

**Effect of dietary fat type on meat quality and fatty acid composition of various tissues in growing-finishing swine**

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**Abstract:** Thirty-six castrated male growing pigs were used to study the effect of dietary beef tallow (BT) versus sunflower oil (SO) on meat quality and fatty acid composition of various tissues. The diets used contained either 5% (w/w) of the variable fat source. The fat type had no significant effect on carcass traits (carcass weight, back-fat thickness, fat-lean ratio) and meat quality (colour, pH(1), pH(U), drip losses, cooking losses, shear force, sarcomere length, loin moisture, loin marbling). The diet with SO instead of BT significantly increased the incorporation of polyunsaturated fatty acids in adipose tissues, loin and liver at the expense of the sum of saturated and monounsaturated fatty acids. In erythrocytes, the diet containing SO raised the contents of saturated and polyunsaturated fatty acids and lowered that of monounsaturated fatty acids. In particular, the SO diet produced an increase in the content of linoleic acid (C18:2n-6) in the various tissues. It is concluded that feeding a diet with SO instead of BT altered the fatty acid composition of tissues without simultaneously affecting various characteristics of meat quality. (c) 2006 Elsevier Ltd. All rights reserved.

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