2. Применение дезинфекции молокопроводов помогает увеличить срок хранения молока, сохранить его свежесть и предотвратить его порчу. Это также способствует снижению риска заболеваний, передающихся через молоко, и обеспечивает безопасность для потребителей.

Таким образом, дезинфекция молокопроводов играет важную роль в обеспечении качества молока и предотвращении его загрязнения патогенами. Уделяя внимание этому процессу, производители могут обеспечить высокое качество своей продукции и безопасность потребителей.

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PREVENTION OF DISORDERS OF CALCIUM AND PHOSPHORUS METABOLISM IN RABBITS

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This article describes the results of the use of innoprovet and bactovet probiotics with Nova Marks vitamin-mineral premix in preventing mineral metabolism disorders in rabbits. The effectiveness of the use of innoprovet probiotic to prevent disorders of mineral metabolism in rabbits is high, and experiments have shown that the metabolism, clinical and hematological parameters of rabbits are improved to the standard level. ***Key words.*** *Rabbits, minerals, calcium and phosphorus, carbohydrates, ossification, osteomalacia, probiotics, granular soft feed, innoprovet*.

ПРОФИЛАКТИКА НАРУШЕНИЙ КАЛЬЦИЕВОГО И ФОСФОРНОГО ОБМЕНА У КРОЛИКОВ

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В данной статье описаны результаты применения пробиотиков Иннопровет и Бактовет с витаминно-минеральным премиксом Нова Маркс для профилактики нарушений минерального обмена у кроликов. Эффективность применения пробиотика Иннопровет для профилактики нарушений минерального обмена у кроликов высока, а эксперименты показали, что обмен веществ, клинико-гематологические показатели кроликов улучшаются до стандартного уровня. ***Ключевые слова.*** *Кролики, минеральные вещества, кальций и фосфор, углеводы, оссификация, остеомаляция, пробиотики, гранулированный мягкий корм, иннопровет.*

Introduction: Nowadays, great attention is being paid to the development of rabbit breeding in the world, raising the level of consumption of high-quality rabbit meat, and increasing its share in the volume of total meat products in the republic. Many diseases of calcium and phosphorus metabolism disorders are noted in rabbits, there is a decrease in natural resistance in their body, a decrease in productivity, stunted growth and development of young rabbits.

Identifying the causes of disorders of calcium and phosphorus metabolism in rabbits, studying their symptoms and syndromes, and developing methods for early diagnosis of this pathology and group preventive measures are urgent tasks.

Mineral substances do not play an important role in the energy balance in the rabbit's body, but their effect on metabolic processes is important, and mineral substances are a component of bones and teeth. Mineral substances are biologically active substances that participate in the processes of digestion, absorption and secretion in the body of rabbits. This is due to its inclusion in enzymes and ensuring their activity [2,4,5].

Calcium and phosphorus make up 65-70% of all minerals in the rabbit's body and about 2% of its body weight. Most of calcium and phosphorus are in bones. Minerals are absorbed under the influence of vitamin D, its deficiency causes fetal death in strait rabbits, just like mineral deficiency [1,3,6].

Materials and methods. In order to prevent disturbances of mineral metabolism in rabbits, experiments were conducted on mother rabbits belonging to the Khikol breed of the "Nurniyoz Ota" farm.

For the experiments, three groups of 5 female rabbits of 3.5-4 months of age were formed in each group. The first experimental group was fed granulated feed enriched with Bactovit probiotic.

The second experimental group was given granular mixed feed enriched with Nova Marks vitamin-mineral premix (1 ton of feed/1 kg) + probiotic innoprovet with 1 ml/l of water (for 7 days). Clinical and hematological examinations were

performed on the 10th, 20th and 10th postpartum days of rabbits. The birth weight of the rabbits born from them was determined. The experiments lasted 30 days.

The obtained results and their analysis. According to the results of clinical examinations conducted every 10 days from the 10th day of the experimental rabbits, the body temperature of the rabbits in all experimental groups was within the limits of physiological norms at the beginning of the experiments, decreased appetite, paleness of mucous membranes, obesity level lower than average, decreased response to external influences in rabbits, increased skin coating, decreased gloss.

