

Introduction

The realization of the genetic potential under the conditions of agricultural pig farms depends upon the adaptation possibilities of an animal's organism which is characterized by the imperfection of the compensated mechanisms in early age. Starting from 5-day age the piglets from 5- to 45-day old were additionally fed with "Biovir" additive in the form of dry powder with the calculation of 10 mg/kg of the body weight per day. Technological stress associated with animals weaning on the 28th day of piglets' life was complex and included piglets weaning, formation of groups from different clusters.

Material & Methods

The research material was constituted by the blood selection before the morning feeding of animals through the puncture of vena cava cranialis on the 15-th day of life (preparation period), one day after the ablactation (which corresponded to the alert phase, according to H. Selye), 7, 20 and 60 days after the ablactation (which corresponded to different resistance development periods according to H. Selye). All blood components were conducted using the Hematology Analyzer MITIKH-18, (Switzerland). Total protein concentration of the blood serum was determined with the help of refractometer RDU. Protein fractions determination (albumen, $\alpha 1$ -, $\alpha 2$ -, β -, γ was conducted using the globulins) vertical microelectrophoresis in the polyacrylamide gel tubes.

PHYSIOLOGICAL MECHANISMS OF THE REGULATION OF ERYTHRON AND PROTEI PIGLETS AT THE DEVELOPMENT OF ADAPTATIVE SYNDROME

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After one (anesthetic stage) and 7 days (beginning of G.Selle's resistance stage), after the echoing, the adaptation of the erythron system was shown by a decrease in the number of red blood cells on the contrary of increasing the mean corpuscular volume and hemoglobin indicating the inhibition of erythrocytopoze with simultaneous macrocytosis, and a decrease in mean Corpuscular hemoglobin concentration for 14.0-13.0% that indicated hypochromia. In these stressful periods, the catabolism of protein substrates was discovered, the redistribution of albumins between blood and tissues in the form of a decrease in the total protein content by 6.1-7.1% due to albumin by 14.8-10.0%, and the deficit of the humoral link of the immune response due to reduction of γ-globulins by 29.9-18.7%. In the later stages of the resistance stage (after 20 and 60 days after weaning), there was a stabilization of erythrocytic indices and the development of anisocytosis in the form of an increase in red cell distribution width by 19.0%, with a simultaneous decrease of 6.1% of the total protein content, redistribution of its fractions in the side of the growth of y-globulins by 18.4%.





Results

Conclusions

It can be concluded that the adaptation of the system of erythronine piglets at the stage of anxiety and the initial stage of resistance was manifested by a reduction in erythrocytopoze, macrocytosis and hypohromy with subsequent stabilization of erythrocytic indices and signs of anisocytosis, whereas in the protein metabolism system a reduction in the total protein content was found due to albumins and y globulins from further increase of hepatocytic and immune proteins at the later stages of the implementation of the adaptive syndrome. An effective prolonged way of preventing disorders in the system of erythron and protein of extramarital piglets was the feeding of the additive "Biovir", which stimulated the intensity of oxidative-reducing processes and the exchange of proteins.