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ҚЫЗЫЛОРДА ОБЛЫСЫНЫҢ АУМАҒЫНДАҒЫ СІБІР ЖАРАСЫНЫҢ КӨМІНДІЛЕРІН ГЕОИНФОРМАЦИЯЛЫҚ КАРТАЛАУ ЖӘНЕ СІБІР ЖАРАСЫНЫҢ ӨЛКЕЛІК ІНДЕТТІК ЕРЕКШЕЛІКТЕРІ

Аңдатпа

Қазақстан Республикасы Қызылорда облысының аумағындағы жануарлардың сібір жарасының эпизоотиялық жағдайдын талдау және сібір жарасының көмінділерін геоақпараттық картаға түсіру нәтижелері келтірілген.

Кілт сөздер: Сібір жарасы, ошақ, қолайсыз пункт, мал көмінділері, мониторинг.

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BACKGROUND FEATURES OF EPISOTIOLOGY OF SIBERIAN LANGUAGE AND GEOINFORMATION CARTOGRAPHY OF SIBERIATICAL BURIALS IN THE TERRITORY OF THE KYZYLORDA REGION

Summary

The article presents the results of an analysis of the epizootic situation in the Siberian anthrax of animals and geoinformation cartography of anthrax burial in the territory of the Kyzylorda region of the Republic of Kazakhstan.

Key words: Anthrax, hearth, dysfunctional item, cattle cemetery, monitoring.

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DETERMINATION OF THE GENERAL PROTEIN AND PROTEIN FRACTIONS IN THE USE OF PROBIOTICS BY VETOM 1.1

Annotation

This article illustrates the results of the determination of the total protein and protein fractions when using probiotics with vetom 1.1 and echinacea purpurea in lambs of the Akzhayk meat and wool breed at different ages. A blood test for proteins and protein fractions of lambs

blood shows that the use of probiotic vetom 1.1 and its combination with Echinace purpurea in various doses at the end of the experiment caused a slight increase in the content of the total protein in the serum of the lambs, as well as of the β and γ globulin indices. The data of the albumin concentration concentration study shows that its indices practically did not differ from the control group in which no drugs were used. Also, the results of the study of the concentration of α-globulins indicate that its indices decreased comparatively from the control group.

Key words: probiotic, total protein, albumins, globulins, lambs.

Introduction

Preservation of health and obtaining high productivity of young animals is one of the most important tasks of modern animal production. The widespread and unjustified use of antibiotics has led to a deficit in the organism of animals of the symbiotic microflora, which participates in the digestion of food, the synthesis of vitamins and amino acids, and also has an antagonistic effect on the pathogenic and conditionally pathogenic microflora. In veterinary medicine, a problem arose-the search for new ways of healing and treating animals. Acutely needed drugs that do not cause drug resistance, have a pronounced antimicrobial effect, including antibiotic-resistant strains of microbes. In modern conditions, the idea of creating new drugs - probiotics. [1].

Initially, the name "probiotic" was used to describe substances pro- duced by a single protozoa that stimulated the growth of other, and later feed additives, which had a beneficial effect on the host animal by affecting its intestinal microflora. In its last role, it was defined as the organism and substances (substances), which contribute to the microbial balance of the intestine [2].

This term comes from the Greek words "pro" and "biotos", which means "for life." Experts from the World Health Organization proposed the following definition: probiotics are living microorganisms that, if consumed in the required quantity, have a beneficial effect on the health of the host organism [3].

The concept founder of the probiotics became I.I. Mechnikov, awarded for a series of works of Nobel Prize in medicine in 1908 [4]. Since then, a sufficient number of microorganisms have been studied, for which there would be an application in everyday medical practice as part of pharmacological preparations and functional foods [5, 6], however, only a few of them are officially recognized as such at the present stage. The main criteria for this are phenotypic, genetic characteristics and information about the presence of the probiotic effect established in double-blind, control-controlled studies.

Bacteria of the genus Bacillus, like saprophytes, are able to last for a long time in the environment due to their genetically determined ability to produce various groups of enzymes, antibiotics, and spore formation. Such abilities are not possessed either by lacto - or bifidobacteria.

Probiotics based on bacteria of the genus Bacillus have antagonistic activity to a wide range of pathogenic and conditionally pathogenic microorganisms: staphylococci, proteas, candida, shigella, escherichia, pseudomonas, streptococci. The use of sporadic probiotics prevents the development of dysbacteriosis, promotes stimulation of cellular and humoral immunity factors, increases nonspecific resistance of the organism, stimulates regenerative processes in the body, and normalizes metabolism [7].

