

So, the linear wounds area and the traumatic surface at the ointment application from the «Brassica Napus L. Schrot» have been borne the reliable and the authentic character, in comparison with the control. The «Symphytum» ointment reliably and authentically has been accelerated the regeneration, only from the fourteenth research day. So, the «Brassica Napus L.» action reliably and authentically has not been differed from the «Symphytum» ointment effect, in the comparison aspect. In the control test and the experiment, the complete wounds – healing has been on the twenty – second research day, against the background of the «Symphytum» ointment – on the eighteenth day, at the «Brassica Napus L.» ointment application – on the sixteenth day. Thus, they have registered, that the animals' wounds have been dried and without any suppuration at the «Brassica Napus L.» ointment application, throughout the whole test and the experiment.

So, the «Brassica Napus L.» has been accelerated the skin regeneration process for the 27%, in comparison with the control and for 11%, with respect to the comparison preparation – the «Symphytum» ointment.

Thus, the «Brassica Napus L. Schrot» is being contained the quite valuable biologically active substances: the 8,8% polysaccharides, and the 11,65% amino acids. So, the «Schrot» dried extract is being possessed the antibacterial, the antimicrobial and the wound – healing actions, it is being related to the safe substances, that it is allowed to be predestined on the «Brassica Napus L. Schrot» further research prospects and the subsequent fruitful perspectives.

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THE CHANGE IN THE LEVEL OF TRIGLYCERIDES IN BLOOD SERUM OF PIGS IN ONTOGENESIS

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Free radical processes play a big role during adaptation with stress reactions involved as its initial stage. Stress condition in animals can develop

in connection with certain periods of ontogenesis («physiological stress»). Regarding individual development of animals, their birth and early postnatal periods are stress situations conjugated with basic changes of oxygenic regime of their organism. This is followed by the change in running of free radical reactions, lipids peroxidation.

Atmospheric oxygen is used as electrons acceptor in vital processes of an organism, herewith, oxygen metabolites forming. The free radical oxidation is a regular metabolic process, free radicals, when in minor quantities, are referred to signal molecules. When hyper-produced, radical-superoxide becomes an initial step of a multi-stage process (metabolic cascade) that results in oxidative stress under which oxygen metabolites become high toxic for biological systems. They cause lipids peroxidation, have a damaging effect at tissue and cell level.

Investigations were carried out at Closed Joint Stock «Landrace» in Novosibirsk region. Landrace pigs were the objects of investigations. The animals were selected and grouped by the principle of analogues with regard to origin, breed, productivity, age and live weight. The pigs were kept following the technology for complexes and farms. The blood to examine was taken from aural vein. The content of triglycerides was determined in the blood serum of pigs aged 1, 2, 3, 4, 5 months. The data obtained were processed statistically with the package of applied software Statistica 6 and Excel. The experiment identified the highest concentration of triglycerides in the blood serum of pigs aged 1 month (45,16%, $p < 0,001$). This testifies to lipolysis running in Landrace pigs in early periods of ontogenesis.

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THE CONTENT OF FREE FATTY ACIDS IN BLOOD SERUM OF PIGS IN DIFFERENT PERIODS OF POSTNATAL DEVELOPMENT

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Continuous or extremely intensive stress causes the activation of “primary toxins”. Active forms of oxygen are referred to those. Increased intensity of free radicals oxidation gives rise to the formation of multiple free radicals causing peroxidation of lipids and development of oxidative stress. Activated oxygenic metabolites (superoxide radical, hydrogen peroxide, etc.) have a damaging effect at tissue and cell level.

Lipids are a major source of energy for a newborn. Lipolysis activation results in a considerably increased concentration of free fatty acids. They are substrates for lipids peroxide oxidation and determine its intensity.

The lipids peroxidation processes run at a maximal rate in animals during the first days of their life. The transition of organism to the aerobic type of respiration encourages oxygenation of tissues. Proviso, the increased generation of oxygenic metabolites results from adaptive reactions and this activates the processes of the peroxide oxidation of lipids.

Investigations were carried out at Closed Joint Stock «Landrace» in Novosibirsk region. Landrace pigs were the objects of the investigations. The animals were selected and grouped by the principle of analogues with regard to origin, breed, productivity, age and live weight. The pigs were kept following the technology for complexes and farms. The blood to examine was taken from aural vein. The content of free fatty acids was examined in the blood serum of the pigs aged 1, 2, 3, 4, 5 months. Statistical processing of the data was done with the package of applied software Statistica 6 and Excel.

The maximal content of free fatty acids was found in the blood serum of one month piglets (59,66%, $p < 0,001$) that testifies to lipolysis present in the pigs in early postnatal development.

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AGE CHANGES OF LIPIDS METABOLISM INDEXES IN PIG BLOOD

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To study the characteristics of lipid exchange at early stages of pigs' postnatal development is crucial and timely for pig-breeding.

The content of lipids and their fractions in blood depends upon genetic factors, physiological status, feeding and age of pigs.

Lipids perform various functions in vital activity of the organism, structural and energetic functions being the basic.

Lipids are not only the source of power; they influence the reproductive function and productivity.

Lipids are part of cell membranes; they form ultrastructure of biological membranes and ensure their specificity. Main functions of the biological membranes are those of recognizing, transporting, fermentative and others. These functions depend upon different structural lipids available in the membranes.

Lipids are differentiated into two main groups: structural and reserve. Cholesterol is a structural lipid.

Cholesterol is referred to sterols, derivatives of cyclopentanhydrophenanthrene. As an intermediary compound, it is involved in the synthesis of bile acids, vitamins of group D and sex hormones. It is a structural component of biological membranes. Cholesterol and its esters with long-chained fatty

acids are important components of plasma lipoproteins and outer membrane of a cell.

In membranes, cholesterol together with glycolic lipids and phospholipids form complexes. Membranes of some species are distinguished by the presence of different classes of lipids and their quantitative content which depends upon genetic factors. A great amount of cholesterol is found in the membranes of erythrocytes of myelinic fibers, less cholesterol is in mitochondrial membranes. Permeability of a certain type of membranes goes down with the growing concentration of cholesterol in the lipid biolayer.

Cholesterol is found in the organism both in free and etherified forms. Lipoproteids combined with cholesterol in complexes are of great value when cholesterol transported.

Investigations were carried out at Closed Joint Stock «Landrace» in Novosibirsk region. Landrace pigs of different genotypes were the objects to investigate. The animals were selected and grouped by the principle of analogues with regard to breed, productivity, live weight and age. The pigs were kept following the technology for complexes and farms. The blood to examine was taken from aural vein. The content of cholesterol was determined in the blood serum of the pigs aged 1 month. The data obtained were processed statistically with the package of applied software Statistica 6 and Excel. According to the data of the investigations, it was identified that in List 217 progenies aged 1 month, the amount of cholesterol made up 15,18% ($p < 0,001$) against minimal values.

The experimental data confirm the possibility to employ the lipids metabolism indexes to forecast economic traits of pigs at early age.

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EXAMINATION OF THE LEVEL OF SULFHYDRYL GROUPS IN PIG LIVER MITOCHONDRIAL FRACTION

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The pigs of industrial complexes are affected by many artificial stress-factors caused by man. The stressors give rise to peroxide oxidation of lipids, its level being determined by the formation of radicals, destruction of membrane and mitochondrial structures and condition of anti-oxidant defense. Thiols are referred to anti-oxidants as they possess anti-radical and anti-peroxide properties. Some sulfur containing low molecular compounds contain SH-groups, cystin being referred to the compounds.