

THE EFFECT OF PROBIOTIC *LEVUCCELL*[®] SC ON THE ACTIVITY OF FERMENTATIVE PROCESSES IN THE RUMEN OF DAIRY COWS AND THEIR PRODUCTIVITY

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Summary. Probiotics are considered to be especially effective preparations used in order to improve physiological functions of farm animals. The enzymes of alive yeast help to increase forage digestion and positively affect productivity of the animal. The aim of this investigation was to define the effect of probiotic *LEVUCCELL*[®] SC on the activity of fermentative processes in cattle rumen, milk yield and its quality. For this reason twenty-two cows were divided into 2 groups (experimental and control) each of 11 cows, which were fed balanced ration of the indoor period. Cows in control group (Group 1) were daily given concentrates and in experimental group (Group 2) were daily fed concentrates supplemented with *LEVUCCELL*[®] SC 58 days. This preparation contained yeast *Saccharomyces cerevisiae* CNCM 1077. The duration of the experiment was 60 days. The results from this study indicate that probiotic *LEVUCCELL*[®] SC increased pH, the level of volatile fatty acids (VFA) in rumen of experimental cows and improved glucose fermentation. Furthermore, the count of infusoria as well as total bacterial count and cellulolytic bacterial count at the end of the experiment was significantly higher compared to controls in Group 1. The results showed that supplementation with probiotic in experimental cows on 4% increased digestibility of organic matter (OM) compared to control cows ($p < 0.05$). The milk yield of the cows supplemented with probiotic (Group 2) was significantly on 4.2 kg ($p < 0.05$) higher compared to control cows in Group 1. The results of the current study evidently demonstrated that probiotic *LEVUCCELL*[®] SC fed with concentrates during the period of 58 days ensured higher activity of fermentative processes in the rumen of dairy cows. Consequently, it led to increased OM digestibility and to higher milk production in later stages of lactation.

Key words: probiotic, yeast, rumen, fermentative processes, OM digestibility, milk.