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CLINICAL AND HEAT RESISTANCE INDICATORS OF DAIRY COWS

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Abstract:

Cows use physiological indicators, characterizing internal organs, such as body temperature, frequency of heart rate and frequency of breathing, izuchameye kak optimal indicators for internal research, and physiological and biochemical processes, originating in the organism, yavlyayutsya factors, characterizing health status and ego effectiveness.

Keywords: Cow, blood, clinical, heat endurance, index, respiratory carbon dioxide and temperature,

ENTER.

To determine the degree of adaptation of cows to hot climatic conditions, the study of their heat resistance index is of great importance. The study of the milk yield of cattle in hot climate conditions and their clinical and heat tolerance indicators is important in assessing the degree of adaptation to the conditions being kept. In this context, we studied the clinical indicators of cows in the experimental groups depending on the seasons. Because it is important to fully use the genetic potential of cows that are well adapted to local conditions and bring it to the surface. Based on this, we studied the index of heat resistance of cows due to the increase in the amount of hashaki beet, and the obtained results are presented in Table 1. The coefficient of endurance of cows in heat was calculated by the method of Yu.O. Rauschenbach (1975) according to the following formula:

IHRC (index heat resistance coefficient)=100 - 20(T1 - T2) + 0.1(40 - t2),
CHR- coefficient of heat resistance,
T1-Body temperature in a neutral state
T2-Temperature of the body at work
t2-Body temperature in the middle of the day
0.1-External environment

The data of Table 1 shows that no significant difference was found between the groups on the index of heat resistance of cows, which means that the group of cows with increased amounts of different feeds in the groups are better adapted to hot climate conditions.

Table 1
Heat resistance index of cows

Groups	$\overline{X} \pm S\overline{x}$	**Cv,%**	**Limit**
Control	89,15±0,68	1,65	88,27-92,37
I experiment	89,71+0,75	1,49	87,46-91,46
II experiment	89,34±0,83	1,63	87,48-91,49

During our experiment, the coefficient of heat resistance of cows was studied. In January, when the air temperature was +2 C0, the IC of our control group was 118.8 C0. In our first experimental group, it was 110.8 C0. In our second experimental group, it was 112.7 C0.In April, when the air temperature was +18 C0, the CPI in our control group was 117.4 C0. In our first experimental group, it was 107.2 C0. In our second experimental group, it showed 113.4 C0.In July, when the air temperature reached 35 C0, the IC of our control group was 111.5 C0. In our first experimental group, this indicator reached 105.3 C0. In our second experimental group, it was 111.2 C0. In October, when the air temperature was 12 C0 on average, the CPI indicator of our control group was 116 C0. In our first experimental group, the temperature was 108 C0, and

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also in our second experimental group, the temperature was 112 C0.

It can be seen that the change of seasons also affects the coefficient of heat resistance.External indicators of blood vessels are pulse, blood pressure, rheogram.In mammals, external respiration is carried out by the lungs. Oxygen and carbon dioxide (carbon dioxide, carbon dioxide) are involved in lung gas exchange.When breathing through oxygen, the exchange of air between the alveoli of the lungs and the external environment occurs as a result of breathing movements in the rhythmic contraction of the chest, which can be recorded and taken into account.The combination of external and internal evaluations is based on the limit of connection between the unity and integrity of the living organism. The internal characteristics of the body are related to the growth and development of heifers, fertility characteristics, and especially the productivity of animals.

Body temperature, heart rate, and respiration rate were studied as the most acceptable indicators of internal research from the physiological parameters describing the internal organs of cattle.

Physiological and biochemical processes occurring in the body of cattle are the factors that describe the state of health and its efficiency.

High-yielding animals are characterized by heart rate, respiration and high blood pressure. In healthy cattle, the variability of these indicators is high and depends on age, sex, blood and muscle activity, level of productivity, physiological state, season of the year and many other factors.It is important to consider the health status and level of productivity in the evaluation and subsequent selection of cattle. Based on this, they studied the changes in heart rate, number of respiratory movements, and body temperature of young Holsteins, which are presented in Table 2.

Table 2 - clinical and physiological parameters of experimental groups heifer, x±mx

Age (months)	**Indicators**		
	Body temperatura, S⁰	**Puls/Number of pulses, times/minute**	**Number of breaths, times/minute**
Control			
1	38,9±0,25	86±1,28	30±1,29
3	38,7±0,21	86±1,31	30±1,31
6	38,5±0,29	85±1,30	29±1,28
9	38,3±0,29	84±1,26	28±1,27
12	38,1±0,28	83±1,29	28±1,26
18	37,9±0,20	81±1,27	27±1,25
I experiment			
1	38,9±0,22	86±1,30	30±1,28
3	38,9±0,21	86±1,28	29±1,30
6	38,3±0,23	86±1,31	29±1,31
9	38,1±0,25	85±1,29	29±1,29
12	38,1±0,24	84±1,31	28±1,27

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18	38,0±0,26	83±1,28	28±1,30
II experiment			
1	38,8±0,23	88±1,31	31±1,31
3	38,7±0,24	85±1,29	30±1,29
6	38,4±0,22	85±1,27	30±1,28
9	38,2±0,20	85±1,28	30±1,26
12	38,0±0,21	84±1,26	29±1,29
18	38,1±0,23	85±1,27	29±1,81

It follows from the above data that the magnitude of the clinical and physiological parameters we studied (body temperature, heart rate and respiration rate) tended to decrease with the age of the animals.
In all cases, although insignificant, these values were higher in young animals at 1 month than at 6 months. For example, the 6-month body temperature was 38,838.90, and the 1-month body temperature was 38,338.50. A similar nature of variability is observed in other age periods for body temperature, heart rate, and respiratory rates.

SUMMARY.

In all groups, the coefficient of variation of the heat resistance index was low, which indicates that the indicators between the groups were not significantly different from each other.Thus, in our research, regardless of the increase in the type of different feeds, Holstein cows had a high heat tolerance index, which indicates that they are well adapted to dry hot climate conditions.

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