

THE INFLUENCE OF BEEF BREED BULLS ON LITHUANIAN BLACK-AND-WHITE CATTLE PRODUCTION AND QUALITY

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Summary. The objective of this study work was to investigate the potential influence of Limousin and Charolais bulls on Lithuanian Black-and-White cattle meat production and quality. Five groups of bulls, 18-20 per group, were selected. Two bull's offsprings were selected from each breed. It was shown, that the weight at the age of 500-days-old Lithuanian Black-and-White x Charolais crossbred offspring were by 47.0 kg or 10.0 % ($p < 0.001$), and Lithuanian Black-and-White x Limousin crossbred by 15.0 kg or 3.2 % ($p < 0.05$) higher than Lithuanian Black-and-White pure breed. Lithuanian Black-and-White x Limousin crossbred used by 10 MJ or 12.2 % less feed energy and Lithuanian Black-and-White x Charolais crossbreeds by 5 MJ or 6 % less feed energy compared to Lithuanian Black-and-White pure breed bulls. The influence of breed to yield of Lithuania Black-and-White crossbreeds was different. A carcass yield of Lithuanian Black-and-White x Charolais crossbreeds was by 4.67 % ($p < 0.05$), and Lithuanian Black-and-White x Limousin crossbreeds by 0.38 % ($p < 0.05$) higher than Lithuanian Black-and-White pure breed cattle. A crossing had a positive influence to soft parts of yield from hip-thigh of carcass, where are the most valuable meat by a nutrition position. A carcass yield of Lithuania Black-and-White x Limousin crossbred was by 2.34 % and Lithuanian Black-and-White x Charolais crossbred by 3.11 % higher compared to Lithuanian Black-and-White cattle. A crossing had significant influence on some indexes of meat. A meat pH of crossbreeds was by 0.94 higher ($p < 0.05$), a colour of meat was darker ($p < 0.05$), a lower water binding capacity, a meat was tender.

Keywords: meat production, meat quality, Lithuanian Black-and-White, Limousin, Charolais.