



2024/1434

28.5.2024

COMMISSION IMPLEMENTING DECISION (EU) 2024/1434

of 24 May 2024

**authorising grading methods for the classification of pig carcasses in Poland and repealing
Decision 2005/240/EC**

(notified under document C(2024) 3342)

(Only the Polish text is authentic)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) No 1308/2013 of the European Parliament and of the Council of 17 December 2013 establishing a common organisation of the markets in agricultural products and repealing Council Regulations (EEC) No 922/72, (EEC) No 234/79, (EC) No 1037/2001 and (EC) No 1234/2007⁽¹⁾, and in particular Article 20, first paragraph, point (p), thereof,

Whereas:

- (1) Article 10 of Regulation (EU) No 1308/2013 provides that Union scales for the classification of pig carcasses are to apply in accordance with point B of Annex IV to that Regulation. Section B.IV, point 1, of Annex IV to that Regulation provides that, for the classification of pig carcasses, the lean meat content is to be assessed by means of grading methods authorised by the Commission, that only statistically proven assessment methods based on the physical measurement of one or more anatomical parts of the pig carcass may be authorised and that grading methods are subject to compliance with a maximum tolerance rate for statistical error in assessment. That tolerance is defined in Part A, point 1, second paragraph, of Annex V to Commission Delegated Regulation (EU) 2017/1182⁽²⁾.
- (2) Commission Decision 2005/240/EC⁽³⁾ authorised the use of 11 methods for grading pig carcasses in Poland.
- (3) Poland has requested the Commission to withdraw the authorisation of the methods 'Fully ultrasonic automatic carcass grading (Autofom)', 'CSB Image-Meater (CSB)', 'gmSCAN', 'ESTIMEAT' and 'MEAT3D'.
- (4) Poland has requested the Commission to authorise the following new methods: 'AutoFom IV', 'CSB Image-Meater 2.0', 'EstiMeat Expert' and 'EstiMeat Pro'. For that purpose, Poland has presented a detailed description of the dissection trials, indicating the principles on which those new methods are based, the results of the dissection trials and the equations used for assessing the percentage of lean meat in the protocol referred to in Article 11(3) of Delegated Regulation (EU) 2017/1182.
- (5) Poland has also requested the Commission to authorise an updated formula for six methods ('Capteur Gras/Maigre – Sydel (CGM)', 'Ultra FOM 300', 'Autofom III', 'Fat-O-Meater II (FOM II)', 'manual method (ZP)' and 'IM-03') already authorised by Implementing Decision 2005/240/EC for grading pig carcasses on its territory.

⁽¹⁾ OJ L 347, 20.12.2013, p. 671, ELI: <http://data.europa.eu/eli/reg/2013/1308/oj>.

⁽²⁾ Commission Delegated Regulation (EU) 2017/1182 of 20 April 2017 supplementing Regulation (EU) No 1308/2013 of the European Parliament and of the Council as regards the Union scales for the classification of beef, pig and sheep carcasses and as regards the reporting of market prices of certain categories of carcasses and live animals (OJ L 171, 4.7.2017, p. 74, ELI: http://data.europa.eu/eli/reg_del/2017/1182/oj).

⁽³⁾ Commission Decision of 11 March 2005 authorising methods for grading pig carcasses in Poland (notified under document number C(2005) 552) (OJ L 74, 19.3.2005, p. 62, ELI: <http://data.europa.eu/eli/dec/2005/240/oj>).

- (6) The examination of those requests has revealed that the conditions and minimum requirements for authorising the new grading methods and updating the equations for the authorised methods as laid down in Part A of Annex V to Delegated Regulation (EU) 2017/1182 are fulfilled. The new grading methods and the new formulas should therefore be authorised in Poland.
- (7) Unless explicitly authorised by a Commission implementing decision, modifications of the grading methods or apparatuses thereof should not be allowed.
- (8) For reasons of clarity and legal certainty, Decision 2005/240/EC should be repealed.
- (9) In order to allow operators sufficient time to adapt to the technical requirements of introducing new devices and new equations, this Decision should apply from 29 July 2024.
- (10) The measures provided for in this Decision are in accordance with the opinion of the Committee for the Common Organisation of the Agricultural Markets,

