NUTRITIONAL VALUE AND DIGESTIBLE ENERGY OF DIFFERENT GENOTYPES OF OATS IN THE HORSES NUTRITION

Vilma Kliševičiūtė*¹, Gintautas Juozas Švirmickas², Saulius Alijošius¹, Romas Gružauskas¹, Vilma Šašytė¹, Asta Racevičiūtė-Stupelienė¹

¹Institute of Animal Rearing Technology, Lithuanian University of Health Sciences Tilzes str. 18, LT-47181, Kaunas, Lithuania
²Institute of Animal Science, Lithuanian University of Health Sciences R. Zebenkos 12, Baisogala, Radviliskis distr., Lithuania

*Corresponding author: Vilma Kliševičiūtė

Department of Animal Sciences, Lithuanian University of Health Sciences, Veterinary Academy

e-mail: Vilma.Kliseviciute@lsmuni.lt, Tel: +370 37 363505

Abstract. Oats are grown for both grain and forage for livestock feeding over a long time in many parts of the world. In comparison with other cereals, oat grain is characterised by a larger amount of total protein and crude fat and a smaller one of crude fibre. The characteristic feature of protein is its good amino acid composition with a high nutritive value. The aim of this study was to evaluate the nutritive value and content of digestive energy for horses of different oats varieties grown in Lithuania. Fifteen different genotypes of oats, with their know growth conditions were analysed by the following methods: chemical analyses (dry matter, crude protein, crude fat, crude ash, calcium, phosphorus) were determined according to Pašarų tyrimo metodai (2003), crude fiber, NDF, ADF and ADL - by Fibertec™ 2021/2023 FiberCap™ system; horses digestible energy calculated by Pagan (1998) method. The results showed that the average of values was: dry matter − 91.07% DM, crude protein − 11.85% DM. crude fat − 4.16% DM, crude ash − 2.74% DM, crude fiber − 9.63% DM, ADL − 3.11% DM, ADF − 13.82% DM, NDF − 28.67% DM. Digestible energy for horses − 13.67 MJ/kg DM.

Keywords: oats, nutrition value, digestible energy, horses