

Title Fatty acid composition of leg meat and perirenal fat of rabbits selected by growth rate
Author Jorge A. Ramírez, Isabel Díaz, Marcial Pla, Marta Gil, Agustín Blasco and Maria Àngels Oliver
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Abstract

The effect of selection for growth rate on the fatty acid composition of edible rabbit fat and meat was studied. Two groups of contemporary animals, one selected for growth rate (S) during 14 generations and other unselected control group (C) were compared. Control group were the offspring of animals originated from embryos that were vitrified at the beginning of the experiment and thawed to produce a control group contemporary with the selected group. Forty four rabbits of both sexes of group C and forty of group S were used in the experiment. The composition of fatty acids of the meat of a hind leg and of the perirenal fat was determined by gas chromatography. Selection for growth rate modified the percentage of fatty acids both in meat and in perirenal fat, and increased the content of most fatty acids in meat, but the indices related to human health were only slightly modified by selection. The changes in percentage of fatty acids in meat affected myristic (2.24 and 2.48, for C and S, respectively) palmitic (25.38 and 26.50), *cis* $n-7$ palmitoleic (2.08 and 2.79), oleic (22.52 and 23.51), linoleic (31.41 and 29.06) and arachidonic (2.10 and 1.77) acids. The highest change in indices related to human health was a 10% of reduction of the ratio polynsaturated:saturated fatty acids, which represents less than a 1% of change per generation. The ratio $n-6:n-3$ fatty acids slightly improved. Selection for growth rate would not damage the quality of meat and edible fat from a human health point of view.