

## THE IMPACT OF DIFFERENT FEEDING TECHNOLOGIES ON THE RUMINAL FLUID PARAMETERS IN DAIRY COWS

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**Summary.** The present study was design to assess the impact of different feeding technologies on the ruminal fluid microbiological and biochemical parameters. The experiments were carried out during the indoor period with twelve Lithuanian Black/White breed cows. The animals were divided into two comparable groups and fed for 5 month according to the Lithuanian standard ration for dairy cows. For experimental animals two feeding technologies were used: Group 1 was fed with unchopped forage; Group 2 was fed with mixture of forage chopped by the special feeding equipment – OptiMix™. In addition, all cows individually were fed with concentrates. Rumen fluid samples were collected 3 h after the morning feed and the following parameters were determined: pH, reduction activity of bacteria, glucose fermentation, the number of infusoria, total amount of free fatty acids (FFA) and digestibility of forage organic matter (OMD).

The cows fed with chopped forage (Group 2) have shown significantly reduced activity of ruminal bacteria, increased number of infusoria and the total amount of FFA compared with cows on unchopped forage (Group 1), respectively. Further, the cows on chopped forage (Group 2) exhibited improved fermentation of glucose and OMD *in vitro*.

**Keywords:** rumen, cows, activity of bacteria, glucose, infusoria, free fatty acids, digestibility.