

VEAL QUALITY AND FATTY ACIDS CONTENT IN HOLSTEIN CALVES AT DIFFERENT DIETS

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Abstract. Effect of feed on meat and adipose tissue fatty acid composition has become an object of concern. The aim of this work was to monitor the meat yield of Holstein calves and fatty acid composition of meat. The experiment included 12 Holstein young bulls divided into two groups. After weaning, the animals in group I were fed with grain feed and hay (lucerne-grass) and in group II animals were fed hay, grain feed and maize silage. The animals were fed for 150 days. Higher individual differences in fattening indicators were revealed mainly in the second group. Significant differences were found in the percentage of carcass yield, round meat, tenderloin, pH₂₄, meat colour (L value) and weaning weight. Group II showed significantly higher proportion of saturated fatty acids C16:0, C18:0 ($P \leq 0.05$), C20:0 ($P \leq 0.001$), monounsaturated fatty acids C16:1 ($P \leq 0.05$), C18:1 ($P \leq 0.01$) and *n*-3 polyunsaturated fatty acids C20:5 *n*-3 ($P \leq 0.001$) and C22:6 *n*-3 ($P \leq 0.05$). The diet in group I produced significantly higher amounts of C18:2 *n*-6 ($P \leq 0.001$) and C18:3 *n*-3 ($P \leq 0.01$) than group II. Addition of maize silage leads to higher production of *n*-3 PUFAs with long-chain (EPA, DHA) and lowering *n*-6/*n*-3 ratio.

Keywords: veal, quality, Holstein, fattening, carcass value, fatty acids.