

Introduction

- The most important criterion for evaluating feed protein is the degree of its breakdown in the rumen, as this value affects the availability of nitrogen for microorganisms, as well as the amount of feed protein available for digestion in the small intestine.
- Since it is not always possible to achieve the required ratio of rumen digestible and undigestible protein fractions by selecting feed, regulating protein breakdown by protecting it from degradation in the rumen is one of the scientifically based ways to improve rations for cattle. One of the methods of protecting feed protein from excessive breakdown in the forestomach is formaldehyde treatment of protein supplements.

Material & Methods

The experiment was performed by the method of periods on intact cows and cows with fistulas of the duodenum in the first period of lactation. An exchange experiment was conducted during the experimental period. In addition, in vitro and in situ feed studies were performed.

EFFECT OF REDUCTION OF EASILY DIGESTIBLE PROTEIN IN THE DIET OF COWS ON INTENSITY OF MICROBIAL PROTEIN SYNTHESIS IN THE RUMEN AND FORMATION OF THE FUND OF MILK PROTEIN PREDECESSORS Y.Korinets, V.Snitynskii, P.Khirivskii, O.Zelisko

Lviv National Agrarian University, Lviv. Ukraine

rumen

As a result of the received data it is established that introduction of the protected from disintegration cattle cake into a diet had influence on an exit of available for digestion protein and synthesis of microbial protein in forestomach. This is due to the fact that the intestine got more rumen undigested feed protein. At the same time, the proportion of microbial protein in the chyme of the duodenum was less than in the control period of the experiment. The nitrogen digestion coefficient was 2% higher when compared to the control period. When cows got feeding with the protein protected from degradation, the coefficient of nitrogen digestibility was also higher by 5.4% than in the control period. Nitrogen digestion was also slightly higher. During the experimental period, there was a decrease in ammonia formation in the rumen with a decrease in non-protein and an increase in the proportion of protein nitroge.

The decrease in the proportion of hard-to-digest protein in the diet led to a slight increase in the concentration of volatile fatty acids in the rumen content and acetic acid rate in the blood. Its absorption by the mammary gland was 28% higher when compared to the control period. At the same time the fat rate in milk increased by 20%. During all periods of the experiment, milk productivity varied within the physiological parameters of lactation.



Results

Conclusions

Cows with high levels of hard-to-digest protein in the diet used more energy for milk synthesis and less energy for deposition in the form of gains, which is desirable in the initial period of lactation. These animals had a higher level of mammary gland uptake of protein and lipid substrates.



