**Supplementary Table S2:** Prediction equations selected.

| **Parameter** | **Genotype** | **Equationa** |
| --- | --- | --- |
| ***Lean %*** | LDxLW | 33.3313+0.42723\*Plean+(0.00119\*LoinArea)+(-0.37608\*LoinSubcutLateralFat) |
|  | PIx(LDxLW) | 24.6702+0.57191\*Plean+(0.00081\*LoinArea)+(-0.24929\*HamSubcutFat) |
|  | DUx(LDxLW) | 9.9202+0.59199\*Plean+(0.00986\*HamPerimeter)+  (-0.32093\*LoinSubcutSupFat)+(0.09318\*DiagonalMuscleThickness) |
| ***Main cuts*** | |  |
| Lean | LDxLW | 10\*\*( 2.128 + 253.172 \*LogVolLean ) |
|  | PIx(LDxLW) | 10\*\*( 2.25 + 1.14 \*LogVolLean ) |
|  | DUx(LDxLW) | 10\*\*( -5037.41 + (275.949 \* VolLean) +(24.8485 \*amp\_11\_12)+(4.7186 \*HamWidth)) |
| Fat | LDxLW | -244.274 + 219.279 \* VolFat +( 46.9117 \*HamSubcutFat) |
|  | PIx(LDxLW) | -174.075 + 228.695 \* VolFat +( 34.7227 \*HamSubcutFat) |
|  | DUx(LDxLW) | -560.92 + 168.495 \* VolFat +( 100.71 \*LoinSubcutSupFat) |
| Bone | LDxLW | -14.092 + 407.302 \* VolBone |
|  | PIx(LDxLW) | 60.37 + 399.174 \* VolBone |
|  | DUx(LDxLW) | 5.258 + 396.785 \* VolBone |
| ***Ham*** |  |  |
| Weight | LDxLW | 10\*\*( 1.8373 + 1.075 \*LogTotalVol) |
|  | PIx(LDxLW) | -184.567 + 107.551 \* TotalVol |
|  | DUx(LDxLW) | -106.473 + 113.426 \*TotalVol+( -58.79 \*LoinSubcutSupFat) |
| Lean | LDxLW | -437.357 + 127.15 \* VolLean +( 19.775 \*LoinSubcutSupFat) |
|  | PIx(LDxLW) | 10\*\*( 1.7569 + 1.1874 \*LogVolLean) |
|  | DUx(LDxLW) | -101.259 + 60.1792 \* VolFat +( 27.3005 \*HamSubcutFat) |
| Fat | LDxLW | -952.16 + 159.064 \* VolLean+( -0.44383 \* VolLean\* VolLean) |
|  | PIx(LDxLW) | 10\*\*( 1.8714 + 0.9863 \*LogVolFat) |
|  | DUx(LDxLW) | -70.054 + 46.5679 \* VolFat +( 0.05383 \*HamFatArea) |
| Bone | LDxLW | 0.3559 + 138.65 \* VolBone+( -2.90522 \*HamLateralFat) |
|  | PIx(LDxLW) | 30.3274 + 126.873 \* VolBone |
|  | DUx(LDxLW) | 28.2768 + 119.213 \* VolBone |
| ***Loin*** |  |  |
| Weight | LDxLW | -680.02 + 61.1775 \*TotalVol+(48.252\*LoinSubcutSupFat) |
|  | PIx(LDxLW) | -685.91 + 77.4938 \* TotalVol |
|  | DUx(LDxLW) | -808.03 + 38.4436 \*TotalVol+(138.505\*LoinSubcutSupFat) |
| Lean | LDxLW | 63.15159 + 58.51575 \* VolLean +( 0.41809 \*LoinArea) +( -5.42972 \*LoinPerimeter) |
|  | PIx(LDxLW) | -543.185 **+** 80.6152 \* VolLean |
|  | DUx(LDxLW) | 801.3505 + 50.31777 \* VolLean +( 0.75025 \*LoinArea) +( -12.3532 \*LoinPerimeter) |
| Fat | LDxLW | -217.079 + 65.6474 \* VolFat +( 14.4885 \*HamSubcutFat) |
