

ETIOLOGY, CLINICAL SIGNS AND DIAGNOSIS OF SUBCLINICAL KETOSIS IN PRODUCTIVE CATTLE

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<https://doi.org/10.5281/zenodo.15543996>

Abstract: In the article productive sub clink in cattle from ketosis to the patient animals milk amount decreasing , in content acidity increase, food digestion to do in the process one how much problems to be, mucus curtains yellowing such as clinical signs with you passing of the disease etiology, clinical signs and diagnostics according to your information analytical statement made.

Key words: subclinic ketosis, clinical ketosis, protein, ketone particles, acid amount, proteins and oil.

Login. Uzbekistan In the Republic livestock field and his/her networks develop for 2022-2026 program confirmation about in the decision: Today on the day in our republic total 18,032 livestock farms there is of which 7,614 cattle breeding, 3,263 sheep and goat farming, 142 horse breeding, 52 camel farming, 1,163 poultry farming, 4,829 fishing, 715 beekeeping and 254 rabbit farming in the direction of organization done farms support support measure events by designating placed .

Subject Relevance: Current on the day population count increase them village farm to products demand increase is being monitored. Also milk products for consumption suitability check their in the composition acidity high situations prevent to take It is an urgent issue.

Literature analysis: Ketosis – Bo'goz and milk giver in animals substance exchange violation organism acetone poisoning in the blood increasingly urine with output, milk with output with is characterized.

Etiology. Disease usually on a diet far term during digestion divider proteins and oil substance feed in the diet out of the norm passion with develops.

Clinical signs. In cattle ketosis mainly clinical and subclinical in cases Milk quantity decreased, decreased acidity level 20 increases, smell unpleasant, tasteless bitter will be. Sick of cows appetite is broken down, in the body actions decreases, blood vein and heart hit number increases, mucus curtain color yellowing rank enters.

Diagnosis. all in animals diagnosis sick from an animal taken blood, urine and milk in the content ketone of the cells to the amount based on is placed.

Research object and methods: The study was conducted on young calves of the "Jamol Ota" cattle breeding farm, Yangiyul city, Tashkent region.

The "Jamol Ota" farm has a total area of 5 hectares, and there are 230 cattle on the farm, of which 130 are Holstein cows in the dairy sector, and 35 are 6-month-old calves. Cows produce up to 32 liters of milk per day at a rate of 12 liters. They are fed with silage, silage, bran, corn, straw, alfalfa and hay throughout the day.

It is a metabolic disease in which ketone bodies are elevated above normal levels in cows due to energy deficiency, but clinical symptoms are not yet apparent. It is mainly observed at the beginning of lactation - in the first 2-6 weeks after calving.

According to the results of the study: As a result of the examination, it was determined that there was an abundance of protein-rich foods in the farm's diet. Ketosis occurs when proteins and fats in the diet exceed the norm in cows. During a clinical examination of the cows, yellowing of the mucous membrane was observed in some of them. In order to diagnose the disease in a comprehensive manner, based on anamnesis data, recording of symptoms characteristic of the disease, and laboratory tests, blood samples were taken from the cows and tested using a device adapted for testing ketosis. It was determined that the number of ketosis cells was higher than 1. At the same time, blood samples were also taken for total protein and blood biochemistry and sent to special laboratories.

To detect subclinical ketosis, laboratory and field express methods are used. The main ones are listed below.

1. Detection of ketone bodies in urine (Ketonuria test)

Method: Acetone and acetoacetate are detected in cow urine using special test papers (dipsticks). A color change is observed within 1–2 minutes.

Advantages: Fast, cheap, can be used in field conditions

Cons: Only detects moderate to high levels of ketosis

Ketones appear in the urine later

2. Measuring the amount of ketone bodies in the blood

a) Beta-hydroxybutyrate (BHB) levels BHB is the main marker for subclinical ketosis. A blood sample is taken (from the ear vein or jugular vein). The result is obtained immediately using a special portable ketone analyzer.

Norm and diagnostic criteria:

<1.0 mmol/L — normal

Above 1.2–1.4 mmol/L — subclinical ketosis

>3.0 mmol/L — clinical ketosis



b) The amount of NEFA (non-esterified fatty acids) in the blood plasma. An increased level of NEFA indicates fat mobilization (a sign of energy deficiency). Above 0.3 mmol/L is a risk indicator.

Figure 1. Centrivet GK apparatus was used to detect ketosis.

3. Detection of ketone bodies in milk

Method: Special milk test reagents (naptophor, ketotest) are used. The reagent is added to the milk - a color change is observed.

Advantages: Can be checked directly during milking. Fast and cheap.

Disadvantages: Less sensitive to BHB levels in the blood

4. Determination based on the amount and composition of milk (indirect signs)

Milk fat/milk protein ratio >1.4 — a sign of subclinical ketosis

The fat percentage in milk increases, while the protein decreases.

This test can be measured through laboratory analysis.

5. Periodic monitoring (prevalence control)

Cows are routinely tested 5–14 days after calving

Out of every 10–20 cows, 5–10 are randomly selected for testing (for preventive purposes).

Consequences of subclinical ketosis.

Milk production decreases by 20–30%

Uterine involution is delayed.

The risk of postpartum diseases (metritis, endometritis) increases.

Conclusion: Measures are being taken to restructure the diet of livestock farms specializing in cattle breeding, change the composition of feed, and treat animals with ketosis separately.

Subclinical ketosis is a latent but very harmful metabolic disorder. Measuring the level of ketone bodies in blood, milk or urine is the most reliable method for its detection. Early diagnosis and treatment can prevent losses. A monitoring program should be implemented on every large farm.

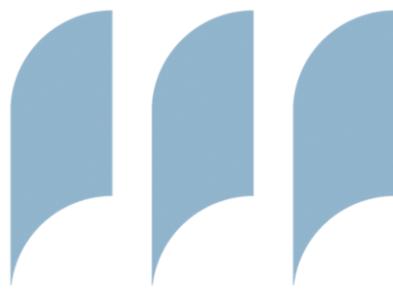
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