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THE EFFECT OF BIOSTIMULATORS ON THE BIOLOGICAL DEVELOPMENT OF KORAKUL SHEEP

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Abstract
In this article, in order to determine the pharmacostimulating effect of various pharmacological drugs (Butasal, Miosta-H, E-selenium) on the animal body, an increase in their body weight, growth and development was carried out on Karakul lambs. The effect on body temperature, respiration rate per minute and heart rate.

Keywords: Butasal, Miosta-H, Ye-selenium, frequency, pharmacostimu-lation, regenerative, biopreparation, electronic scale.

Introduction

Relevance of the topic. Today, various pathologies of animals are one of the biggest obstacles in meeting the demand of the world's population for ecologically clean and high-quality livestock products and ensuring food safety. Also, as a result of the natural resistance in animals and the decrease in productivity and fertility, as a result of young animals lagging behind in growth and development, livestock farms cause great economic damage. In order to effectively solve these problems, there is an increasing need to modernize and rapidly develop the production of domestic ecologically safe veterinary drugs, in particular biopreparations, which replace imports. Biostimulant drugs have a complex effect on the animal organism, stimulate metabolism, restore the activity of the central nervous system, and have the property of increasing immunobiological properties, regenerative ability, and resistance to pathogenic factors.

In the world veterinary practice, comprehensive scientific research is being conducted on the production of biostimulants, the study of their pharmacological effects on the animal organism, and the assessment of the quality of the products and their suitability for consumption in terms of veterinary hygiene. Biostimulants are mainly used on a large scale to accelerate the growth and development of young animals and increase their productivity. In this regard, attention is being paid to the research conducted on the prevention of various infectious and non-infectious pathologies and processes occurring in the immune system of animals.

Research object and methods:

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The experiments were conducted in the vivarium of the Samarkand State University of veterinary medicine, livestock and biotechnologies. For the experiments, a total of 12 heads of 3-4-monthold Karakul lambs were separated and divided into 4 groups of 3 heads. Our first, second and third groups were divided into the experimental group and the fourth control group. Before starting the experiment, the physiological conditions of Karakul lambs (respiration rate, heart rate, body weight) were measured and recorded. The live weight of Karakul lambs was determined every 15 days by weighing on an electronic scale.

Results and their analysis:

For experiments, 12 heads of 3-4 month old Karakul lambs were taken and divided into 3 to 4 groups.

The first experimental group was injected intramuscularly with 3 ml of "Butasal" drug produced by "Interchemie" company of the Netherlands every 10 days.

The second experimental group was injected intramuscularly with 2 ml of "Miosta-H" drug from "Miosta Group" once a month.

The third experimental group of Karakul lambs was injected intramuscularly with 0.4 ml of "Ye-selenium" drug of "Nita-farm" company once in 10 days.

No drug was administered to the fourth control group. All groups were fed according to farm ration. Body temperature, respiration rate, heart rate, and growth and development were constantly monitored to determine the pharmacological effects of the drugs used on the body of Karakul lambs.

Table 1 Clinical parameters of Karakul lambs in experiments (n=12)

Groups	Experiment time	Body temperature ºC	Number of heartbeat, 1 per minute	Number of breaths per minute
Experiment 1 Butasal drug	At first	39,4±0,04	140,5±4,5	61,2±2,6
	After 15 days	39,2±0,03	138,7±3,8	59,6±2,4
	After 30 days	39,0±0,03	135,4±3,7	58,4±2,3
	After 45 days	38,8±0,02	133,7±3,6	57,0±2,7
	After 60 days	38,7±0,02	130,5±3,6	56,2±2,5
Experiment 2 Miosta-H drug	At first	39,6±0,04	140,5±4,5	60,6±2,6
	After 15 days	39,5±0,03	139,4±4,2	60,4±2,4
	After 30 days	39,3±0,03	138,6±4,7	59,6±2,3
	After 45 days	39,1±0,02	135,8±3,5	58,7±2,7
	After 60 days	38,9±0,02	132,7±3,7	56,8±2,5
Experiment 3 E-selenium drug	At first	39,4±0,03	140,5±3,6	60,6±2,6
	After 15 days	39,6±0,05	139,7±4,8	60,5±3,4
	After 30 days	39,4±0,03	138,8±3,7	59,6±2,3
	After 45 days	38,3±0,04	136,3±4,5	58,6±2,7
	After 60 days	39,1±0,03	134,2±3,8	57,7±2,5
4-Control	At first	39,5±0,04	139,5±5,5	60,5±2,6
	After 15 days	39,4±0,04	138,8±4,8	60,4±2,4
	After 30 days	39,3±0,03	136,6±4,7	59,8±2,3
	After 45 days	39,3±0,04	135,8±4,6	59,3±2,7
	After 60 days	39,3±0,02	135,3±4,6	58,7±2,5

