Growth of total fat and lean and of primal cuts in relation to estimated mature weight in pigs of different sexual conditions, assessed using computed tomography

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**Suplementary material**

**Supplementary Table S1.** *Anatomical location of the measurements taken from each tomogram of live pigs*

|  |  |  |
| --- | --- | --- |
| Tomogram | Location | Measurements |
| Shoulder (Fig. 1.1) | Cross section -SS- (Porcine Myology, Pork.org, 2005) | Subcutaneous fat thickness in the middle of the vertebral column and perpendicular to the skin (A) |
| Area (mm2) of the whole shoulder (B) |
| Loin(Fig. 1.2) | Between:6th-7th rib11th-12th rib14th-15th rib3rd-4th lumbar vertebrae | Subcutaneous fat thickness (mm) in the middle of the vertebral column and perpendicular to the skin (C) |
| Lateral fat thickness (mm) of right loin eye perpendicular to the skin and in the right side of the loin (D) |
| Right loin eye area (mm2) (E) |
| Ham(Fig. 1.3) | Cross section -N- (Porcine Myology, Pork.org, 2005) | Subcutaneous fat thickness (mm) at the top of the ham and perpendicular to the skin (F) |
| Lateral fat thickness (mm) at the level above the bones (G)  |
| Area of the ham (mm2) (H) |

**Suplementary Table S2.** *Least-square means of the carcass and cuts composition, depending on the sex type (SEX) and the target body weight (TBW).*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | 30 kg |  | 70 kg |  | 100 kg |  | 120 kg |  | P-Value |  |
| Parameters (g) | CM | EM | FE | IM | se | CM | EM | FE | IM | se | CM | EM | FE | IM | se | CM | EM | FE | IM | se | SEX | SEXxTBW |
| Carcass |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4cuts | 7.17 | 7.21 | 7.12 | 6.96 | 0.11 | 18.27 | 18.46 | 18.30 | 18.14 | 0.16 | 26.15 | 26.55 | 27.02 | 26.47 | 0.21 | 31.64 | 31.58 | 32.29 | 31.44 | 0.23 | 0.018 | 0.059 |
| Lean5p | 5.50ab | 5.77a | 5.40b | 5.53ab | 0.09 | 13.14b | 14.31a | 13.56b | 14.22b | 0.16 | 17.67c | 20.14a | 19.35b | 19.52b | 0.20 | 20.60c | 23.60a | 22.44b | 21.61bc | 0.28 | <.0001 | <.0001 |
| Fat4p | 1.03a | 0.84b | 1.08a | 0.77b | 0.04 | 3.75a | 2.87b | 3.36a | 2.67b | 0.10 | 6.64a | 4.72c | 5.77b | 5.41bc | 0.19 | 8.84a | 5.89c | 7.45b | 7.70b | 0.26 | <.0001 | <.0001 |
| Ham |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  Weight | 2.90ab | 2.99a | 2.86b | 2.88ab | 0.04 | 7.07b | 7.39a | 7.12b | 7.27ab | 0.06 | 9.87b | 10.52a | 10.34a | 10.31a | 0.08 | 11.74c | 12.42a | 12.21ab | 11.96bc | 0.09 | <.0001 | <.0001 |
|  Lean | 2.09 | 2.15 | 2.03 | 1.96 | 0.06 | 5.11b | 5.55a | 5.31ab | 5.41ab | 0.08 | 7.01b | 7.84a | 7.69a | 7.58a | 0.10 | 8.11c | 9.20a | 8.93ab | 8.48bc | 0.12 | <.0001 | <.0001 |
|  Fat | 0.28a | 0.24b | 0.29a | 0.22b | 0.01 | 1.10a | 0.91c | 1.00b | 0.88c | 0.02 | 1.87a | 1.42c | 1.65b | 1.63b | 0.04 | 2.42a | 1.79c | 2.10b | 2.18ab | 0.06 | <.0001 | <.0001 |
|  Bone | 0.30 | 0.30 | 0.30 | 0.30 | 0.01 | 0.58 | 0.60 | 0.59 | 0.59 | 0.01 | 0.74 | 0.78 | 0.77 | 0.76 | 0.01 | 0.85 | 0.86 | 0.86 | 0.86 | 0.01 | 0.495 | 0.521 |
| Loin |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  Weight | 1.43 | 1.41 | 1.42 | 1.25 | 0.06 | 4.94 | 4.92 | 4.93 | 4.72 | 0.06 | 7.41 | 7.42 | 7.58 | 7.35 | 0.08 | 9.07 | 8.95 | 9.13 | 8.85 | 0.11 | 0.031 | 0.812 |
|  Fat | 0.32 | 0.30 | 0.35 | 0.21 | 0.05 | 1.44a | 1.31ab | 1.25ab | 1.10b | 0.06 | 2.57a | 2.13b | 2.24b | 2.16b | 0.08 | 3.20a | 2.61b | 2.82ab | 2.85ab | 0.11 | 0.004 | 0.002 |
| Shoulder | 1.84 | 1.86 | 1.81 | 1.80 | 0.04 | 4.22 | 4.35 | 4.23 | 4.29 | 0.04 | 5.83 | 6.08 | 6.05 | 5.99 | 0.06 | 6.96 | 7.13 | 7.15 | 6.98 | 0.07 | 0.029 | 0.066 |
| Belly | 1.05ab | 1.05ab | 1.07a | 0.99b | 0.02 | 2.80ab | 2.77ab | 2.84a | 2.73b | 0.03 | 4.13ab | 4.07ab | 4.24a | 4.05b | 0.04 | 5.01a | 4.77b | 5.06a | 4.89ab | 0.05 | <.0001 | 0.006 |

+Different superscripts within a row and weight group indicate significant differences (P<0.05). The TBW effect was significant (P<0.001) for all of the parameters; se = standard error; LA = Landrace x Large White, PI = Pietrain x (Landrace x Large White) and DU = Duroc x (Landrace x Large White); Lean%=0.89 x [lean of (ham, loin, belly and shoulder and tenderloin)/weight of (ham loin belly shoulder and tenderloin)] x100; Lean5p: lean of ham, shoulder, loin, belly and tenderloin; Fat4p and Bone4p: fat and bone of ham, shoulder, loin and belly.