

**Fatty acid of nutritional interest in young Holstein bulls fed linseed and CLA enriched diets**

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The aim of this work was to study the content of polyunsaturated fatty acid (PUFA) of nutritional interest in beef from cattle fed with concentrates enriched with whole linseed and protected conjugated linoleic acid (CLA). Forty-eight Holstein bulls were randomly assigned to one of four dietary treatments: Control, fed on corn, barley and soybean meal concentrate (C, n=12, 0% linseed and 0% CLA); Linseed (L, n=12, 10% linseed and 0% CLA); CLA (CLA, n=12, 0% linseed and 2% CLA); Linseed plus CLA (L+CLA, n=12, 10% linseed and 2% CLA). All the diets were isoenergetic (3.34 Mcal EM/kg) and isoproteic (16.9% CP). Animals were fattened from 239.8±6.61 to 458.6±9.79 kg body weight (322±6.0 d old at slaughter). Lipid profile was analyzed by GC and fatty acids were quantified using tricosanoic acid methyl ester (C23:0) as an internal standard. The contents of some PUFA of nutritional interest in bulls fed L and L+CLA diets were higher than those fed Control and CLA diets: C18:3n3 (ALA, 12.28 and 13.50 vs 1.84 and 2.08 mg/100 g muscle), C20:5n3 (EPA, 4.91 and 5.91 vs 2.39 and 2.54 mg/100 g muscle) and C22:5n3 (DPA, 11.78 and 13.26 vs 6.62 and 6.91 mg/100 g muscle). Addition of 10% whole linseed or 2% CLA improved the CLA content of beef compared with the beef from bulls fed Control diet (7.30 and 7.43 vs 5.23 mg/100 g muscle). Furthermore, linseed plus CLA showed a synergistic effect achieving the highest content of CLA (9.86 mg/100 g muscle). In conclusion, dietary supplementation with 10% linseed and 2% CLA would be recommended to increase the contents of some of the PUFA of nutritional interest (omega 3 and CLA) in beef from young Holstein bulls.