THE CONTENT OF NUCLEIC ACIDS IN TISSUES AND PIG PRODUCTIVITY

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New methods to evaluate animals require the study in interior indexes in relation to meat traits.

The improvement of breed and productive traits of pigs is largely determined by biochemical tests which reflect metabolism intensity in animal organisms.

Nucleic acids accomplish the storage and transfer of genetic information and are involved in realization of the information through the synthesis of all proteins.

Methionine plays an essential part in protein metabolism; it is the only amino acid that initiates the protein synthesis.

Proteins provide multiversity of functions in organisms and phenotypic characters. They are molecular instruments which accomplish the realization of hereditary information. Proteins make up about a half of dry weight of living organism. Muscular tissue contains around 72 – 80% water, dry matter largely composed of proteins making up 20 – 28%.

The experiment was carried out on the experimental training farm “Tulinskoye” of Novosibirsk State Agrarian University. The object of research was Precocious Meat pigs (SM-1) which are well adapted to local natural and climatic conditions.

The research was done in the 6 month animals in control fattening. The pigs were kept according to the technology provided for complexes and farms. The data was processed statistically through computer programs MS Excel 2000, Statsoft Statistica 6.

The progeny from 6 boars of Precocious Meat breed were under control in the experiment. Individual variation of methionine content in blood serum, DNA, RNA and liver protein in progenies from different boars were explored. Liver was chosen for the exploration because it was regarded as the organ with the expressed function of protein synthesis.

It was established that the pigs different in economically valuable characters differentiated by the explored biochemical indexes. The animals with improved meat productivity were revealed to have higher DNA and RNA content. Protein level in liver was determined to vary with meat traits and to be higher in the individuals with higher ham weight (11.06%, $p<0.01$). Gilts of longer carcass exceeded those of the same age for the concentration of methionine in blood serum (8.73%, $p<0.05$).

The higher content of DNA, RNA, methionine and protein was identified in the blood serum and liver of the progenies from the Svetly 1704 and the Soviet 1618 and this testifies to the higher intensity of protein biosynthesis in the tissues of the pigs with improved productive traits.

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THE FEATURES OF THE 2ND TYPE DIABETES MELLITUS IN ABORIGINAL POPULATION OF THE NORTH

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In the Republic of Sakha (Yakutia) the 2nd type of diabetes mellitus (DM 2) is the most wide-spread pathology of endocrine system. (P.M.Ignatiev, M.A.Fedorova, 2004). For the last decades DM 2 disease incidence has increased more than 2 times. Considerable and fast growth of DM 2 disease has been observed especially among aboriginal population of the North. Undoubtedly the spread of this "metabolic" epidemy is closely connected with urbanization of the North, deformation of traditional food of natives and other factors. Nowadays observation of indigenous inhabitants with DM 2 gives us an opportunity to analyze the features of their disease process, compensation, late complications etc.

Materials and methods. We examined 68 Yakuts (49 women and 19 men) with DM 2 who