the error, while the weight of normal piglets was higher by 11.5%.

The increase in live weight of hypertrophous and normal piglets of sows in the II and III research groups contributed to the significant increase of the total weight of newborn piglets by 26.3% and 26.3% (in comparison with the control group). In the I research group, it increased by 27.1%, mainly due to normal piglets' weight and therefore was not likely.

The influence of Glyutam 1M and Nanovulin-BA on the prolificacy of sows was analyzed, taking into account that the experimental groups were formed from sows with two different farrowing – 1 and 2.

Live weight of the hypertrophous piglets of the sows from the I group after the 1 farrowing was higher by 8.8%, compared to animals which had 2 farrowing. Live weight of hypertrophous and normal piglets in both subgroups was almost at the same level, while the total weight of piglets from the animals with 2 farrowing was higher than from females with 1 farrowing by 10.7%.

Total weight of newborn piglets from the sows in group III with 2 farrowing increased compared to the animals with 1 farrowing by 16.1%.

Comparative analysis of the influence of sows' age on live weight of piglets showed, that the live weight of normal piglets in the I experimental group with 2 farrowing was higher by 11% compared to the control one of the same age (with 2 farrowing). Total live weight of piglets in the I experimental group with 1 and 2 farrowing was higher by 23.0% and 26.8% compared to the control group of animals of the same age.

In the II experimental group live weight of normal piglets from sows with 1 and 2 farrowing increased by 11% and 7.4% respectively in comparison with

animals of the same age in the control group. Total live weight of newborn piglets in the II experimental group increased by 28.0% and 24.8% respectively compared to the animals of the same age of control group (1 and 2 farrowing).

The live weight of hypertrophous piglets from experimental group III (2 farrowing) was higher by 15.1%. The injections of biologically active medicines during insemination of sows in the group III contributed to the increase of live weight of normal piglets (sows with 1 and 2 farrowing) compared with the control one by 11% and 8% respectively. In the III group of animals with 2 farrowing the total weight of newborn piglets increased significantly by 29.6% compared to control animals of the same age (with 2 farrowing).

Analyzing live weight of hypertrophous piglets it should be noted, that in the control group of sows with 1 farrowing this category of piglets was absent. While control females with 2 farrowing and animals of the research group, regardless of their age, showed, that the live weight of hypertrophous piglets was almost at the same level.

Comparative analysis between groups showed, that the live weight of hypertrophous and normal piglets in the I experimental group was higher in comparison with the control one by 14.1% and 11.5% respectively. Weight of hypertrophous piglets from females of the I experimental group was the same compared to the control one. While the weight of normal piglets increased by 10% compared to the control group.

Injections of theneurotropic-metabolic medicines to the sows of the II and III research groups helped to increase the prolificacy by 15.1% and 9.2% and 12.2% and 9.9%. The live weight of normal piglets in the II and III research groups was higher by 8% and 9.2% respectively.

In this way, the injections of biologically active medicine Glyutam 1M for 3 days after the weaning cause an increase in live weight of newborn piglets by 14.1%. Feeding females with Glyutam 1M and Nanovulin-BA at one time helped to increase live weight of piglets by 13%, and the injections of Nanovulin-BA only – by 11.8%. Injections of neurotropic-metabolic medicines with biologically active action on different schemes of their use cause the tendency to increase the live weight of both sexes embryos in the prenatal period up to 2 kg for sows of the 1 and 2 farrowing.

***Keywords:* sow, age, gender, medication, Glutam 1M, Nanovulin-BA, piglets, live weight**