

THE EFFECT OF ORGANIC ACIDS, MEDIUM CHAIN FATTY ACIDS AND YEAST CELL WALLS ON PRODUCTIVITY, PHYSIOLOGICAL STATE AND INTESTINAL HISTOMORPHOLOGY OF RABBITS

*Vilma Viliene*¹, *Virginijus Slausgalvis*², *Asta Raceviciute-Stupeliene*¹, *Vilma Sasyte*¹, *Jamal Al-Saifi*², *Alius Pocekevicius*³, *Daniele Damasaite*¹

¹*Institute of Animal Rearing Technology, Lithuanian University of Health Sciences
Tilzes str. 18, LT-47181, Kaunas, Lithuania*

²*INNOV AD NV/SA, Belgium*

³*Department of Veterinary Pathology, Lithuanian University of Health Sciences, Veterinary Academy
Kaunas, Lithuania*

**Corresponding author: Vilma Viliene*

*Department of Animal Sciences, Lithuanian University of Health Sciences, Veterinary Academy
e-mail: Vilma.Viliene@lsmuni.lt, Tel: +370 37 363505*

Abstract. The study was conducted to investigate the effect of organic acids, medium chain fatty acids and yeast cell walls on the productivity, physiological state and intestinal histomorphology of the rabbits. The study was conducted with 14 Californian breed rabbits. The rabbits (77–161 days old) were assigned to two treatment groups (7 rabbits per each treatment group). The dietary treatments were 1) control diet, 2) diet supplemented with the additive *Luscent* (dosage 1 kg/t of feed) - from INNOV AD nv/sa, Belgium – a commercially available product that medium chain fatty acids, Yeast cell wall (*Saccharomyces cerevisiae*), butyric acids esters, plant extracts. The rabbits were kept in individual wire-net cages with grid floors and an individual vessel for watering and feeding. Storage conditions were the same for both groups. Rabbits were fed twice a day (*ad libitum*). During the feeding trial the following parameters were analysed: rabbits' performance, blood parameters, development of intestinal tract, pH and dry matter content in different parts of the intestine, the villus height and the crypt depth. The inclusion of organic acids, medium chain fatty acids and yeast cell walls in the compound feeds increased the rabbit's body weight, weight gain, growth rate and decreased feed intake. The feed additive *Luscent* had a positive effect on the length of the intestinal tract, the villus height in the duodenum.

Keywords: rabbits, organic acids, yeast cell wall, digestive processes