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ABSTRACT

Effects of Sire on Ether Extract and Fatty Acid Composition of the M. longissimus dorsi in Crossbred between Japanese Black Bulls and Holstein Cows

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Five Japanese Black bulls (from 3 lines) were crossed on Holstein cows and 100 cattle were produced. They were fattened on similar planes of nutrition and on the same fattening period. Samples were taken from the carcasses of these crossbred cattle to evaluate the effects of sire on beef marbling score (BMS), the percentages of moisture, ether extract, crude protein and fatty acid composition of total lipid of the M. longissimus dorsi. Data were analyzed by least-squares analysis of variance using the mixed model least-squares and maximum likelihood computer program (LSMLMW). Differences among sires were not significant in BMS, the percentages of moisture, ether extract and crude protein, however, they were significant in the percentages of myristoleic (C14 : 1), palmitic (C16 : 0), oleic (C18 : 1) and total unsaturated fatty acids per total saturated fatty acids (US/S) regardless of lines. These traits were not affected by BMS and the percentage of ether extract. The present results suggested that the rate of unsaturated fatty acids could be improved genetically without increasing the percentage of ether extract by selecting the sires that have a higher rate of unsaturated fatty acids.