



2023/2804

15.12.2023

**COMMISSION IMPLEMENTING DECISION (EU) 2023/2804**

**of 11 December 2023**

**authorising grading methods for the classification of pig carcasses in Belgium and repealing  
Implementing Decision 2012/416/EU**

*(notified under document C(2023) 8464)*

**(Only the French and Dutch texts are 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 <sup>(1)</sup>, 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 <sup>(2)</sup>.
- (2) Commission Implementing Decision 2012/416/EU <sup>(3)</sup> authorised the use of eight methods for grading pig carcasses in Belgium.
- (3) Unless explicitly authorised by a Commission implementing decision, modifications of the grading methods or apparatuses thereof should not be allowed.
- (4) Belgium has requested the Commission to withdraw the authorisation of the methods 'Capteur Gras/Maigre – Sydel (CGM)', 'Giralda Choimometer Pork Grader (PG 200)', 'Hennessy Grading Probe (HGP 4)' and 'VCS 2000'.
- (5) Belgium has requested the Commission to authorise the following new methods: 'AutoFom IV', 'CSB Image-Meater 2.0', 'CSB Image-Meater 4.0', 'OptiGrade-MCP', 'OptiScan-TPC' and 'ZP (ruler)'. For that purpose, Belgium has presented a detailed description of the dissection trials, indicating the principles on which these 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.
- (6) Belgium has also requested the Commission to authorise an updated formula for three methods ('Fat-O-Meat'er (FOM II)', 'OptiScan-TP' and 'AutoFom III') already authorised by Implementing Decision 2012/416/EU for grading pig carcasses on its territory.

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

<sup>(2)</sup> 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](http://data.europa.eu/eli/reg_del/2017/1182/oj)).

<sup>(3)</sup> Commission Implementing Decision 2012/416/EU of 19 July 2012 authorising methods for grading pig carcasses in Belgium (OJ L 194, 21.7.2012, p. 33, ELI: [http://data.europa.eu/eli/dec\\_impl/2012/416/oj](http://data.europa.eu/eli/dec_impl/2012/416/oj)).

- (7) 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 Belgium.
- (8) For reasons of clarity and legal certainty, Implementing Decision 2012/416/EU should be repealed.
- (9) 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 Belgium:

- (a) the 'AutoFom III' apparatus and the assessment methods related thereto, the details of which are set out in Part I of the Annex to this Decision;
- (b) the 'AutoFom IV' apparatus and the assessment methods related thereto, the details of which are set out in Part II of the Annex to this Decision;
- (c) the 'Fat-O-Meat'er II (FOM II)' apparatus and the assessment methods related thereto, the details of which are set out in Part III of the Annex to this Decision;
- (d) the 'OptiGrade-MCP' apparatus and the assessment methods related thereto, the details of which are set out in Part IV of the Annex to this Decision;
- (e) the 'CSB Image-Meater 2.0' apparatus and the assessment methods related thereto, the details of which are set out in Part V of the Annex to this Decision;
- (f) the 'CSB Image-Meater 4.0' apparatus and the assessment methods related thereto, the details of which are set out in Part VI of the Annex to this Decision;
- (g) the 'OptiScan-TP' apparatus and the assessment methods related thereto, the details of which are set out in Part VII of the Annex to this Decision;
- (h) the 'OptiScan-TPC' apparatus and the assessment methods related thereto, the details of which are set out in Part VIII of the Annex to this Decision;
- (i) the 'ZP (ruler)' apparatus and the assessment methods related thereto, the details of which are set out in Part IX of the Annex to this Decision.

#### *Article 2*

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

#### *Article 3*

Implementing Decision 2012/416/EU is repealed.

#### *Article 4*

This Decision is addressed to the Kingdom of Belgium.

Done at Brussels, 11 December 2023.

*For the Commission*  
Janusz WOJCIECHOWSKI  
*Member of the Commission*

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## ANNEX

**GRADING METHODS FOR THE CLASSIFICATION OF PIG CARCASSES IN BELGIUM**

## PART I

**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 (Frontmatec), with an operating distance between transducers of 25 mm. The ultrasonic data are converted into measurements of back fat thickness, muscle thickness and related parameters. The results of the measurements are converted into estimates of the percentage of lean meat by the apparatus.
3. The lean meat content of the carcass shall be calculated in accordance with the following formula:

$$Y = 63,95763 - 0,35761 \times R2P10 - 0,26503 \times R2P8 - 0,30317 \times R2P4 + 0,08574 \times R3P5;$$

Where:

Y =	Estimated lean meat percentage;
R2P10 =	The minimum fat thickness (mm) without skin in the carcass (this point defines MFT1 position);
R2P8 =	Back fat thickness (mm) without skin in the MFT2 position (MFT2 is the point of minimum fat thickness in the loin closest to the bottom of the array);
R2P4 =	Back fat thickness (mm) without skin in the P2 position (P2 measures are determined 70 mm from the spine in MFT2);
R3P5 =	The maximum loin depth (mm) of the entire carcass.

