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INFLUENCE OF MICROCLIMATE ON THE BIOPHYSIOLOGICAL STATE OF CALVES

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Annotation:
The resistance of the organism to adverse environmental factors in the process of adaptation, after the reconstruction of ventilation systems and to new floor structures, where humoral protection factors play a significant role, has been established, which allows a fairly complete and objective assessment of the state of natural stability. ¬ti calves during the hot periods of the year.

Key words: External environment, adaptation, maintenance, physiology, hematology, productivity, health.

Аннотация:
Установлена устойчивость организма к неблагоприятным факторам внешней среды в процессе адаптации, после реконструкции систем вентиляции и к новым конструкциям полов, где значительную роль играют гуморальные факторы защиты, что позволяет достаточно полно и объективно оценить состояние естественной устойчивости телят в жаркие периоды года.

Аннотация:
Ташқи муҳитни доимий равишда ўзгариб туришига мослашиши натижасида бузоқларнинг ҳаёт фаолияти жумладан, биофизиологик ҳолати ва гематологик кўрсаткичларига таъсир этиб уларни ўзгартириб

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тўради.

Ключовая слова: Внешная среда, адабтация, содержаний, физиология, гематология, продуктевность, здоровья.

Kalit so'zlar: Tashqi muhit, moslashish, mazmun, fiziologiya, gematologiya, mahsuldorlik, salomatlik.

In modern conditions, with half a year of keeping animals without walking indoors, their productivity, health status and feed consumption, as well as the productivity and health of the attendants largely depend on the microclimate of livestock premises. In this regard, certain sanitary and hygienic and economic requirements are imposed on livestock premises.

It is known that animals are forced to continuously adapt to constantly changing environmental conditions in order to achieve an adequate reflection of the influence of the external environment. In the process of evolution, regular systems have been developed that allow you to more accurately respond to the environment. In this regard, animals adapt to changing environmental conditions due to increased activity of the cardiovascular system, which can be judged by body temperature, pulse rate and respiration.

The organism of animals is constantly exposed to the influence of various environmental factors, which significantly affect the vital activity, in particular, the biophysiological state of the organism and the hematological parameters of blood in calves. When analyzing the data obtained, experimental studies on the farm "Istik / yul 10 yilligi" of Khatirchin fog, very interesting results were obtained. During the spring period in calves, the average body temperature was 36.5 ± 0.090C, the pulse rate was 75.4 ± 0.44

Dynamics of physiological parameters in experimental calves.

Table 1.

seasons of the year	Group	Temperature body	Frequency Pulse	Min breath
Spring	1 experienced	38,6±0,09	4±0,44	21,4±0,69
	2 experienced	38,7±0,06	0 ± 0,52	24,1 ± 0,12
	Control	39,9±0,04	9±0,46	23,4±0,33

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Summer	1 experienced	39,3±0,02	4±0,27	34,4±0,12
	2 experienced	39.8±0,08	1+0,17	34,6±0,16
	Control	39,6±0,01	3±029	31,6±0,16
Autumn	1 experienced	38,7±0,05	2±0,20	26,1 ±0, 0
	2 experienced	38,5±0,02	2±0,23	27,0±0,11
	Control	39,7±0,01	3±0,51	24,9 ± 0,37
Winter	1 experienced	38,3±0,01	4±0,27	21,4±0,20
	2 experienced	38,0±0,07	3±0,30	18,4±0,22
	Contro	38,1 ±0,05	1 ±0,56	23,6±0,36

Respiration 21.4+0.69 beats per minute. In calves, SA. huddled on the farm after the reconstruction of the systems in tilation, these indicators were 38.7 ± 0.06 ° C, 84 + o £ and 24.1 ± 0.12 beats / min, respectively, in calves ~ Co * 2 of the role group kept in traditional vr~ conditions. These indicators, with some fluctuations, were within the physiological norms. After laying polymer concrete slabs, wooden and concrete floors and supplying 22-fold air. exchange, in the experimental groups of calves, the generally accepted physiological indicators were studied monthly: body temperature, pulse rate and respiratory movements. Data on these indicators are given in table No. 1. The data in the table testify to the regularity of changes in biophysiological parameters and their dependence on the microclimate and the state of various floor structures. Significant changes in clinical parameters were established in the experimental calves in the summer period, while in the animals of the first experimental group there was an increase in temperature by 0.7 ° C, a pulse rate of five beats per minute, breathing by three movements in a minute more compared to the spring period. In calves of the second experimental group, these indicators were 0.5 ° C, 8.7 and 0.2 beats / min, respectively, more than in the first and 0.3 ° C, 0.9 and 1.8 beats / min, respectively, less than in the calves of the control group.

It should be especially noted that during the summer period, the change in floor temperature also had a significant impact on the biophysiological parameters of the organism, especially on the calves of the second experimental group. During the autumn period, with the stabilization of the temperature and humidity regime of the atmospheric air, the temperature index of the floors of 15.3 ° C normalized, which favorably influenced the physiological state of the body of

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the calves. However, a decrease in the general factors of the external environment also was the reason for the decrease in the temperature of the floors of all brands (by 7.4-15.3 ° C), which naturally led to the overcooling of the body of dairy calves.

In this situation, the warmest ^. and were polymer concrete floors (11.4-15.3 h while the body temperature of the calf ^ eT0 ^ group averaged ^ 8.3 ± ^ O20 pulse rate 80.4 ± 0.27 , breathing 21.4± * beats per minute.

