THE EFFECTS OF GLYCEROL ON THE FERMENTATION OF NITROGENOUS MATTER IN THE RUMEN AND COW PRODUCTIVITY

Darius Šidagis, Saulius Bliznikas, Virginijus Uchockis
Institute of Animal Science of Veterinary Academy, Lithuanian University for Health Sciences (LUHS)
R. Žebenkos str. 12, LT-82317 Baisogala, Radviliškis distr., Lithuania
Tel. +370 42265383; E-mail: lgi@lgi.lt

Summary. The trial was carried out with Lithuanian Black-and-White milking cows at the Institute of Animal Science of Veterinary Academy, LUHS in 2009. The cows were allocated into two analogous groups (Groups 1 and 2) by age, production and calving of 10 animals each. The diet in controls (Group 1) consisted of maize silos (58.8 %), lucerne silos (29.4 %), hay of perennial grass (11.8 %), concentrate feed ad libitum and minerals with vitamins. The experimental cows (Group 2) were fed the same diet ad libitum supplemented with 1% glycerol (according animal weight) and cows in Group 1 were served as control. The cows in Group 1 consumed daily 9.7 % more feed compared to controls (Group 1). Consequently, cows in Group 2 consumed daily on 0.75 kg more dry matter, had on 7.53 increased MJ NEL. This resulted in more stable lactation in experimental cows (Group 2). Daily milk production in Group 2 was on average 1.35 kg/day higher compared to cows in Group 1. There were no significant influence of glycerol supplementation on the fermentation of nitrogenous matter and carbohydrates in the rumen of cows.

Keywords: glycerol, diet, milk production, cows.