During the experiments, these changes were noted to change in a positive direction in the experimental groups, while in the control group, the symptoms detected at the beginning of the experiment were repeated. As it can be seen, it was observed that the disorders of mineral metabolism deepened in rabbits.

The study of the body weight of the mother rabbits in the experiment showed that there was no significant difference in the live weight of the rabbits at the beginning of the experiment, but by the 30-day period of gestation, the average body weight of the rabbits in group 2 was 5.46±1 .48 kg and it was found that it prevailed over other groups. This indicator was 4.86±0.54 kg on average on the 30th day of starvation in group 1 and 4.71±0.34 kg on average in the control group.

The body weight of the children born from the experimental Khikol breed rabbits, and the normal live weight at birth was set to be 40-90 grams. average was 56.4±12.7 grams. The birth weight of rabbits born from rabbits in the 2nd experimental group was 78.3±15.3 grams, and it was noted that it was superior to other groups. In 10 days (130-260 g according to the norm), the average for the groups is 190.7 ± 18.4 and 178.5 ± 15.4 and 206.6 ± 16.5 grams respectively did, and here too, the advantage of body weight of group 2 rabbit children is evident. on average 275.5 ± 25.3, 450.2 ± 35.4 and 250.3 ± 22.4 grams in 20 days (standard 250-500 g), respectively, in 30 days (standard 250-500 gr) averaged 450.1±35.3, 460.8±28.9, and 250.2±22.3 grams. In 30 days (400-900 gr) respectively, 450.5± 35.5, 650.3±38.1 and 392.4±26.6 gr. It was found that the live weight of rabbits born from the 2nd experimental group, given the Innoprovet probiotic, increased.

Hematological parameters in experimental rabbits increased hemoglobin amount to 101.2±3.6 in experimental group 1, to 104.3±5.1 in experimental group 2, and to 88.4±2 in control group by the end of the experiment. It was characterized by a decrease of .3 g/l.

The amount of total protein in the blood serum at the beginning of the experiments was on average 54.25±1.52 g/l in experimental group 1, by the end of the experiments it was on average 62.6±1.48 g/l, correspondingly in experimental group 2 increased from 53.15±1.54 g/l to 68.32±1.48 g/l on average, in the control group it was 52.26±1.76 g/l on average by the end of the experiment It was found that it decreased from 51.72±2.84 g/l.

According to the analysis of the blood glucose content of the rabbits in the experiment, the average of 3.45±0.421 mmol/l at the beginning of the experiment

in the 1st experimental group, and 3.76±0.422 mmol/l at the end, respectively, in the 2nd experimental group It was observed that the average increased from 3.32±0.245 mmol/l to 4.73±0.232 mmol/l, and the average decreased from 3.36±0.582 mmol/l to 3.18±0.453 mmol/l in the control group.

Total calcium in blood serum in group 1 was on average 2.22±0.250 mmol/l at the beginning of experiments, on average at the end was 2.66±0.050 mmol/l, on average in group 2 was from 2.34±0.451 mmol/l It was found that it increased to 3.54±0.216 mmol/l, and decreased from 2.23±0.184 mmol/l to 2.06±0.086 mmol/l in the control group.

The amount of inorganic phosphorus at the beginning of the experiment was 1.46±0.0253 mmol/l in the rabbits of the 1st group and 1.62±0.054 mmol/l at the end, correspondingly, it was 1.38±0.074 mmol/l in the 2nd group. from 1.95±0.053 mmol/l, in the control group it decreased from 1.48±0.024 mmol/l to 1.26±0.069 mmol/l.

Conclusion: The effectiveness of feeding rabbits with soft feed in the form of granules enriched with innoprovet probiotics and vitamins and minerals is high, it improves the level of metabolism in rabbits, the amount of hemoglobin in the blood is on average 2.8g/l, total protein - 15.17g/l, causes an increase in total calcium - 1.2 mmol/l and inorganic phosphorus by 0.57 mmol/l.

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STUDY OF CHEMICAL COMPOSITION, MEDICINAL PROPERTIES AND ANTIBACTERIAL PHYTOTHERAPEUTIC IMPACT OF *ACHILLEA SANTOLINA*

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