

## ETIOLOGY, TREATMENT AND PREVENTION OF LAMINITIS IN CATTLE

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### ABSTRACT

This article discusses the etiology, treatment and prevention of laminitis in cattle, several causes and remedies for hoof problems in cattle.

**KEYWORDS:** Holstein-Friesian, milk deficiency, pathological anatomical change, protein and trace elements

### INTRODUCTION

Breeding of breeding cattle, obtaining healthy offspring from them, and supplying high-quality milk and dairy products to our people is an important task for veterinary specialists in recent years in our country. A number of diseases occur in high-yielding cattle, causing them to have reproductive disorders, lower milk quality, and early weaning. Hoof problems are now the third most common disease in livestock farms after mastitis and reproductive organs. Based on the results of epizootic analyses, clinical examinations and pathologoanatomical changes, Holstein-Friesian cows are more prone to hoof problems from highly productive animals, causing significant economic damage to cattle farms of our country.

In some dairy farms, 10-90% of dairy cows have various manifestations of hoof diseases. Cows infected with hoof diseases eat less food, are practically deprived of movement, milk productivity decreases, as a result, a lot of drugs and additional labor are spent for treatment, and considerable economic damage is caused to the farm. This in turn leads to milk shortage in calves (17-20%) and consequently stunted growth and development (20-65%).

Highly productive Holstein-Friesian cows are highly susceptible to hoof diseases due to the genetic origin of chronic and subclinical laminitis in the legs, damage to the horn layer of conditionally soft hooves, and the structure of the hind legs. Usually, the causative agent of necrobacteriosis develops rapidly against the background of these diseases.

In case of necrobacteriosis, the economic and production losses are quite high (decrease in milk yield from an infected cow to 400 kg, decrease in live weight from 200 g to 1.5 kg per day), early culling of animals, decrease in breeding value (it is not possible to sell seeds in cases of necrobacteriosis and hoof diseases in breeding farms) etc.

There are several reasons for the occurrence of hoof problems in cattle, the most important of which are deficiencies in feeding and storage conditions with unbalanced feed.

According to most scientists, damage to the distal part of the legs is caused by large stomach acidosis, which is caused by feeding with unbalanced feed with high concentrate, regular lack

of carbohydrates, protein and trace elements in the diet. As a result, the softening of the hooves causes the infection of *Fusobacterium necrophorum* in the external environment to trigger the pathological process.

In the last three years, mass cases of necrobacteriosis in Holstein-Friesian cows have been recorded in German farms, Tula region of Russia and Tatarstan. When animals infected with necrobacteriosis, but clinically healthy, are brought to the farm, the spread of the disease in farm cattle is observed up to 25-30%.

Based on the results of studying the epizootology of necrobacteriosis in our republic, it was found that highly productive dairy cows have a high susceptibility to necrobacteriosis. At the same time, it became known that they often encounter various hoof and foot diseases (laminitis, pododermatitis, erosion, phlegmon of the crown) and damage to the hoof and upper hoof skin. In order to sharply reduce the spread of these diseases on the farm, it is necessary to strengthen the hoof and hoof skin layer, as well as regularly eliminate pathogenic and conditionally pathogenic bacteria present on their surfaces. It is planned to develop and test effective and economical methods.

Researches were conducted in 3 farms located in different regions of Uzbekistan (Samarkand, Tashkent and Fergana regions). Necrobacteriosis was widespread in these farms, and almost every day one to three cows were forcibly slaughtered.

According to the results of the research, "solution 3" baths had an effective effect, and no necrobacteriosis-infected cows were recorded, while the number of necrobacteriosis-infected cows in the first and second groups was 5 and 3 heads. The number of cows infected with crown phlegmon was not recorded in the third group, while 6 cows were recorded in the first group and 3 cows in the second group. The number of cows infected with laminitis was 2 heads in the third group, 4 heads in the first group, and 2 heads in the second group. Therefore, the use of "solution 3" baths is highly effective in the treatment and prevention of necrobacteriosis and hoof diseases in farms with Holstein-Friesian cows.

Practical recommendations:

1. The bath must be in a place where all cattle pass.
2. The bath should be 2-3 meters long, 1 meter wide, and 15 cm deep.
3. Before taking a bath with a disinfectant solution, it is necessary to install a water bath or a bath with a soapy solution for preliminary cleaning of the hooves. The antiseptic solution is more effective when applied to clean hooves. In addition, the bath is less dirty in the disinfectant solution.
4. Change the solution in the bath (depending on the degree of contamination of the solution) after 200-250 cattle have passed for the best effect of preventive treatment.
5. When changing the solution in the bath, remove all mud from it. Only pour the disinfectant solution into a clean tub.

6. Remove the manure from the stalls when the cows are taken out for milking, after cleaning the hooves, the cattle must enter the stalls which are clean, dry and with as little manure as possible.

7. The speed of hoof treatment depends on the number of cows with hoof problems and the cleanliness of the barn. Hoof care is recommended twice a week in good conditions, and daily in worse conditions.

## CONCLUSION

With the appearance of large cattle diseases, the animal owner should be warned about their symptoms and signs. A veterinarian should be called to determine the exact diagnosis.

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