This formula shall be valid for carcasses weighing between 60 and 140 kilograms.

## PART II

**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 25 wide band ultrasonic transducers (Frontmatec), with an operating distance between transducers of 16,5 mm. The ultrasonic data are converted into measurements of back fat thickness, muscle thickness and related parameters. The results of the measurements are converted into estimates of the percentage of lean meat by the apparatus.
3. The lean meat content of the carcass shall be calculated in accordance with the following formula:

$$Y = 62,52816 - 0,56134 \times R2P10 - 0,30048 \times R2P8 + 0,10289 \times R3P5;$$

Where:

Y =	Estimated lean meat percentage;
R2P10 =	The minimum fat thickness (mm) without skin in the carcass (this point defines MFT1 position);
R2P8 =	Back fat thickness (mm) without skin in the MFT2 position (MFT2 is the point of minimum fat thickness in the loin closest to the bottom of the array);
R3P5 =	The maximum loin depth (mm) of the entire carcass;

This formula shall be valid for carcasses weighing between 60 and 140 kilograms.

## PART III

**Fat-O-Meat'er 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-Meat'er II (FOM II)'.
2. The apparatus is a Fat-O-Meat'er type of equipment, and it shall be equipped with a probe of six mm diameter containing a photodetector and having an operating depth up to 125 mm.
3. The lean meat content of the carcass shall be calculated in accordance with the following formula:

$$Y = 64,98677 - 0,82043 \times X_1 + 0,11917 \times X_2;$$

Where:

Y = Estimated lean meat percentage;

X<sub>1</sub> = Fat depth (including skin) (mm) measured perpendicularly to the back of the carcass (7 cm off the split line on the outside and ± 4 cm off the split line on the inside) between the 3rd/4th last ribs;

X<sub>2</sub> = Muscle depth (mm) measured perpendicularly to the back of the carcass (7 cm off the split line on the outside and ± 4 cm off the split line on the inside) between the 3rd/4th last ribs.

This formula shall be valid for carcasses weighing between 60 and 140 kilograms.

## PART IV

**OptiGrade-MCP**

1. The rules provided for in this Part shall apply when the classification of pig carcasses is carried out by means of the apparatus 'OptiGrade-MCP'.
2. The apparatus shall be equipped with an optical probe 6 mm in diameter, one infrared photodiode and a photo transistor. The operating distance shall be between 0 and 125 mm.
3. The lean meat content of the carcass shall be calculated in accordance with the following formula:

$$Y = 65,18582 - 0,83449 \times X_1 + 0,12034 \times X_2;$$

Where:

Y = Estimated lean meat percentage;

X<sub>1</sub> = Fat depth (including skin) (mm) measured perpendicularly to the back of the carcass (7 cm off the split line on the outside and ± 4 cm off the split line on the inside) between the 3rd/4th last ribs;

X<sub>2</sub> = Muscle depth (mm) measured perpendicularly to the back of the carcass (7 cm off the split line on the outside and ± 4 cm off the split line on the inside) between the 3rd/4th last rib.

This formula shall be valid for carcasses weighing between 60 and 140 kilograms.

## PART V

**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 in particular of a video camera, a PC equipped with an image-analysis card, a screen, a command mechanism, a trigger mechanism and interfaces. The Image-Meater variables are all measured at the split line in the ham area (around musculus 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:

$$Y = 65,64227 - 0,19817 \times ZPF + 0,02295 \times ZPM - 0,21595 \times MF + 0,05384 \times MM - 0,17837 \times V4F;$$

Where:

Y =	Estimated lean meat percentage;
ZPF =	Smallest fat depth (including skin) (mm) over the musculus gluteus medius;
ZPM =	Lumbar muscle depth (mm) measured as the shortest distance from the front (cranial) end of the musculus gluteus medius to the upper (dorsal) edge of the spinal canal;
MF =	Mean fat thickness (mm) over the musculus gluteus medius;
MM =	Mean muscle thickness (mm) of the musculus gluteus medius;
V4F =	Mean fat thickness (mm) above the 4 vertebrae.

This formula shall be valid for carcasses weighing between 60 and 140 kilograms.