|  | PIx(LDxLW) | -167.014 + 71.4287 \* VolFat |
|  | DUx(LDxLW) | 10\*\*(1.5788 + 1.1654 \*LogVolFat) |
| Bone | LDxLW | -239.988 + 98.108 \* VolBone+( 0.41807 \*HamPerimeter) |
|  | PIx(LDxLW) | 1.0276 + 138.424 \* VolBone |
|  | DUx(LDxLW) | 15.955 + 75.566 \* VolBone+( 12.1084 \*LoinSubcutSupFat) |
| ***Shoulder*** |  |  |
| Weight | LDxLW | 3.065 + 55.0624 \* TotalVol |
|  | PIx(LDxLW) | -329.783 + 70.721 \* TotalVol +( -0.085215 \* TotalVol \* TotalVol) |
|  | DUx(LDxLW) | -26.047 + 57.1905 \* TotalVol |
| Lean | LDxLW | -302.048 + 76.2117 \* VolLean +( -0.02464 \*HamFatArea) |
|  | PIx(LDxLW) | 10\*\*( 1.6498 + 1.0907 \*LogVolLean) |
|  | DUx(LDxLW) | -167.279 + 56.4373 \* VolLean +( 0.03782 \*HamFatArea) |
| Fat | LDxLW | 47.93 + 51.668 \* VolFat+(-0.26241\* VolFat\* VolFat) |
|  | PIx(LDxLW) | -32.641 + 65.7754 \* VolFat+(-0.47326\* VolFat\* VolFat) |
|  | DUx(LDxLW) | 67.45 + 52.5053 \* VolFat+(-0.17932\* VolFat\* VolFat) |
| Bone | LDxLW | -11.3075 + 90.761 \* VolBone |
|  | PIx(LDxLW) | 10\*\*( 1.976 + 0.9876 \*LogVolBone) |
|  | DUx(LDxLW) | -16.8623 + 95.27 \* VolBone |
|  |  |  |
| ***Belly*** |  |  |
| Weight | LDxLW | 10\*\*( 1.2885 + 1.183 \* LogTotalVol) |
|  | PIx(LDxLW) | 1.3559 + 1.1392 \* LogTotalVol |
|  | DUx(LDxLW) | -381.842 + 47.9655 \* TotalVol |
| Lean | LDxLW | 41.564 + 29.387 \* VolLean+( 0.16671 \* VolLean\* VolLean) |
|  | PIx(LDxLW) | 10\*\*( 1.3743 + 1.1278 \*LogVolLean) |
|  | DUx(LDxLW) | -485.445 + 61.5811 \* VolLean+( -0.21133 \* VolLean\* VolLean) |
| Fat | LDxLW | -47.309 + 57.199 \* VolFat |
|  | PIx(LDxLW) | -37.346 + 55.5948 \* VolFat |
|  | DUx(LDxLW) | -111.898 + 67.8666 \* VolFat+( -0.27937 \* VolFat\* VolFat) |
| Bone | LDxLW | 16.5834 + 4.21416 \* VolLean+( 7.2243 \* VolBone)+( 0.2292 \*LoinSubcutSupFat) |
|  | PIx(LDxLW) | 10\*\*( 1.7457 + 0.9099 \*LogVolBone) |
|  | DUx(LDxLW) | -1.5791 + 51.1388 \* VolBone |
| ***Tenderloin*** | LDxLW | -48.2966 + 11.5466 \* VolLean |
|  | PIx(LDxLW) | 10\*\*( 0.7363 + 1.1611 \*LogVolLean) |
|  | DUx(LDxLW) | -62.121 + 12.3949 \* VolLean+( -0.0248 \* VolLean\* VolLean) |

aVolLean: volume between 0 Hounsfield units (HU) and 140 HU; VolFat: volume between −149 and –1 HU; VolBone: volume between 141 and 1400 HU; TotalVol: volume between −150 and 1400 HU; PLean: 100 × VolLean/TotalVol.

The other variables of the equations are explained in Figure 3 of the manuscript.