THE EFFECT OF ENZYMES ON THE QUALITY OF PIG PERFORMANCE

Raimondas Leikus, Jūratė Norvilienė
Institute of Animal Science of Lithuanian Veterinary Academy, R. Žebenkos 12, LT-82317. Baisogala, Radviliškis distr., Lithuania

Summary. A feeding trial with fattening pigs was carried out at the Institute of Animal Science of Lithuanian Veterinary Academy to determine the effect of multi-enzyme composition (α-amylase – 70 U/g; β-glucanase – 700 U/g; xylanase – 1800 U/g; protease – 0,8 U/g) on the growth rate of pigs and quality of carcass, meat and backfat. The results from the trial indicated that 0.05 % multi-enzyme composition supplementation of the compound feed composed of barley and triticale resulted in increased weight gains of pigs: the average daily gain was 11 % ($P<0.05$) higher, feed consumption per kg gain was 7% lower and the length of the fattening period was reduced by 9 days. However, there was no significant influence on weight gain and feed consumption when the above mentioned supplementation accounted for only 0.035 % ($P>0.4$-0.5). Supplementation of the pig diets with 0.035 % of multi-enzyme composition resulted in 4.2 mm ($P<0.025$) lower backfat thickness at the last rib, and there was a tendency towards lower backfat thickness at withers (4.6 mm; $P>0.2$) and 6^{th}-7^{th} ribs (4.3 mm; $P>0.1$), though there were no differences for the other carcass measurements ($P>0.2$-0.5). Supplementation of the compound feed with 0.05 % multi-enzyme composition had no significant influence on the carcass quality ($P>0.2$-0.5), except for 6 mm ($P<0.05$) lower backfat thickness at withers. Supplementation with multi-enzyme composition had almost no effect on the physicochemical indicators of pig meat and backfat ($P>0.1$-0.5).

Thus, it can be concluded that supplementation of the compound feed based on barley and triticale with a 0.05 % multi-enzyme composition effectively increases weight gains of pigs and reduces feed consumption per kg gain.

Key words: multi-enzyme composition, pig growth, feed consumption, carcass quality, chemical composition of meat.