

INFLUENCE OF CHICORY FLOUR (*Cichorium intybus* L.) ON PHYSIOLOGY OF DIGESTIVE TRACT AND HEALTH IN RABBITS

Lina Ašmenskaitė¹, Jerzy Juškiewicz², Zenon Zduńczyk², Birutė Staniškienė³, Rūta Budreckienė³,
Ingrida Sinkevičienė³, Ana Žilinskienė⁴, Paulius Matusevičius⁵

¹*Department of Social Sciences and Informatics, Lithuanian Veterinary Academy, Tilžės 18, LT-47181, Kaunas, Lithuania. E-mail: lina.asmenskaite@lva.lt*

²*Department of Biological Chemistry, Lithuanian Veterinary Academy, Lithuania*

³*Department of Plant-Growing and Animal Husbandry, Lithuanian University of Agriculture, Lithuania*

⁴*Department of Animal Husbandry, Lithuanian Veterinary Academy, Lithuania*

Summary. A 36-day experiment carried out on 54-day-old rabbits addressed to analyse physiological properties of diets supplemented with chicory roots flour. Twenty-four rabbits were allocated in individual cages to three treatments, in which they were fed each diet with the chicory flour at 0.25 and 50 g/kg - I and II experimental groups (Groups 1 and 2), and control (Group 3), respectively). The chicory administered at a higher dose (Group 2), lowered ileal pH and viscosity, and evoked increased hydration of ileal and caecal digesta, compared to the controls ($P \leq 0.05$). Group 1 was characterized by the highest increase in the bulk of digesta and concentration of protein in the caecum ($P \leq 0.05$ vs. Group 3). The lowest colonic pH was found in Group 2 ($P \leq 0.05$ vs. Group 3). Group 1 was characterized by a significantly higher volatile fatty acids (VFA) pool size in the caecum, whereas rabbits in Group 2 had the highest colonic VFA pool size ($P \leq 0.05$ vs. Group 3). In conclusion, the chicory flour rich in inulin, exerted positive effects on the rabbit gastrointestinal tract physiology and would be a potential source of functional feed additives.

Key words: chicory flour, inulin, microflora, rabbits, nutrition.