HAS ADOPTED THIS DECISION:

Article 1

The use of the following grading methods is authorised for the assessment of the lean meat content of pig carcasses pursuant to Section B.IV, point 1, of Annex IV to Regulation (EU) No 1308/2013 in Poland:

- (a) the 'Capteur Gras/Maigre – Sydel (CGM)' apparatus and the assessment methods related thereto, details of which are given in Part I of the Annex;
- (b) the 'Ultra FOM 300' apparatus and the assessment methods related thereto, details of which are given in Part II of the Annex;
- (c) the 'IM-03' apparatus and the assessment methods related thereto, details of which are given in Part III of the Annex;
- (d) the 'Autofom III' apparatus and the assessment methods related thereto, details of which are given in Part IV of the Annex;
- (e) the 'Autofom IV' apparatus and the assessment methods related thereto, details of which are given in Part V of the Annex;
- (f) the 'Fat-O-Meater II (FOM II)' apparatus and the assessment methods related thereto, details of which are given in Part VI of the Annex;
- (g) the 'manual method (ZP)' and the assessment methods related thereto, details of which are given in Part VII of the Annex;
- (h) the 'CSB Image-Meater 2.0' apparatus and the assessment methods related thereto, details of which are given in Part VIII of the Annex;
- (i) the 'EstiMeat Expert' apparatus and the assessment methods related thereto, details of which are given in Part IX of the Annex;
- (j) the 'EstiMeat Pro' apparatus and the assessment methods related thereto, details of which are given in Part X of the Annex.

As regards the apparatus 'Ultra FOM 300' referred to in the first paragraph, point (b), after the end of the measurement procedure it must be possible to verify on the carcass that the apparatus measured the values of measurement X1 and X3 on the site provided for in the Annex, Part II, point 3. The corresponding marking of the measurement site must be made at the same time as the measurement procedure.

The manual method (ZP), referred to in the first paragraph, point (g), shall only be authorised for abattoirs having a slaughter line with a capacity to process no more than 40 pigs per hour.

Article 2

Notwithstanding the standard presentation referred to in Section B.III of Annex IV to Regulation (EU) No 1308/2013, the flare fat, the kidneys and the diaphragm need not be removed from pig carcasses before being weighed and graded whereas the external auditory canal may be removed. In order to establish quotations for pig carcasses on a comparable basis, the recorded hot weight shall be:

- (a) reduced:
 - (i) for diaphragm by 0,23 %;
 - (ii) for flare fat and kidneys by:
 - 1,90 % for carcasses grade S and E,
 - 2,11 % for carcasses grade U,
 - 2,54 % for carcasses grade R,
 - 3,12 % for carcasses grade O,
 - 3,35 % for carcasses grade P;
- (b) increased by 260 grams per carcass for both external auditory canals.

Article 3

Modifications of the authorised grading methods or apparatuses thereof referred to in Article 1 shall be authorised by Commission Implementing Decision.

Article 4

Decision 2005/240/EC is repealed.

Article 5

This Decision is addressed to the Republic of Poland.

It shall apply from 29 July 2024.

Done at Brussels, 24 May 2024.

For the Commission
Janusz WOJCIECHOWSKI
Member of the Commission

ANNEX

GRADING METHODS FOR THE CLASSIFICATION OF PIG CARCASSES IN POLAND

PART I

Capteur Gras/Maigre – Sydel (CGM)

1. The rules provided for in this Part shall apply when the grading of pig carcasses is carried out by means of the apparatus known as 'Capteur Gras/Maigre – Sydel (CGM)'.
2. The apparatus shall be equipped with a high-definition Sydel probe 8 mm in width, a light-emitting infra-red diode (Honeywell) and two light sensors (Honeywell). The operating distance is between 0 and 105 mm. The values measured will be converted into estimated lean meat content by the CGM itself.
3. The lean meat content of the carcass shall be calculated in accordance with the following formula:

$$Y = 60,7538 - 0,6465 \times X1 + 0,1243 \times X2$$

Where:

Y = the estimated lean meat percentage,

X1 = the thickness of the back fat measured at the third to fourth rib from last rib position, 60 mm from the dorsal midline, measured parallel to the split line of the carcass,

X2 = the thickness of the lumbar muscle measured at the third to fourth rib from the last rib position, 60 mm from the dorsal midline, measured parallel to the split line of the carcass.

