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Effectiveness of Eleovit Preparation with Tissue Preparations in Calves

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Abstract: *The use of the vitamin preparation Eleovit and tissue preparations in the diet of calves optimizes metabolic processes, resulting in more efficient feed consumption and increased production, with a 20.3 % increase in live weight growth.*

Keywords: *Vitamin deficiency, eleovit, prophylaxis, hemoglobin, erythrocyte, cyanocobalamin, biotin.*

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Relevance of the topic. Agricultural productivity depends on the long-term development of animal husbandry, particularly cow breeding. As a result, farms have been paying increasing attention in recent years to the breeding of high-yielding cattle breeds in various types of ownership, and it is critical to consider the feeding of young calves to fill the herd [3].

Inadequate calves' nutrition, as well as the low quality and imperfection of nutrients in the food, causes a severe disturbance of all types of metabolism in the body, resulting in a decline in natural resistance and productivity. As a result, young animals are more vulnerable to infections and may potentially die as a result.

A lack of vital physiologically active chemicals in the body is commonly accompanied with a latent state of metabolism, according to the research [1,2, 3].

At this stage, it is advised that special laboratory testing be used to diagnose the condition. One of these disorders is vitamin insufficiency in calves [1,3].

There is a lot of research on the treatment and prevention of vitamin deficiency in calves, and numerous multivitamins have recently been introduced into the republic's veterinary practice. However, not enough study on the use and dose of these medications has been done. [3, 4]

The purpose of the study. The goal of this study is to see how Eleovit and fish liver tissue affect calves' physiological status, as well as their growth and development.

Object and methods of research. Our experiments were performed on 2-4-month-old Holstein calves breed at the Petrol Agro Biznes livestock farm in Kattakurgan district.

For the experiments, 15 head of calves were divided into 3 groups. Pharmacological effects on the efficacy and growth intensity of 5 calves of experimental group 1, 2 ml of Russian-made eleovit, 3 ml of 5 calves of experimental group 2 and 3 ml of tissue prepared from fish liver were determined intramuscularly.

Eleovit contains 1 ml of solution containing vitamin A - 10000 ME, vitamin D_3 - 2000 ME, vitamin E - 10 mg, vitamin K_3 - 1 mg, vitamin B_1 - 10 mg, vitamin B_2 - 4 mg, vitamin B_6 - 3 mg, cyanocobalamin - 10 mkg, biotin - 10 mg, nicotinamide - 30 mg, pantothenic acid - 20 mg, folic acid - 0.2 mg.

The control group did not administer the drug to calves. Calves in all groups were kept on the same ration as the farm.

At the beginning of the experiments and once every 20 days in the experimental and control group, the calves were clinically examined and no general abnormalities or functional disorders in the gastrointestinal tract were observed.

Changes in calf live weight were weighed individually before the experiment and then before feeding in the morning.

During the experiments, the morphological parameters of the calf's blood were studied using generally accepted methods at the beginning and end of the experiment to monitor the physiological condition of the calves.

Inspection results. All experimental calves were fed the same ration from the farm's available feed. The physiological condition of the calves was monitored daily. No significant changes in the physiological condition of the experimental calves were observed during the experiments.

Intensification of metabolic processes in calves during the injection of eleovit into the body of experimental calves provided intensive growth of live weight (Table 1).

As a result of the use of Eleovit in the 2nd experimental group, the high live weight gain of calves was restored, reaching 26 kg. The mean daily growth of calves was 7.3–13.2% higher in the experimental group than in the control group.

Table 1: Dynamics of growth intensity of experimental calves.

Indicators	Groups		
	Control	Experiment 1	Experiment 2
Live weight at the beginning of the experiment, kg	131	110	128
Live weight at the end of the experiment, kg	154	135	154
Absolute increase in live weight, kg	23,0	25,0	26,0
Average daily growth, g In relation to control %	776,0 100	830,0 107,3	879,0 113,2
Feed consumption, in feed units	11,0	9,65	9,0

When we analyzed the studies, the effect of eleovite and tissue preparations used in the treatment and prevention of vitamin deficiency at the above doses, activation of processes such as improving the survival of young animals, improving their physiological condition and intensive growth of live weight and consumed nutrient unit Decreased to 1.35-2.0.

The hematological parameters of the calves 'blood were studied, the morphological parameters of the calves' blood were physiologically normal at the beginning of the experiment, and at the end of the experiment it was found that the number of erythrocytes and hemoglobin increased. In particular, the number of erythrocytes and hemoglobin increased by 12.7% in experimental group 1, 14.5% in experimental group 2, and by 5.3% in the control group.

Experiments have shown that the therapeutic and prophylactic doses of Eleovit and tissue preparations have a positive effect on the growth and development of young animals. While at the beginning of the experiment the calves of the control and experimental 2 groups had almost the same live weight, at the end of the experiment in the group with eleovit and tissue preparations this indicator increased by 20.3% of live weight. During the experiments, calf numbers were maintained at 100%.

Conclusion

1. The use of Eleovit in combination with tissue preparations in calves increases the animal's resistance, prevents intoxication and improves the function of the digestive system.
2. These drugs do not have a toxic effect on the body when used in the prescribed doses.
3. Tissue preparations are administered intramuscularly to calves 3 ml 5 times every 7 days to stimulate intensive growth and increase live weight.

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