

THE EFFECT OF GROWTH RATE TO MEATINESS TRAITS IN PUREBRED AND CROSSBRED PIGS

Asta Klimienė, Ramutis Klimas

Šiauliai University

P. Višinskio 19, LT-77156 Šiauliai, Lithuania

Tel. +370 41 595720; Fax. +370 41 595794; E-mail: btmc@cr.su.lt

Abstract. The aim of this study was to analyse the effect of growth rate to leanness, backfat thickness and loin lean area formation in purebred and crossbred pigs, and to determine optimal limits of daily gain that do not have crucial negative influence on meatiness traits. In the State Pig Breeding Station, the control fattening and carcass evaluation of purebred Lithuanian Whites (LW), Large Whites (La.W), Yorkshires (Y), Landraces (L), Pietrains (P), Durocs (D) and the widely used crossbred combinations (LWxL, La.WxL, La.WxP, YxL, YxP, YxPxP, LxD, LxPxP) were accomplished by the accepted methodology. During the control fattening (from 30 to approx. 95 kg weight), conditions of housing and feeding were equal for all groups of pigs. When analysing effect of fattening intensity on the meatiness indicators, grown purebred pigs (n=235) were divided into 3 groups by the daily gain: I - till 750 g, II - 751–850 g, and III – 851 g and more. Crossbred pigs (n=341) were divided into 4 groups: I – till 750 g, II – 751–850 g, III – 851–950 g, and IV – 951 g and more.

The study indicated, that leanness of LW, La.W, Y and L breed pigs that had daily gain 851 g and more was lower by 2.2–4.0 % ($P<0.05-0.001$) and backfat thickness at the last rib was higher by 1.2–2.6 mm when compared to pigs with daily gain till 750 g. Reliable thickening of backfat was found not only to Yorkshires and Landraces, but to Durocs as well ($P<0.05-0.01$). Lean meat content of all investigated combinations of crossbreds that had daily gain 951 g and more was lower by 1.7–4.1 % ($P<0.05-0.001$, except LWxL) and backfat thickness at the last rib was higher by 2.4–5.0 mm ($P<0.05-0.001$) when compared to hybrids with daily gain till 750 g. Intensity of fattening did not have crucial influence on the loin lean area for the most purebred and crossbred pigs.

According to the investigation data, in appropriate conditions of housing and omni-valued feeding the optimal limits of daily gain (from 30 to approx. 95 kg weight) that do not have crucial negative influence on meatiness traits are the following: for purebred LW, La.W, Y and L pigs daily gain are 751–850 g. Growing purebred Durocs and Pietrains on purpose to fatten is not recommended. They are kept for a possibility to be used in crossbreeding combinations as paternal forms. For hybrids of LWxL, YxL, YxP, LxD, YxPxP daily gain are 851-950 g. For crossbreds of La.WxL, La.WxP, LxPxP daily gain are 751–850 g.

Keywords: pig breeds, crossbreds, daily gain, leanness, backfat thickness, loin lean area, dependence.