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Slaughter value and meat quality of calves from different breeds

S u m m a r y

The effect of breed of calves on slaughter value and meat quality was evaluated. The research material covered 47 calves assigned to four groups due to their breed, i.e. Polish Holstein-Friesian Black-and-White strain (n=15), Polish Holstein-Friesian Red-and-White strain (n=10), Red Polish (n=8), and Simmental (n=14). The colour of carcasses and dressing percentage, chilling loss, and kidney fat were determined. The pH, electrical conductivity (EC), shear force, drip and cooking loss, and chemical composition of *longissimus lumborum* (MLL) and *semimembranosus* (MSM) muscles were determined. The most brightness carcasses (the highest L* and the lowest a* values of external muscular tissue on round, flank and neck) had animals of Simmental and Red Polish breed, however, the darkness carcasses originated from both strains of Polish Holstein-Friesian breed. The *post mortem* glycolysis ran properly in both muscles of all breeds. The lowest EC value after 48 hrs and simultaneously the lowest drip lost were stated in MLL of Simmental calves. Similar tendency was observed for MSM in relation to Red Polish breed. The lowest cooking loss showed the MLL of Simmental breed, but MSM of Red Polish breed. A substantial significant improvement of tenderness after 7 days of the conditioning period was observed. The lowest shear force was recorded for muscles of Simmental breed. However, the toughest was meat of both strains of Polish Holstein-Friesian breed. Significantly higher content of water and simultaneously lower content of ash were determined in MLL and MSM of Polish Holstein-Friesian Black-and-White strain and Simmental breed. Summing up at similar slaughter value, carcasses of Simmental and Red Polish breed were brighter, and their meat in compare with both strains of Polish Holstein--Friesian breed showed lower drip and cooking loss and was more tender.