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PHYSIOLOGICAL PROPERTIES OF THE RABBITS BODY TO HEAT STRESS

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Heat stress is a severe challenge for the rabbit industry and one of the main problems with a negative impact on the growth, reproduction and quality performance of rabbit products. The current study investigated the effect of low temperature on the physiological indicators of the rabbits body. In the pre-experimental period, the animals were adapted to new maintenance conditions within 30 days, after the book followed the experimental periods I and II within 30 days with the application of low temperatures of a moderate stressogenic intensity 0-3 ºC and +6-8 ºC. Throughout the experimental period, the animals were monitored through daily clinical examination. The results obtained of the study denote that the body temperature in rabbits in all pre- and experimental periods is within the limits of the physiological norm, which denotes about the maintenance of homeostasis through various mechanisms of regulation. The action of low temperatures influences the excretory metabolic processes that established verified increased levels at the temperature of 0-3 ºC in the experimental batches ($p<0.05$), and at the temperatures of +6-8 ºC there were significant changes in the decrease of these processes ($p<0.05$). The value of these studied parameters varies depending on the vasoconstriction of blood vessels, increased blood circulation to the organs involved in excretion, including increased metabolism by influencing the animal's requirements for drinking water consumption and, implicitly, urination. The low temperatures produced variations in the heart rate of the animals by increasing ($p<0.05$) to 0-3 ºC in both experimental batches, and therefore this process can be perceived as a stressor, and the stress response may include an increase in heart rate, i.e. a reaction of adaptation of the body to hypothermic conditions is triggered. Temperatures of +6-8 ºC, on the contrary, decreased ($p<0.05$) the heart rate of the animals in both experimental groups, compared to those in the control group, but within the limits of the physiological norm which, possibly, was produced by a lower metabolic rate that determined a decrease in the oxygen requirement of the tissues and, respectively, a reduction in the heart rate. Thus, by applying low temperatures to the experimental herd of rabbits, it is possible to maintain the properties of the thermoregulation, cardiovascular and excretion systems at optimal physiological values through the influence of the thermal factor.

***Keywords*:** *rabbit, heat stress, physiological metabolism.*