

THE EFFECT OF FEED SUPPLEMENTS WITH ENZYMES AND VITAMINS ON MILK QUALITY

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Summary. An experiment was undertaken to study the effect of enzymes (lysozyme and lysosubtilin) and vitamins as feed supplements on milk somatic cell count and technological properties of milk, which are important for cheese production. Thirty cows were randomly divided into 3 equal groups (Groups 1-3) and fed 3 different diets. The diets were based on normal diet supplemented with Neosomatas 1 (lysozyme - 0.2 g/kg of feed and lysosubtilin - 0,02 g/kg) (Diet 1), normal diet supplemented with Neosomatas 4 (lysozyme - 0,2 g/kg and vitamins A, C, E) (Diet 2) and normal diet without supplementation (Diet 3 – control). The experiment lasted for 10 days. The measurements were conducted at days 4, 7 and 10 and at day 7 after the experiment.

The results from this study demonstrate that supplementation with enzymes and vitamins significantly reduced milk somatic cell count and effected technological properties of milk during the experiment and one week after. The most pronounced reduction of mentioned parameters was registered in group supplemented with Neosomatas 4 (Diet 2). The results also show that feed supplementation with enzymes and vitamins in comparison to the controls markedly reduced changes in milk acidity, speed of milk fermentation and properties of formed structures. However, supplementation with Neosomatas 4 (Diet 2) have shown more pronounced influence on technological properties of milk compared to the group supplemented with Neosomatas 1 (Diet 1), respectively. There was no influence of feed supplementation with enzymes and vitamins on enzyme structure formation and process of syneresis.

Keywords: feed, lysozyme, lysosubtilin, vit. A, C, E, somatic cells, milk technological properties, cows.