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Dietary conjugated linoleic acid influences the content of stearinic acid in porcine adipose tissu

Stanimirovic M, Petrujkic B, Delic N, Djelic N, Stevanovic J, Stanimirovic Z:

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[fulltext]

The present study was conducted in order to determine the effects of supplementation of a growing-finishing pig diet with 0.5% conjugated linoleic acid (CLA) on production characteristics and slaughter traits. Ninety-seven female Swedish Landrace pigs were used. The control group of animals was fed a regular diet (n = 49), while the experimental group of animals (n = 48) received a diet where part of the soybean oil was substituted with commercially enriched CLA oil (containing at least 56% of CLA isomers, 28% *cis*-9, *trans*-11 and 28% *trans*-10, *cis*-12). The experiment lasted 44 days; porkers were fed from an initial weight of 66.0 up until a final weight of

103.5 kg. Feed conversion ratio, carcass and ham weight, percentage of lean meat and subcutaneous fat tissue as well as intramuscular fat were recorded. The fatty acid content of ham intramuscular fat tissue was determined by HPLC. No statistically significant influence of CLA was observed, either on carcass and ham weight, or on fat percentage in subcutaneous and intramuscular tissue. Dietary CLA enrichment proved to increase the content of stearinic acid in intramuscular fat tissue, 17.29 ± 13.26 % in experimental and 15.87 ± 33.71 % in control group of pigs ($P < 0.01$). The obtained production results show no statistically significant changes in main production traits between the two groups of animals. The observed difference in the content of stearinic acid ($P < 0.01$) implies firmer fat tissue, which has a practical value in pig bacon fattening.

Keywords:

swine; conjugated linoleic acid; fat tissue; lean meat

[fulltext]