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Effect of the dietary inclusion of microalgae and soybean oil on rabbit carcass traits and meat quality

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ABSTRACT: To evaluate the effects of the dietary inclusion of *Chlorella vulgaris* microalgae and soybean oil on carcass traits and meat quality, 576 growing rabbits were fed from weaning to slaughtering (33 to 71 d) 6 diets combining three levels of chlorella (0%, 1% and 2%) and two levels of soybean oil (1% and 3%). At slaughtering, 144 rabbits were randomly selected and carcass traits, muscle pH, and colour were evaluated (24 carcasses per diet). Proximate composition and fatty acid profile were assessed on 72 meat burgers, each obtained pooling the meat of 2 carcasses (12 burgers per diet). The inclusion of chlorella did not affect dressing percentage, dissectible fat and muscle-to-bone ratio in the reference carcass, but reduced the L* index of *biceps femoris* (−2%; $P<0.05$) and increased the proportion of α -linolenic acid (C18:3 n-3; +6%; $P<0.05$) in the burgers. Increasing dietary vegetable oil increased the proportion of dissectible fat in the reference carcass (+26%; $P<0.001$) and total polyunsaturated fatty acids (+21%; $P<0.001$) in the burgers. Overall, the dietary inclusion of chlorella and soybean oil at the tested levels did not impact on rabbit carcass traits, whereas increased the proportion of polyunsaturated fatty acids in the meat.

Keywords: *Chlorella vulgaris*; soybean oil; carcass traits; meat quality; fatty acids

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