

EFFECT OF GENOTYPE ON GROWTH INTENSITY AND MEAT QUALITY OF BULLS

Vigilijus Jukna¹, Česlovas Jukna¹, Nijolė Pečiulaitienė¹, Vita Riškevičienė², Audrius Korsukovas¹

¹*Laboratory of Meat Characteristics and Quality Assessment, Lithuanian Veterinary Academy
Tilžės 18, Kaunas LT-47181, Lithuania, tel. +370 37363414; e-mail: vjukna@lva.lt; nijole@lva.lt*

²*Department of Infectious Diseases, Lithuanian Veterinary Academy, Tilžės Str. 18, Kaunas, Lithuania
tel.: +370 37363318; e-mail: vitarisk@lva.lt*

Summary. The objective of this study was to investigate the effect of genotype on growth intensity and meat quality of Aubrac, Limousine, Lithuanian Black-and-White, Lithuanian Black-and-White x Limousine, Lithuanian Red, Lithuanian Red x Simmental, Charolais and Simmental breed bulls. Two bulls from each breed (8 breeds in total) were selected. From each bull offspring 4 calves were randomly selected (n=64). The study was performed at the Šilutė control bulls feeding station. The animals were fed a standard feed regimen and the ration was adjusted according to body weight. The feeding of bulls offspring was performed from 210 to 500 days of age. The diet consisted of hay, silage, pelleted feed, minerals and vitamins. The bulls were weighed on arrival, then every other month, and at the end of experiment. Meat quality analysis of cattle performed by a commonly used methods. Caloric value of meat was counted according Watt & Mersil [1975] formula. It was shown, that growth intensity and amount of intramuscular fat in different breed cattle was variable. The highest increase of live weight (LW) was registered in Aubrac breed, while lowest LW in Lithuanian Red breed. Meat from Lithuanian Red x Simmental crossbreed had the highest amount of intramuscular fat and higher caloric value. Intramuscular fat and meat shear force correlation coefficients were highly positive and statistically significant in Lithuanian Red and Lithuanian Red x Simmental crossbreeds. In cattle of Aubrac breed and Lithuanian Black-and-White x Limousin crossbreeds highly significant negative correlation of intramuscular fat and increase of LW was registered. These results suggested that a genetic variation among different cattle breeds had influence on meat quality and live weight.

Keywords: genotype, live weight, meat quality, bulls.