

Book of Abstracts of the 68th Annual Meeting of the European Federation of Animal Science



68th ANNUAL MEETING OF
THE EUROPEAN FEDERATION
OF ANIMAL SCIENCE

28 August – 1 September 2017, Tallinn, Estonia

**Book of abstracts
No. 23 (2017)**

Comparison of pig classification results between entire and castrated males

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Entire male is the alternative to pig castration chosen by some groups in Europe and in France by the leader cooperative. Although the advantage in carcass composition is well known precise estimates are not easily available and figures can vary a lot between samples. Conversely to most of European countries sex is registered online in France during pig classification. Statistics per sex are regularly published by the regional classification organisations. The aim of this work is to compare the national classification results of entire males with these of castrated males. Since 2013 the production of entire males in France has been growing up. In 2016 about 2.6 millions of entire males were classified, i.e. 11.7% of the pigs and 23% of the males. More than 95% of the entire males are classified with the classification method CSB Image-Meater® (IM) approved by the EU in 2013. This LM% (Lean Meat Percentage) prediction equation contains two fat depths (G3 and G4) and two muscle depths (M3 and M4). The analysis of the 2016 statistics published by the classification organisation Uniporc Ouest showed that entire males had less fat (-4.0 mm of G3 and -3.5 mm of G4) and less muscle (-2.0 mm of M3 and -2.6 mm of M4). Multiplying these differences by the respective depths coefficients in the LM% equation gave the contribution of each depth to the LM% difference between entire and castrated males. These contributions were +1.9, +0.5, -0.2, -0.1 respectively for G3, G4, M3 and M4. Summing fat depths on one hand and muscle depths on the other hand gave a fat contribution of +2.4 and a muscle contribution of -0.3. The balance, largely driven by fat, was thus of +2.1 LM%. The same type of calculation with the other classification method, called CGM, gave a balance of +1.8 LM%. The respective fat and muscle contributions were of +2.1 and -0.2. Nevertheless, as both IM and CGM equations were based on sample stratified with 50% of castrated males and 50% of females, and because of sex bias, the precise size of the LM% advantage for entire males is unsure. An update of the carcass classification equations would give better estimates. Moreover, sex biases could be removed by at least a different intercept in the prediction equations. This would contribute to a better efficiency in the pig chain.

Assessment of carcasses of pigs, slaughtered with different live weightM. Povod¹, O. Kravchenko² and A. Getya³

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In modern pig production systems, the choice of optimal live weight of animal before slaughter belongs to the important issues. To clarify this question 80 heads of final hybrids Yorkshire×Landrace×Maxgro (gilts and castrates) with the age between 153 and 160 days were slaughtered. All animals, which were fattened under the condition of industrial pig farm, obtained the same ration wet feeding. Day before slaughter all animals were divided into different groups depending on their weight and sex: I group (live weight 85-95 kg), II group (live weight 95-110 kg), III group (live weight 110-120 kg). Carcass quality assessment was performed according to national Ukrainian and EUROP grading scheme using Fat-o-Meater S71 device. After assessment 8.75% of all carcasses were graded with E, 57.5% with U, 32.5% with R, 1.25% with O, while according to national norms all carcasses were ranked into the 2nd class. In the first group (light pigs) more than 80% carcasses of gilt and castrates were graded with E and U. The percentage of E and U carcasses in other groups was under 65%. Carcasses of gilts had slightly higher dressing percentage in all groups comparing with castrates. No relevant difference on lean meat content between castrates and gilts was found. The highest lean meat percentage was observed in group I: 52.27±0.71% in castrates and 52.61±0.71% in gilts. At the same time carcasses in group III had highest dressing percentage 75.23±0.46% and 76.24±0.55% in castrates and gilts respectively. Thus, increasing of live weight before slaughtering leads to increasing of dressing percentage of carcasses but causes the reduction of percentage of lean meat. This interaction need to be considered during introduction in Ukraine EUROP grading scheme instead of national norms, which don't allow classifying of all carcasses properly. Facing the forthcoming ban on chirurgical castration without anesthesia in EU the advanced study on fattening of entire mails and immunocastrated boars in Ukraine as well as on consumer behavior is required.