This formula shall be valid for carcasses weighing between 60 and 120 kg.

PART II

Ultra FOM 300

1. The rules provided for in this Part shall apply when the grading of pig carcasses is carried out by means of the apparatus known as 'Ultra FOM 300'.
2. The apparatus shall be equipped with an ultrasonic transducer array at 3,5 MHz (U-Systems). The results of the measurements shall be converted into estimated lean meat content by means of the Ultra FOM 300 apparatus itself.
3. The lean meat content of the carcass shall be calculated in accordance with the following formula:

$$Y = 64,0655 - 0,5986 \times X1 + 0,0584 \times X2 - 0,1600 \times X3 + 0,0275 \times X4$$

Where:

Y = the estimated lean meat percentage,

X1 = the thickness of the back fat measured at the last rib position, measured at the same time, in the same place and in the same way as X2,

X2 = the thickness of the lumbar muscle measured at the last rib position, 70 mm from the dorsal midline perpendicularly to the muscle,

X3 = the thickness of the back fat measured at the third to fourth rib from the last rib position, measured at the same time, in the same place and in the same way as X4,

X4 = the thickness of the lumbar muscle measured at the third to fourth rib from the last rib position, 70 mm from the dorsal midline perpendicularly to the muscle.

This formula shall be valid for carcasses weighing between 60 and 120 kg.

PART III

IM-03

1. The rules provided for in this Part shall apply when the grading of pig carcasses is carried out by means of the apparatus known as 'IM-03'.
2. The apparatus shall be equipped with a needle-optical probe (single line scanner SLS01) of 7 mm diameter. The probe contains the line of contact image sensors (CIS) and green light-emitting diodes. The operating distance is between 0 and 132 mm.
3. The lean meat content of the carcass shall be calculated in accordance with the following formula:

$$Y = 57,3864 - 0,5657 \times X1 + 0,1476 \times X2$$

Where:

Y = the estimated lean meat percentage,

X1 = the thickness of the back fat measured at the third to fourth rib from the last rib position, 60 mm from the dorsal midline, measured parallel to the split line of the carcass,

X2 = the thickness of the lumbar muscle measured at the third to fourth rib from the last rib position, 60 mm from the dorsal midline, measured parallel to the split line of the carcass,

This formula shall be valid for carcasses weighing between 60 and 120 kg.

PART IV

Autofom III

1. The rules provided for in this Part shall apply when the classification of pig carcasses is carried out by means of the apparatus 'Autofom III'.
2. The apparatus shall be equipped with sixteen 2 MHz ultrasonic transducers (Carometec A/S), with an operating distance between transducers of 25 mm. The ultrasonic data shall comprise measurements of back fat thickness, muscle thickness and related parameters. The results of the measurements shall be converted into estimates of the percentage of lean meat by using a computer.
3. The lean meat content of the carcass shall be calculated in accordance with the following formula:

$$Y = 59,9912 - 0,3658 \times X1 - 0,3841 \times X2 + 0,0605 \times X3 + 0,0602 \times X4$$

Where:

Y = the estimated lean meat percentage,

X1 = the thickness of the back fat (without skin) at the MFT2 position,

X2 = the thickness of the back fat (without skin) at the MFT1 position,

X3 = the thickness of the lumbar muscle at the MFT2 position,

X4 = the thickness of the lumbar muscle at the MFT1 position.

The MFT refers to the position of the minimum fat thickness (without skin). MFT1 refers to the minimum fat thickness in the entire carcass and MFT2 refers to the minimum fat thickness in the lumbar closest to the bottom of the array.

This formula shall be valid for carcasses weighing between 60 and 120 kg.