## PART VI

**CSB Image-Meater 4.0**

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 4.0'.
2. The CSB Image-Meater 4.0 consists in particular of a video camera, a PC equipped with an image-analysis card, a screen, a command mechanism, a trigger mechanism and interfaces. The Image-Meater variables are all measured at the split line in the ham area (around musculus 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:

$$Y = 65,38538 - 0,18721 \times ZPF + 0,02861 \times ZPM - 0,20286 \times MF + 0,05062 \times MM - 0,17544 \times V4F;$$

Where:

Y =	Estimated lean meat percentage;
ZPF =	Smallest fat depth (including skin) (mm) over the musculus gluteus medius;
ZPM =	Lumbar muscle depth (mm) measured as the shortest distance from the front (cranial) end of the musculus gluteus medius to the upper (dorsal) edge of the spinal canal;
MF =	Mean fat thickness (mm) over the musculus gluteus medius;
MM =	Mean muscle thickness (mm) of the musculus gluteus medius;
V4F =	Mean fat thickness (mm) above the 4 vertebrae.

This formula shall be valid for carcasses weighing between 60 and 140 kilograms.

## PART VII

**OptiScan-TP**

1. The rules provided for in this Part shall apply when the classification of pig carcasses is carried out by means of the apparatus 'OptiScan-TP'.
2. The OptiScan-TP apparatus shall be equipped with a digital camera, an extension to standardize the distance from the camera guide (with spring-loaded ruler) and a data acquisition and analysis board (inside the device). Firstly, the extension is placed at the  $X_1$  position for measuring  $X_1$  fat thickness. Next, the ruler is hooked into the spinal canal and the extension is placed at the  $X_2$  position for measuring lumbar muscle thickness. The images shall be the base for the calculation of fat and muscle thickness. The results of the measurements shall be converted into estimated lean meat content by means of the OptiScan-TP apparatus itself.
3. The lean meat content of the carcass shall be calculated in accordance with the following formula:

$$Y = 64,36031 - 0,67190 \times X_1 + 0,08306 \times X_2;$$

Where:

Y = Estimated lean meat percentage;

$X_1$  = Smallest fat depth (including skin) (mm) over the musculus gluteus medius;

$X_2$  = Lumbar muscle depth (mm) measured as the shortest distance from the front (cranial) end of the musculus gluteus medius to the upper (dorsal) edge of the spinal canal.

This formula shall be valid for carcasses weighing between 60 and 140 kilograms.

## PART VIII

**OptiScan-TPC**

1. The rules provided for in this Part shall apply when the classification of pig carcasses is carried out by means of the apparatus 'OptiScan-TPC'.
2. The OptiScan-TPC apparatus shall be equipped with a digital camera, an extension to standardize the distance from the camera guide (with spring-loaded ruler) and a data acquisition and analysis board (inside the device). The ruler is hooked into the spinal canal and the extension is placed at the  $X_2$  position for measuring lumbar muscle thickness. One picture is taken of the lumbar area indicating the position for measuring lumbar muscle thickness and measuring  $X_1$  fat thickness. The image shall be the base for the calculation of fat and muscle thickness. The results of the measurements shall be converted into estimated lean meat content by means of the OptiScan-TPC apparatus itself.
3. The lean meat content of the carcass shall be calculated in accordance with the following formula:

$$Y = 64.88925 - 0.63908 \times X_1 + 0.06647 \times X_2;$$

Where:

Y = Estimated lean meat percentage;

$X_1$  = Smallest fat depth (including skin) (mm) over the musculus gluteus medius;

$X_2$  = Lumbar muscle depth (mm) measured as the shortest distance from the front (cranial) end of the musculus gluteus medius to the upper (dorsal) edge of the spinal canal.

This formula shall be valid for carcasses weighing between 60 and 140 kilograms.

## PART IX

**ZP (ruler)**

1. The rules provided for in this Part shall apply when the classification of pig carcasses is carried out by means of the apparatus 'ZP (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 mid-line of the split carcass of the thickness of the muscle and of the thickness of the fat.
3. The lean meat content of the carcass shall be calculated in accordance with the following formula:

$$Y = 63,47584 - 0,65106 \times X_1 + 0,08389 \times X_2;$$

Where:

Y = Estimated lean meat percentage;

X<sub>1</sub> = Smallest fat depth (including skin) (mm) over the musculus gluteus medius;

X<sub>2</sub> = Lumbar muscle depth (mm) measured as the shortest distance from the front (cranial) end of the musculus gluteus medius to the upper (dorsal) edge of the spinal canal;

This formula shall be valid for carcasses weighing between 60 and 140 kilograms.

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