

PROBIOTICS IN LIVESTOCK SIGNIFICANCE

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Abstract: In this article, in European countries and other developed countries today, antibiotics have been abandoned and probiotics are used on a large scale in the production of livestock products, and the information about the effectiveness of these works and the delivery of livestock and their products in an ecologically clean manner is based on the analysis of the literature. given. Today, it has been mentioned that the time has come to use probiotics in animal husbandry practice in our republic.

Key words: probiotic, microflora, bifidiobacteria, colonization, biocenosis, detoxification, adhesion, adhesion, recombination.

INTRODUCTION

Today, antibiotics are used on a very large scale in veterinary and medicine, and in order to increase the productivity of domestic animals. As a result, the level of resistance of various bacteria to antibiotics is increasing, because in many cases, it occurs due to the fact that antibiotic treatment measures are not carried out to the end. found the proof. This, in turn, causes a decrease in the sensitivity of microorganisms to antibiotics.

LITERATURE ANALYSIS AND METHODOLOGY

Based on literature data, we present the information about probiotics that replace antibiotics, and we suggest to practicing veterinarians and researchers and veterinarians who are conducting their scientific work in the same direction that it is time to use porobiotics instead of antibiotics and to increase the effectiveness of

treatment with probiotics in the future. , we would like to mention that the opportunities for ecologically clean animal husbandry and food production can increase, and as a result, our consumed products will be free of antibiotics, and the microflora in the gastrointestinal system will increase the beneficial properties.

The resident microflora of warm-blooded animals consists of bifidiobacteria, lactobacilli, bacteriodes, enterococci, and facultative anaerobic microorganisms: escherichia, salmonella, and non-spore-forming absolute anaerobes.

DISCUSSION AND RESULTS

Unlike antibiotics, the mechanism of action of probiotics is not to destroy groups of intestinal microflora, but to ensure that competitive strains of probiotic bacteria live and develop in the intestine for a long time, which in turn suppress conditionally pathogenic microbes in the intestine from the composition of the intestinal microbiocenosis and increase the number reduces, establishes control over them through non-specific influence. (Panin A.N) The normal microflora of the intestine is an important physiological component that is evolutionarily connected with the microorganism, its positive effect is not limited to the antagonistic effect. It ensures the physiological integrity of many systems connected with the endocrine system. Selective influence (with drugs) on gram-negative intestinal microflora also has a negative effect on intestinal biocenosis. Antibiotics, together with the pathogens of intestinal infections, usually perform a protective function, stopping the development of beneficial microbes that resist the large accumulation of potential pathogens in the intestine.

The systematic use of antibiotics leads to the emergence of antibiotic-resistant populations of conditionally pathogenic microorganisms with increased virulence and the development of difficult-to-treat dysbacteriosis caused by proteus, staphylococcus, candidia, clostridia, which activates the development of gram-negative microorganisms in the intestine and prolongs their life in the intestine. . Diseases that are difficult to treat occur.

The next generation of antibiotics has a narrow mechanism of action, regardless of the method of use, it causes the increase of lactose-negative and weakly fermenting strains of escherichia, the emergence of staphylococci, fermenting fungi, proteus and klebsiella in the intestinal population. In the normal microflora of the intestine, the number of strains and clones of lactobacilli and bifidiobacteria with reduced enzyme activity, known as "minus variants", increases, and they lose the properties of preventing the development of Klebsiella, Escherichia coli, staphylococci.

After treatment with antibiotics, the recovery of the intestinal microflora takes a long time. A decrease in intestinal resistance to salmonella colonization has been proven when antibiotics such as penicillin, ampicillin, kanamycin, neomycin, metronidazole, rifampicin, cloxacillin, amoxicillin, doxycillin, cephaliccin, polymyxin are used orally.

In recent years, the phenomenon of pseudomembranous enterocolitis, which develops in the presence of antibiotics, has been discussed in veterinary practice, its causative agent is *Clostridium difficile*, which until recently was considered a non-pathogenic inhabitant of the digestive tract of humans and warm-blooded animals.

Probiotic cultures do not have a direct effect on the decrease in the amount of viruses, but in such conditions, their effect on colonization resistance increases the synthesis of sector IgA, the activation of immune response mediators, nitrophils, the secretion and activity of lysozyme, opsonins, agglutinins. and is manifested by an increase in the secretion of interferons and their activity.

Thus, the use of probiotics in veterinary medicine is combined with a wide range of problems, starting with the coordination of the intestinal biocenosis of young animals and the immune, hormonal and enzyme systems.

Interest in probiotics increased after the salmonellosis epizootology that occurred among poultry in European countries, and *Streptococcus faecium* culture was used in the eradication of salmonellosis. The achieved effect was named after

the author "Nurmi-effect" and was widely spread in poultry farming. In Russia, a similar STF-1/56 culture was used to prevent salmonellosis.

Lactose-fermenting bacteria are still the most widely used probiotic microorganism. In addition to acidophilic bacteria, probiotics include *L.Cellobiosum*, *L.brevis*, *L.curvatus*, *L.delbsreuckii*, *Tupi bulgaricus*, *L.cese*, *L.fermentum*, *L.lactis*, *L.rlantarum*, *L.reuterii*. Bifidobacteria have only recently been used for probiotic purposes and have been discovered to be always present as part of the normal intestinal microflora.

Unlike the probiotic preparations produced in Europe and the USA, the industry of probiotic preparations in Japan is based on the use of spore-forming strains such as *Bacillus toyoi*, *Bacillus cagulans*, *clostridium butyricum*, *Lactobacillus sprogenes*, according to pineapple.

Bifidobacteria such as *Bif.bifidum*, *Bif.adolenskensis*, *Bif.longum*, *Bif.globosum*, *Bif.animalis*, *Bif.intantis*, *Bif.thermophilus* are used in probiotic preparations with bifido. Probiotics include spore-forming bacteria belonging to the genus *Bacillus* - *B. licheniformis*, *B. subtilis*, *B. coagulans*, *B. lentus*, *leuconostics*, *L. mesenteroides*, *L. acidilactis*, *L. cerevisiae*, *L. rammonus*, *pediococcus* *Ped. pentosaceus*, *bacteroides* *Bacteroid. Amylophilus*, *Bacteroid. Cappilosus*, *Bacteroid. Ruminocola*, *Bacteroid ruminocola*, *Bacteroid. Suis*, propionic acid bacteria *Propionibacterium freudenreichii*, *Propionibacterium shermanii*, streptococci *Str.lactis*, *Str.intermedius (anginosus)*, *Str.thermophilus* are used.

These data show that the problem of increasing the number of probiotics in veterinary medicine, their creation and production is receiving great attention.

It is known that lactobacilli and bifidobacteria, which are part of probiotics, must have adhesive (adhesion, adhesion) and growth-reproduction properties that allow to quickly cover the mucous membrane of the gastrointestinal tract. The resistance of the cells of the bacteria to the reactogenic effect of the stomach and

the upper part of the intestine is also a necessary condition for the viability of probiotic preparations.

As a result of extensive studies on the mechanism of action of probiotics, clear information has been obtained on the mechanism of interaction between probiotic bacteria and conditionally pathogenic microflora in the digestive tract, proving the beneficial and reliable role of probiotics in maintaining human and animal health. it's really just getting started.

CONCLUSION

Based on the information presented above, it can be said that today our ideas about the importance of probiotics in ensuring the health of farm animals and in the cultivation and production of ecologically clean products from them will be appropriate for practicing veterinarians. Let's talk. The result shows the prospect of using probiotics in animal husbandry and veterinary practices.

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