PART V

Autofom IV

1. The rules provided for in this Part shall apply when the classification of pig carcasses is carried out by means of the apparatus 'Autofom IV'.
2. The apparatus shall be equipped with 16 2 MHz ultrasonic transducers (Carometec A/S), with an operating distance between transducers of 25 mm. The ultrasonic data shall comprise measurements of back fat thickness, muscle thickness and related parameters. The results of the measurements shall be converted into estimates of the percentage of lean meat by using a computer.
3. The lean meat content of the carcass shall be calculated in accordance with the following formula:

$$Y = 56,3590 - 0,7618 \times X1 + 0,0326 \times X2 + 0,0685 \times X3 + 0,0551 \times X4 + 0,3868 \times X5$$

Where:

- Y = the estimated lean meat percentage,
X1 = the thickness of the back fat (without skin) measured 70 mm from the spine at the MFT2 position,
X2 = the thickness of the lumbar muscle at the MFT2 position,
X3 = the maximum thickness of the lumbar muscle of the entire carcass,
X4 = the thickness of the lumbar muscle at the MFT1 position,
X5 = the thickness of the back fat (without skin) at the MFT2 position.

The MFT refers to the position of the minimum fat thickness (without skin). MFT1 refers to the minimum fat thickness in the entire carcass and MFT2 refers to the minimum fat thickness in the lumbar closest to the bottom of the array.

This formula shall be valid for carcasses weighing between 60 and 120 kg.

PART VI

Fat-O-Meater II (FOM II)

1. The rules provided for in this Part shall apply when the classification of pig carcasses is carried out by means of the apparatus 'Fat-O-Meater II (FOM II)'.
2. The apparatus is a new version of the Fat-O-Meater measurement system. The FOM II consists of an optical probe with a knife, a thickness measurement device having a measurement thickness of 125 mm and a data acquisition and analysis board – Carometec Touch Panel i15 computer (Ingress Protection IP69K). The results of the measurements are converted into estimated lean meat content by means of a computer.

3. The lean meat content of the carcass shall be calculated in accordance with the following formula:

$$Y = 60,3281 - 0,6493 \times X1 + 0,1529 \times X2$$

Where:

Y = the estimated lean meat percentage,

X1 = the thickness of the back fat measured at the third to fourth rib from the last rib position, 70 mm from the dorsal midline perpendicularly to the lumbar muscle,

X2 = the thickness of the lumbar muscle measured at the third to fourth rib from the last rib position, 70 mm from the dorsal midline perpendicularly to the muscle.

This formula shall be valid for carcasses weighing between 60 and 120 kg.

PART VII

Manual method (ZP)

1. The rules provided for in this Part shall apply when the grading of pig carcasses is carried out by use of the 'manual method (ZP)' measuring by ruler.
2. This method may be implemented using a ruler, with the grading determined on the basis of the prediction equation. It is based on the manual measurement on the midline of the split carcass of the thickness of the back fat and of the thickness of the lumbar muscle.
3. The lean meat content of the carcass shall be calculated in accordance with the following formula:

$$Y = 62,4306 - 0,6264 \times X1 + 0,0911 \times X2$$

Where:

Y = the estimated lean meat percentage,

X1 = the minimum thickness of visible fat on the midline of the split carcass in mm, covering the *M. gluteus medius*,

X2 = the thickness of the lumbar muscle in mm on the midline of the split carcass, measured as the shortest connection between the front (cranial) end of the *M. gluteus medius* and the upper (dorsal) edge of the vertebral canal.

This formula shall be valid for carcasses weighing between 60 and 120 kg.

PART VIII

CSB Image-Meater 2.0

1. The rules provided for in this Part shall apply when the classification of pig carcasses is carried out by means of the apparatus 'CSB Image-Meater 2.0'.
2. The CSB Image-Meater 2.0 consists of a video camera, a PC equipped with an image-analysis card, a screen, a printer, a command mechanism, a trigger mechanism and interfaces. The 5 Image-Meater variables are all measured at the split line in the ham area (around *M. gluteus medius*). The results of the measurements shall be converted into estimates of the percentage of lean meat by using a computer.

3. The lean meat content of the carcass shall be calculated in accordance with the following formula:

$$Y = 56,4264 + 0,1417 \times X1 - 0,4331 \times X2 - 0,3504 \times X3 + 0,9952 \times X4$$

Where:

- X1 = the thickness in mm of the *M. gluteus medius* at the front (cranial) end,
 X2 = mean averaged thickness in mm of the back fat over *M. gluteus medius*,
 X3 = mean averaged thickness in mm of the back fat over the vertebral bodies a, b, c, and d,
 X4 = mean averaged thickness in mm of the external layer of the back fat over the vertebral bodies a, b, c, and d.