Modern industry, products a sufficient number of probiotics, representing the culture of living organisms. The most common is the drug VETOM-1.1, which is a product of genetic engineering. The use of the drug in prophylactic purposes increases the growth of live weight in animals and reduces feed costs per unit of production, and also increases the safety of young animals. The drug does not cause side effects in the body, does not have a carcinogenic, toxic, mutagenic and allergic effect.

The drug successfully combines with all vaccinations of animals and enhances their effectiveness, has therapeutic effectiveness in viral and bacterial diseases with symptomatic diarrhea.

The use of probiotics in feeding and veterinary medicine makes it possible: to increase the economic efficiency of livestock enterprises; significantly improve the epizootic and ecological situation in the areas of livestock production; to obtain high-quality products free from salmonellosis, antibiotics, chemotherapeutic agents, traces of disinfectants, for the system of healthy nutrition of the population [8].

The need to solve the problems of producing ecologically clean, safe and tasty products of increased demand for the population opens up a great prospect in the use of probiotics in livestock.

The purpose of our work was to determine the total protein and protein fraction when probiotic Vetom 1.1 was used in the lambs of the Akzhaik meat and wool breed.

Materials and methods

The objects of the study were the lambs of the akzhaik meat and wool breed of the Educational and Scientific Center of the Department of Animal Husbandry of the Zhangir Khan West Kazakhstan Agrarian and Technical University.

For the conduct of the scientific and economic experience, a control group and 3 experimental groups of 4-month-old lambs with 50 heads in each were formed, 25 males and 25 females.

During the experiment, lambs received the same economic diet. Lambs were kept in identical conditions. As part of the main ration of the Ignat of the 1st test group, vetom 1.1 was given at a dose of 75 mg per kg of body weight once a day for 10 days, a repeated cycle of application after 20 days.

2nd experimental - 10gr Echinacea purpurea per 1 kg of feed 1 time per day for 10 days, repeated cycle of application after 20 days, 3rd test - vetom 1.1 at a dose of 75 mg per 1 kg of mass + 10gr Echinacea purpura per 1 kg feed once a day for 10 days re-use after 20 days.

During the whole period of the experiment, the clinical and physiological state of the lambs was determined by daily inspection. At the same time, attention was paid to general behavior, appetite, water consumption, mobility.

In the lambs of experimental groups, blood was taken three times during the experiment for hematological studies. To study the effect of feeding drugs and their combinations on biochemical blood indices, 8 lambs (4 males and 4 females) from each group before feeding, and then through the 10th and 40th days were taken from the jugular vein, in the morning before feeding.

Laboratory studies were conducted in the laboratories of the Scientific Research Center of the West Kazakhstan Agricultural and Technical University named after Zhangir Khan.

Biochemical blood tests included the definition of: total protein - biuret method; protein fractions by electrophoresis on cellulose acetate [9].

All the data obtained during the experiment were processed biometrically using a personal computer [10].

Results and discussion

The physiological state of lambs, closely related to productivity, is largely characterized by the biochemical composition of the blood.

Before feeding in lambs, the studied parameters were approximately on the same level and did not have significant differences, then after the first and repeated feeding the parameters of protein metabolism changed with a certain regularity (Tables 1, 2).

The level of total protein in the serum of lambs after first feeding in the 1 st group was higher than in the control and other experimental groups. After re-feeding also in group 1, the indicator was higher than in other groups.

The concentration of albumin in the serum of lambs was lower in comparison with the control after the first and second feeding in the 1 st group, and in the third group lambs after the first feeding higher, but after re-feeding it decreased.

Table 1. Indicators of total protein and protein fraction when using probiotic Vetom 1.1 in lambs after first feeding.

Index	The group			
	control	1st experienced	2nd experienced	3rd experienced
Total protein, g / l	62.24 ± 1.06	63.23 ± 1.58	61.61 ± 2.17	62.95 ± 2.03
Albumins, g / l	19.27 ± 0.43	18.47 ± 1.35	18.54 ± 0.71	20.22 ± 1.13
α-globulins,%	12.58 ± 0.48	10.64 ± 1.48	13.32 ± 1.67	11.76 ± 1.21
β-globulins,%	8.11 ± 0.72	6.13 ± 1.12	7.04 ± 1.86	7.68 ± 0.75
γ-globulins,%	20.88 ± 0.76	25.62 ± 2.37	23.14 ± 1.12	31.17 ± 1.48

Table 2. Indicators of the total protein and protein fraction when using probiotic Vetom 1.1 in lambs after re-feeding.