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The clinical parameters of Karakul lambs in the control group were 39.5 ± 0.04**ºC** at the beginning of the experiment, and 39.3 ± 0.02**ºC** at the end of the experiment. The number of heart beats per minute was on average 139.5±5.5 times, and by the end of the experiments, it increased to 135.3±4.6 times, the frequency of breaths per minute increased from 60.5±2.6 times to 58.7± Dilution up to 2.5 times was noted.

The body temperature of Karakul lambs in the first experimental group treated with "Butasal" drug was on average 39.4 ± 0.04**ºC** at the beginning of the experiment, and at the end of the experiment it was 38.7 ± 0.02**ºC** on average. The number of heartbeats per minute was on average 140.5±4.5, and by the end of the experiments it increased to 130.5±3.6 times, the frequency of breaths per minute increased from 61.2±2.6 times to 56.2± Dilution up to 2.5 times was noted.

The average body temperature of Karakul lambs in the second experimental group treated with the drug "Miosta-H" was 39.6 ± 0.04 **ºC** at the beginning of the experiment, and 38.9 ± 0.02**ºC** at the end of the experiment. The number of heartbeats per minute was on average 140.5±4.5, and by the end of the experiments it was on average 132.7±3.7 times, the frequency of breaths per minute increased from 60.6±2.6 times to 56 Dilution up to 8±2.5 times was noted.

At the beginning of the experiment, the average body temperature of the Karakul lambs in the third experimental group, where the drug "Ye-selenium" was used, was 39.4±0.03**ºC**, and at the end of the experiment it was 39,1±0,03 **ºC**,It was equal to 0.03**ºC**. The number of heartbeats per minute was on average 140.5±3.6, and by the end of the experiments it was on average 134.2±3.8 times, the frequency of breaths per minute increased from 60.6±2.6 times to 57 Dilution up to 7±2.5 times was noted.

Table 2 Average live weight dynamics of Karakul lambs, kg

Experimental groups	Number of heads	Live weight, kg				
		Tajribadan oldin	15-kun	30-kun	45-kun	60-kun
I-Experiment	3	12,65±0,63	13,35±0,72	14,15±0,71	16,24±0,69	18,65±0,85
II-Experiment	3	12,85±0,54	13,95±0,62	14,65±0,58	17,64±0,61	19,20±0,74
III-Experiment	3	12,70±0,58	13,52±0,63	14,18±0,65	16,12±0,65	18,38±0,72
IV-control	3	12,54±0,68	13,32±0,67	13,95±0,71	15,40±0,58	17,43±0,69

As shown in Table 2, the average live weight of Karakul lambs in the first experimental group treated with "Butasal" drug decreased by 0.22% on the 15th day of the experiment, 1 on the 30th day, compared to the control group. It was observed that it increased by 43%, on the 45th day by 5.45%, and on the 60th day by 6.99%.

Compared to the control group, the average live weight of Karakul lambs of the second experimental group treated with the drug "Miosta-H" decreased by 4.72% on the 15th day of the experiment, by 5.01% on the 30th day, by 14% on the 45th day. It was found to be higher by 54%, and by 10.15% on the 60th day.

Compared to the control group, the average live weight of the Karakul lambs of the third experimental group treated with the "Ye-selenium" drug decreased by 1.5% on the 15th day of the experiment, by 1.65% on the 30th day, and by 4% on the 45th day. It was found to be higher by 67%, and by 5.45% on the 60th day.

It was found that the effect on the growth and development of Karakul lambs was higher in the

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first and second experimental groups where "Butasal" and "Miosta-H" drugs were used than in the third experimental and fourth control groups.

Based on the data of Table 2 above, the drugs "Butasal" and "Miosta-H" showed a high pharmacostimulant effect on the body of Karakul lambs.

Conclusions:

1. Intramuscular injection of 2 ml of "Miosta-H" drug once a month has been found to have a positive effect on the growth and development of Karakul lambs.
2. "Butasal", "Miosta-H" and "Ye-selenium" drugs had a positive effect on the growth and development of Karakul lambs in the first, second and third experimental groups, compared to the control group. it was found to be higher by 6.99%, 10.15% and 5.45%, and the best indicators were recorded in the second experimental group where the drug "Miosta-H" was used.

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