This formula shall be valid for carcasses weighing between 60 and 120 kg.

PART IX

EstiMeat Expert

- The rules provided for in this Part shall apply when the classification of pig carcasses is carried out by means of the apparatus 'EstiMeat Expert'.
- The EstiMeat Expert apparatus consists in a depth camera that captures 3D images of the carcasses into a point cloud data, and a computer equipped with software, based on a neural model, to process the point cloud data. The images obtained are processed by the software and the output is a vector containing several thousand features.
- The lean meat content of the carcass shall be calculated in accordance with the following formula:

$$Y = 58,8209 + X1619 \times 0,1035 + X2201 \times 0,0311 + X2234 \times 0,3665 + X2293 \times 0,1774 + X2313 \times -0,3141 + X2363 \times -0,0715 + X2377 \times -0,5151 + X2425 \times 0,0360 + X2457 \times 0,0245 + X2499 \times 0,1272 + X2517 \times -0,3138 + X2592 \times -0,0177 + X2641 \times 0,0853 + X2643 \times 0,0915 + X2711 \times 0,2308 + X2805 \times 0,0598 + X2897 \times 0,0727 + X3088 \times 0,1598 + X3225 \times 0,0305 + X3317 \times 0,1003 + X3449 \times 0,0572 + X3481 \times -0,0646 + X3486 \times 0,0147 + X3497 \times -0,3797 + X3573 \times 0,0357 + X3643 \times 0,1213 + X3779 \times 0,1753 + X3788 \times -0,0265 + X3829 \times 0,0559 + X3878 \times -0,1215 + X4377 \times 0,0896 + X4411 \times -0,0141 + X4473 \times 0,0210 + X4597 \times 0,0413 + X4612 \times -0,1083 + X4633 \times 0,1482$$

Where the sequence X1619 to X4633 are the features obtained as described in point 2 and selected on the basis of a statistical analysis carried out during the authorisation trial.

This formula shall be valid for carcasses weighing between 60 and 120 kg.

PART X

EstiMeat Pro

- The rules provided for in this Part shall apply when the classification of pig carcasses is carried out by means of the apparatus 'EstiMeat Pro'.
- The EstiMeat Pro apparatus consists in a depth camera that captures 3D images of the carcasses into a point cloud data, and a computer equipped with software, based on a neural model, to process the point cloud data. The images obtained are processed by the software and the output is a vector containing several thousand features.

3. The lean meat content of the carcass shall be calculated in accordance with the following formula:

$$Y = 58,7239 + X1035 \times 0,4758 + X1083 \times -0,3372 + X1228 \times 0,2446 + X1312 \times 0,8333 + X1358 \times -0,0403 + X1484 \times 0,0297 + X2059 \times -0,1927 + X2131 \times 0,9101 + X2169 \times -0,2740 + X2201 \times -0,6023 + X2293 \times 0,7966 + X2315 \times -0,3573 + X2336 \times 0,7383 + X2425 \times -0,0186 + X2549 \times -0,4582 + X2974 \times 1,4175 + X3083 \times -0,5134 + X3131 \times -0,3641 + X3193 \times -0,3497 + X3201 \times 0,3780 + X3225 \times -0,0341 + X3317 \times 0,3329 + X3339 \times -0,4669 + X3360 \times 0,6139 + X3387 \times -0,3666 + X3409 \times -0,1408 + X3481 \times -0,0379 + X3486 \times 0,2139 + X3497 \times -0,4410 + X3532 \times -0,6743 + X3573 \times 0,2748 + X4291 \times 0,4108 + X4341 \times -0,4624 + X4363 \times 0,7046 + X4433 \times 0,4170 + X4473 \times 0,2388 + X4532 \times -0,0327 + X4597 \times 0,2930$$

Where the sequence X1035 to X4597 are the features obtained as described in point 2 and selected on the basis of a statistical analysis carried out during the authorisation trial.

This formula shall be valid for carcasses weighing between 60 and 120 kg.