Index	The group			
	control	1st experienced	2nd experienced	3rd experienced
Total protein, g / l	64.74 ± 1.02	66.79 ± 0.94	61.12 ± 1.41	65.50 ± 1.06
Albumins, g / l	22.86 ± 0.47	20.06 ± 0.47	21.76 ± 0.32	21.27 ± 0.63
α-globulins,%	14.93 ± 0.88	13.65 ± 1.14	14.64 ± 0.92	13.36 ± 0.68
β-globulins,%	9.16 ± 0.24	9.64 ± 0.17	9.42 ± 0.37	9.84 ± 0.19
γ-globulins,%	23.91 ± 1.25	26.12 ± 0.96	25.52 ± 1.03	24.05 ± 0.36

The content of α-globulins in the serum of lambs after the first feeding in the 1st and 3 rd groups was lower in comparison with the control, after re-feeding, too, the indices decreased.

The level of β-globulins after the first feeding in the serum of lambs relative to analogues from control was lower in all groups. After re-feeding, the lambs of the experimental groups were higher than those in the control group.

The concentration of γ-globulins in the blood serum of lambs 1, 2 and 3 groups throughout the experiment relative to the analogues from the control group was higher after the first and repeated feeding.

Conclusion

Thus, the probiotic Vetom 1.1 and its combination with Echinace purpurea in the above doses at the end of the experiment caused a slight increase in the lambs in the serum of the content of total protein, β- and γ-globulins. The concentration of the albumin fraction from the control data was practically indistinguishable, α-globulin concentration decreased.

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ОПРЕДЕЛЕНИЕ ОБЩЕГО БЕЛКА И БЕЛКОВЫХ ФРАКЦИИ ПРИ ПРИМЕНЕНИИ ПРОБИОТИКА ВЕТОМ 1.1

Аннотация

В данной статье приведены результаты определения общего белка и белковых фракции при применении пробиотика ветом 1.1 и эхинацей пурпурной у ягнят акжайкской мясо-шерстной породы в различном возрастах. Анализ крови на белки и белковые фракции крови ягнят показывает что применение пробиотика ветом 1.1 и его сочетание с эхинацей пурпурной в различных дозах к концу опыта вызывали у ягнят небольшое повышение в сыворотке крови содержания общего белка, также показателей β - и γ - глобулинов. Данные исследования концентрации альбуминовой фракции показывает что его показатели практически не отличались от контрольной группы в которых не применялись препараты. Также результаты исследования концентрации α –глобулинов указывают что его показатели сравнительно уменшились от контрольной группы.

Ключевые слова: пробиотик, общий белок, альбумины, глобулины, ягнята.

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ВЕТОМ 1.1 ПРОБИОТИГІН ҚОЛДАНУ КЕЗІНДЕ ЖАЛПЫ БЕЛОКТЫ ЖӘНЕ БЕЛОК ФРАКЦИЯЛАРЫН АНЫҚТАУ

Андатпа

Мақалада ақжайық етті-жүнді қой тұқымдарының қозыларына Ветом 1.1 пробиотигін және күңгірт кызылкүренді үйлестіре қолдану кезінде жалпы белокты және белок фракцияларын анықтаудың нәтижелері берілген. Қозылардағы белок және белоктық фракциялардың талдауы бойынша Ветом 1.1 пробиотигін және күңгірт кызылкүренді әртүрлі мөлшерде үйлестіре қолдану кезінде тәжірибе соңында қозылардың қан сарысуында жалпы белок және β -, γ –глобулиндер көрсеткіштері кішкене жоғарылаған. Альбумин фракциясының концентрациясын зерттеудің мәліметтерін препараттар қолданылмаған бақылау тобымен салыстырғанда оның көрсеткіштері ерекше өзгермегенін көрсетеді. Сонымен бірге, α – глобулиндер концентрациясын зерттеу оның көрсеткіштерінің бақылау тобымен салыстырғанда төмендегенін көрсетеді.

Кілт сөздер: пробиотик, жалпы белок, альбуминдер, глобулиндер, қозылар.