Thus, the most favorable and respectful biophysiological state was established in calves of the first and control groups. As evidenced by the data in Table No. 'jQBl, the number of erythrocytes, leukocytes, and hemoglobin in the blood for the period of scientific production did not show significant changes. They basically changed within the limits of physiological fluctuations. However, a slight deviation in the morphological composition was noted in the calves of the second experimental group in the summer periods of the year on concrete floors, in which the average number of erythrocytes was 5.01 ± 0.76 million / µl, leukocytes 8.3 ± 0 .37 thousand µl and hemoglobin 9.4 ± 0.21 g

Seasonal dynamics of morphological parameters of blood in experimental calves.

Table number 2

seasons of the year	Group	erythrocytes, млн./мкл	Leukocytes, тыс/мкл	Hemoglobin, г/%
Transition period	1 опытная	5,90-6,70 5,01+0,76	7,4-9,9 8,3±0,3	9,0-10,1 9,4±0,21
	2 опытная	5,57-6,81 6,39±0.21	7,9-9,6 8,8±0.43	9,1-10,4 9,8±0,22
	контрольная	6,30-7,41 6,90±0,19	8,4-9,8 9,3±0,64	8,8-11,1 10,8±0,56
summer	1 опытная	5,91-7,32 6,32±0,27	7,3-9,0 8,1±0,31	9,3-10,3 9,7±0,22
	2 опытная	5,73-6,54 6,18±0,14	7,0-9,3 8,4±0,35	9,1-10,2 9,8±0,21
	контрольная	5,86-6,65 6,32±0,35	6,1-7,9 7,3+0,32	9,8-10,8 10,4±0,48
winter	1 опытная	5,36-6,73 6,28±0,37	6,1-7,4 6,8+0,86	8,6-10,1 9,37±0,27
	2 опытная	5,78 - 6,59 6,12±0,17	5,9-74 6,4±0,21	8,1-9,8 8,8±0,3
	контрольная	6,12-7,10 6,62±0,34	6,5-7,0 6,9±0,25	8,9-10,4 9,6±0,24

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In winter, at low outside temperatures down to -10°C -21.5°C (V. Starykh, 1987), a sharp decrease in floor temperature in the second experimental group to 7°C was noted, which has a significant negative impact on the metabolic processes of the body of calves. The appearance of dampness and condensation on the ceilings of the calf has been established.

In calves of this group, the number of erythrocytes is up to 0.14 million / μl, leukocytes by 0.3 thousand / μl and hemoglobin is 0.3 g /% less, compared with calves of the first experimental group. This is due to the negative effect of concrete floors on the morphological composition of the blood of animals. Thus, from the above data, it can be seen that keeping calves on different floors, in particular, on polymer concrete floors, ensures the activation of the functions of the hematopoietic system, improves metabolic processes and increases air exchange per head (V. Starykh, 1987; N. G. Sattarov , 1989)

Further, in the process of scientific and production experiments, while studying the protective function of the organism of dairy calves kept on different floors, we studied the level of bactericidal and lysozyme activity of the blood serum of experimental calves in dynamics. According to the results obtained, it can be seen that the bactericidal activity of blood serum in calves of the first experimental group, which was 54.1 ± 10% before the experiment, after laying polymer concrete floors on the 30th day increased by 13.4%, on the 90th day - 20.3%) and before the start of the hot period, on the 120th day of the experiment it decreased by 3.3%), on the 150th day by 16.3% and on the 240th day it increased by 75.4 ± 0.5 %. These indicators in the calves of the second group before the experiment increased by 14.3%), on the 90th day only by 0.9%, and on the 150th day they decreased by 10% compared with the beginning of the experiment.

It should be noted that during the experimental period, which covers all seasons of the year, the bactericidal activity of blood serum in calves of the first experimental group was higher by 9.3% compared to calves kept on sand-concrete floors. Moreover, in the calves of the control group, kept on wooden floors, it was also higher by 1.6% against the second experimental group.

The lysozyme activity of blood serum in calves also increases with age, however, at the beginning and in the middle of the experiment, it coincided with the hot season and the traditional ventilation system, it decreases, which can be

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clearly seen in the materials obtained. If in the first experimental group on the 30th day after the reconstruction of the ventilation system and laying the floors, the lysozyme activity of the blood serum averaged 26.7 ± 1%, then on the 150th day it significantly decreased by 14% and on the 270th day was lower by 2.7%) compared with the average annual figures. During experimental studies, lysozyme activity in calves of the second group was on average 4.7% lower compared to the first and 2.6% lower than in the control group of calves. Moreover, the lowest level of lysozyme activity in calves of the second group was noted at the beginning of 12.8±0.34% and at the end of the experiment 17.4±0.88%. This indicator in the calves of the control group ranged from 14.2±0.62% to 31.4±0.97%. Thus, the resistance of the organism to adverse environmental factors in the process of adaptation, after the reconstruction of ventilation systems and to new floor structures, has been established. where humoral protection factors play a significant role, which allows a fairly complete and objective assessment of the state of natural stability of calves in hot periods of the year.

List of used Literature

1. Ruziev Sh.M. Raising calves in a hot climate zone // Zh-l "Agriculture of Uzbekistan". 1986, pp. 21-22
2. Ruziev Sh.M., Seredkin V., Turdiev A.K. Veterinary and hygienic assessment of the floors of livestock premises. // Zh-l "Agriculture of Uzbekistan" -1993, pp. 24-25
3. Sattarov N.G. Veterinary sanitation and hygienic floor assessment based on polyurethane coating. // Zh-l "Veterinary" 1989 No. 7 pp. 27-28
4. Starykh V. and others Thermal protection in calves. // Zh-l "Dairy and beef cattle breeding". 1987 No. 1 pp. 54-55
5. Turdiev A.K. Influence of polymer floors on the physiological state and productivity of calves. Abstracts of the III conference of young scientists. Samarkand - 1993 - pp. 42-43

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