THE EFFECT OF YEAST *SACCHAROMYCES CEREVISIAE* ON INTRARUMINAL CONCENTRATION OF VOLATILE FATTY ACIDS AND BACTERIAL COUNT IN COWS

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Summary. The aim of this investigation was to define the effect of yeast *Saccharomyces cerevisiae* additive on the cows‘ intraruminal concentration of volatile fatty acids (VFA) and bacterial count and to assess the correlation between these parameters. Twelve clinically healthy cows were divided into two groups: the cows of group I (n=6) were fed ration without additives; the cows of group II (n=6) during the morning milking were given additive composed of yeast *Saccharomyces cerevisiae* (CNCM 1077) mixed with concentrated feed. During the first seven days of the experiment, each cow was given 1 g of the additive, during the following twenty three days 0.5 g. At the end of feeding the influence of supplementation on the total amount of VFA, their percentage ratio, total bacterial count and count of cellulolytic bacteria (CBC) in the ruminal fluid of the cows were studied. It was determined that yeast *Saccharomyces cerevisiae* (CNCM 1077) supplement fed with concentrated feed for the period of 30 days increased the total amount of VFA and the amount of butyric, valeric and caproic acids, and decreased the amount of acetic acid in the rumen fluid of dairy cows. Positive correlation was defined among all volatile fatty acids. Furthermore, yeast additive increased the total bacterial and cellulolytic bacterial count in the rumen fluid of cows. Positive correlation was ęstablished among CBC and acetic acid, propionic acid and butyric acid. Consequently, yeast additive positively effected VFA production and count of microorganisms and influenced the VFA ratio in the ruminants.

Keywords: yeast, rumen, volatile fatty acids, bacteria, cows.