

CORRELATIONS BETWEEN FATTY ACID COMPOSITION IN INTRAMUSCULAR FAT AND MEAT QUALITY TRAITS IN HYBRIDS FROM DIFFERENT GENOTYPE AND GENDER

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Summary. The objective of performed study was to estimate correlations between the fatty acid composition of intramuscular fat and meat quality traits. In this study the data on evaluated meat quality traits and fatty acid composition of Lithuanian indigenous pig x wild boar hybrids from two different genotypes (1/4 and 1/2 wild boar) and gender (entire and castrated males) were used. The traits included cooking loss, water holding capacity, colour, pH (24), dry matter, fat and fatty acids. Significant phenotypic correlations were found between fatty acid composition and biochemical measurements. Cooking loss measurements significantly and positively correlated with C16:0 (0.56) and negatively with polyunsaturated fatty acids (0.60) including C18:2, C18:3, C20:3, C20:4 in meat from 1/4 wild boar genotype. Associations between fatty acids and meat quality traits for hybrids with higher proportion of wild boar (1/2 wild boar genotype) were different compared with those for 1/4 wild boar genotype. pH positively correlated ($P<0.05$) with C20:1, C20:3, tended to correlate ($0.05\leq P<0.01$) positively with C18:3, C22:5 and negatively with C16:0 in meat from 1/2 wild boar genotype. Castration of wild boar hybrids has affected the associations between fatty acid composition and meat quality traits. Several correlation coefficients within the entire male group were higher and different from those of castrates. The results from this study suggest that proportion of wild boar in hybrids and castration of these hybrids can affect the associations among fatty acid composition in intramuscular fat and meat quality traits.

Key words: swine, wild boar, hybrids, meat quality, fatty acid, correlation.