The examination aims to study the transaminase activity in the blood of pigs different in breeds when fattened to different live weights.

The examinations were carried out on the experimental training farm «Tulinskoye» under Novosibirsk State Agrarian University. Large White, Landrace and Kemerovo pigs were the objects to examine. The animals were selected by the principle of analogues with regard to origin, breed, productivity and live weight. The pigs were divided into three groups and kept following the technology for complexes and farms. The animals were fattened to 100, 120 and 140 kg. The blood to examine was taken from aural vein. The aspartate-aminotransferase activity was determined in the blood serum of the pigs.

The data obtained were processed statistically with the package of applied software Statistica 6 and Excel.

The experiment identified the differences among the breeds for the activity of aspartate-aminotransferase in the blood serum of the animals. When fattened to 100 kg live weight, the activity of the serum aspartate-aminotransferase was found to increase by 27,27% ($p < 0,001$) in the Kemerovo pigs versus the Large Whites. The experimental data testify to the enzyme activity decreased with the animals fattened to 120 and 140 kg.

Based on the data of the examinations carried out, it can be concluded that the activity of aspartate-aminotransferase may be employed in the evaluation of pigs' productivity.

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PHOSPHATASE ACTIVITY OF BLOOD IN PIGS FATTENED TO DIFFERENT LIVE WEIGHTS

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The improvement of breeding methods is based not only on the investigations of economic traits of animals, but on the study of biochemical indexes that determine the formation of productivity.

Enzymes are highly specialized proteins that are used by living organisms to run a great many interrelated reactions. Phosphatases are enzymes referred to esterases. One can discern alkali and acid phosphatases. Esterases catalyze numerous processes in the organism.

Alkaline phosphatase (phosphohydrolase of monoesters orthophosphate, C.F. 3.1.3.2). Molecular weight of the one is confined to 80–200 thousand Daltons. Alkaline phosphatase is metal-containing enzyme referred to non-specific phosphatases hydrolyzing phosphoester bonds.

Catalytic effect of the enzyme on lipid and carbohydrate metabolism is shown. This enzyme is involved in the processes of carbohydrates and lipids resorption in small intestines. It activates adsorption of glucose by kidney nephrons. The effect of alkaline phosphatase on the reactions of synthesis of fructose out of glucose is identified. The enzyme is involved in the reactions of phosphoric acid docking and splitting off in nucleic acids, carbohydrates, esters, etc.

The investigation aimed to study the activity of alkaline phosphates in pigs of different breeds under fattening to 100, 120, and 140 kg.

The experiment was carried out on the experimental training farm "Tulinskoye" under Novosibirsk State Agrarian University. Large White, Landrace and Kemerovo pigs were the objects to examine. The animals were selected by the principle of analogues with regard to origin, breed, productivity and live weight. The pigs were divided into three groups and kept following the technology for complexes and farms. The animals were fattened to 100, 120 and 140 kg. The blood to examine was taken from aural vein. The activity of alkaline phosphatase in the blood serum of the pigs was determined [4]. Statistical processing of the data obtained was done with the package of software MS Excel and Statistica 6.

The data of the experiment identified interbreed differences for the activity of alkaline phosphatase in the blood serum of the pigs. It was marked that the Kemerovo breed surpassed the Large White by 22,42% ($p < 0,001$) for the activity of the enzyme studied in blood when the gilts fattened to 100 kg. The Landrace occupied an intermediary position between the Large White and Kemerovo breeds. The enzyme activity of blood was determined to decrease with fattening to different live weights.

The data obtained allow to apply the phosphatase test to the estimation of productive traits of pigs.

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THE CONTENT OF GENERAL LIPIDS IN BLOOD OF GENOTYPICALLY DIFFERENT PIGS

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Nowadays, lipidology is a rapidly advancing branch of biochemistry. Achievements of the branch are widely applied to biology, medicine and livestock-breeding. Most lipids are several molecules bound with each other and not referred to highly polymeric substances.