

INFLUENCE OF EXTRUDED RAPESEEDS AND FABA BEANS MIXTURE ON PRODUCTIVITY, PRODUCTION QUALITY AND RUMEN FLUID PARAMETERS OF DAIRY COWS

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Abstract. The purpose of this study was to assess the influence of a mixture of extruded rapeseeds (70%) and fodder beans (30%) for dairy cows on fermentation processes of rumen fluid, milk productivity and quality. For the purposes of this study, 30 holsteinized Lithuanian cows of Black-and-White breed of II-IV lactation were selected and divided into 2 groups (15 cows each) applying the principle of analogous groups. The number of infusoria, the rumen reduction activity of bacteria, pH, total volatile fatty acid (VFA), content total and ammonia nitrogen were investigated during the whole experimental period. Milk quantity, composition, and quality indicators were estimated during control milking; fat, protein, lactose, and urea were assessed with the LactoScope FTIR instrument (FT1.0. 2001; Delta Instruments, the Netherlands). The investigation showed no crucial influence of the extruded rapeseeds and faba beans mixture on microbiological and biochemical indicators as well as milk composition and quality indicators of dairy cows' rumen content. However, the milk yield of the experimental cow group increased by 2.35 kg/d, i.e. 10.96 % ($P < 0.05$), while the control group showed an increase of only 0.59 kg/d, or 2.94 % ($P > 0.05$). During the whole investigation period, the experimental group of cows produced 8.02% more milk compared with the controlled group of cows.

Keywords: dairy cow, mixture of rapeseeds and faba beans, rumen, milk production