

*I. V. Khatko, A. O. Onyshchenko, V. O. Vovk, T. M. Konks. Comparative study of fat deposition regularities in the different parts of young pigs' trunk of Large White and Mirgorod breeds*

The modern state of social-economic processes development demands increasing the level of food safety of the state, especially providing population by the high quality foods of domestic production, specifically by pork.

One of criteria for estimating pigs' meatness is determining the fat thickness in different points of a trunk. The informative content of measuring in different parts of a trunk is different and it needs detailed study.

The fat thickness is the most common as trait for pigs' meatness in the practice of pig breeding because it has high correlation with meat yield in carcasses.

**The aim of our research** was the comparative study of fat deposition regularities in different parts of a trunk of Large White and Mirgorod pigs in different age periods.

For conducting researches 24 pigs of both breeds with average live weight about 40 kg and at age not more 4 months were selected. The fat thickness was measured at live animals using ultrasonic device Draminski in such points: on withers, the level of the 6-7<sup>th</sup> thoracic vertebra, the level of the 1<sup>st</sup>-2<sup>nd</sup> loins vertebra and sacrum. Measuring the fat thickness was carried out at the age of 4, 5, 6, 7 and 8 months.

During researches it was carried out the statistical processing of obtained material. Reliability of obtained indexes of productivity was determined. Regularities of formatting fat thickness and fat deposition rate depending on the age were studied.

For the results of researches it has been studied and compared economically valuable traits of the most spread domestic pigs of Large White and Mirgorod breeds.

By comparative study of growth and development of young pigs of experimental and control groups it has been found that animals of Large White breed differed by lesser fat deposits in all points of measuring. Thus, at 6-months' age they had lesser thickness of fat in all parts of a trunk. More expressed tendency was at withers and the level of the 6-7<sup>th</sup> thoracic vertebra, at that in the first case the difference between groups was reliable ( $p < 0.01$ ). The fat deposition rate in young pigs of both breeds was not the same in different points of measuring along a trunk.

Above mentioned tendencies were intensified with the age. Purebred animals of intrabreed type LW-1 at 7-months' age had reliable less thickness of fat in comparison with the control group: on withers ( $p < 0.01$ ), at the level of the 6-7<sup>th</sup> thoracic vertebra, the level of the 1<sup>st</sup>-2<sup>nd</sup> loins vertebra ( $p < 0.05$ ) and on sacrum ( $p < 0.01$ ). In future, according to economic and scientific expediency, the animals of Mirgorod breed were excluded from the experiment. Concerning Large White breed, the researches were finished when animals were at 8 months' age.

The process of fat deposition in Large White pigs was less intensive in comparison to Mirgorod breed.

The highest relative rate of fat thickness increase in both breeds was observed at the level of the 1<sup>st</sup>-2<sup>nd</sup> loins vertebra.

By statistical processing of the obtained materials it has been found that the difference of average arithmetical indexes (as absolute and relative) between the experimental and control groups during growth and development had distinct tendency to increasing in all points of measuring. The reliability of the difference between the averages in groups with the age of animals increased. A higher reliability of data was obtained at measuring of the front parts of a trunk of pigs at the level of the 6th-7<sup>th</sup> thoracic vertebra and on withers.

The carried out researches at all points of measuring give the reason to confirm that the fat deposits of Large White pigs are less comparing to Mirgorod breed.

**Conclusions.** 1. Carcasses of animals of intrabreed type ULW-1 are comparatively more technologically suitable and economically beneficial for agricultural proceeding industry.

2. Animals of intrabreed type ULW-1 at 7-months' age had reliable less thickness of fat in comparison with the control group: on withers, at the level of the 6-7<sup>th</sup> thoracic vertebra, the level of the 1<sup>st</sup>-2<sup>nd</sup> loins vertebra and on sacrum.
3. The process of fat deposition in Large White pigs was less intensive in comparison to Mirgorod breed.

**Keywords:** back fat, breeds, thoracic vertebra, young pigs, selection, correlation