

Meat and fat deposition in Moura crossbred pigs slaughtered between 22 and 130 kg

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Moura is a breed that has high potential for intra and extra-muscular fat deposition and can be used for the production of fermented or cured raw products. There is a lack of information on crossbred Moura pigs, therefore, the aim of this study was to evaluate the meat and fat deposition of crossbred pigs with 29.7% Duroc, 15.6% Pietrain, 17.2% Large White, 25% Landrace, and 12.5% Moura genetic composition, slaughtered at seven different live weights. Fifty six pigs (4 barrows and 4 gilts in each slaughter weight) were housed by sex, with 4 animals per pen and fed *ad libitum*. Average body live weight was 20.9, 38.3, 62.2, 82.3, 105.8, 115.4 and 131.5 kg and average age was 56.5, 88.0, 106.5, 127.5, 148.5, 165.0 and 192.5 days at slaughter for the seven groups of slaughter, respectively. Diets were formulated to exceed the nutritional requirements of National Research Council (2012) in order to allow the maximum expression of the genetic potential. After slaughter, carcasses were eviscerated and chilled for 24 hours (4°C), after which the meat and fat of all carcasses were separated. Data were described by Michaelis-Menten function according to the formula: $\text{age}^n (\text{age}^n + k)^{-1}$. The parameters n and k were estimated by Statgraphics software. In barrows, the amount of meat increased strongly until the age of 150 days (n=3.79, k=50584600, R²=96.48%) and slightly from this point until reaching the age of 200 days. However, fat increased almost linearly until 200 days of age (n=4.99, k=61663100000, R²=95.76%). Consequently, the fat:meat ratio increased up to 200 days (n=3.00, k=1931370, R²=87.15%). In gilts, the amount of meat increased similarly to barrows (n=3.58, k=21969300, R²=96.83%), reaching the maximum point of protein deposition at 150-190 days. Differently from barrows, fat deposition in gilts reached the maximum point at 170 days (n=4.74, k=16260600000, R²=87.44%). The fat:meat ratio showed maximum point at 170-190 days (n=2.54, k=154765, R²=68.23%). For the market of fresh pork, it is suggested to carry out the slaughter of pigs from this crossbre at 150 days of age, once at this age occurs the point of maximum protein deposition without large amounts of fat. When the objective is to produce fermented or cured raw products, it is suggested to perform the slaughter at older ages, nearly 200 days. It was concluded that the crossbred evaluated has a potential for protein deposition similar to high lean genotypes and a high potential for fat deposition in heavy weights. Furthermore, can be used for *in natura* market and for processing of fermented products or dry cured hams.

Keywords: Heavy pigs, Moura breed, tissues growth