

## COMMISSION IMPLEMENTING DECISION

of 19 July 2012

authorising methods for grading pig carcasses in Belgium

(notified under document C(2012) 4933)

(Only the Dutch and French texts are authentic)

(2012/416/EU)

THE EUROPEAN COMMISSION,

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

Having regard to Council Regulation (EC) No 1234/2007 of 22 October 2007 establishing a common organisation of agricultural markets and on specific provisions for certain agricultural products (Single CMO Regulation) <sup>(1)</sup>, and in particular Article 43(m), in conjunction with Article 4 thereof,

Whereas:

- (1) Point 1 of Section B.IV of Annex V to Regulation (EC) No 1234/2007 provides that, for the classification of pig carcasses, the lean-meat content has to be assessed by means of grading methods authorised by the Commission, which methods may only be statistically proven assessment methods based on the physical measurement of one or more anatomical parts of the pig carcass. The authorisation of grading methods is subject to compliance with a maximum tolerance for statistical error in assessment. That tolerance is defined in Article 23(3) of Commission Regulation (EC) No 1249/2008 of 10 December 2008 laying down detailed rules on the implementation of the Community scales for the classification of beef, pig and sheep carcasses and the reporting of prices thereof <sup>(2)</sup>.
- (2) By Decision 97/107/EC <sup>(3)</sup>, the Commission authorised the use of five methods for grading pig carcasses in Belgium.
- (3) Due to changes in the pig population, the formulae used with these methods are currently underestimating the lean meat content. It is therefore necessary to update the formula of the authorised methods and to obtain and use three new grading methods.
- (4) Belgium has requested the Commission to authorise eight methods for grading pig carcasses on its territory and has presented a detailed description of the dissection trial, indicating the principles on which those methods are based, the results of its dissection trial and the equations used for assessing the percentage of lean meat in the protocol provided for in Article 23(4) of Regulation (EC) No 1249/2008.

- (5) Examination of that request has revealed that the conditions for authorising those grading methods are fulfilled. Those grading methods should therefore be authorised in Belgium.
- (6) Modifications of the apparatus or grading methods should not be allowed, unless they are explicitly authorised by Commission Implementing Decision.
- (7) For reasons of clarity and legal certainty, Decision 97/107/EC should be repealed.
- (8) In view of the technical circumstances while introducing new devices and new equations, the methods for grading pig carcasses authorised under Decision 97/107/EC should continue to apply up to 30 September 2012.
- (9) The measures provided for in this Decision are in accordance with the opinion of the Management Committee for the Common Organisation of the Agricultural Markets,

HAS ADOPTED THIS DECISION:

*Article 1*

The use of the following methods is authorised for grading pig carcasses pursuant to point 1 of Section B.IV of Annex V to Regulation (EC) No 1234/2007 in Belgium:

- (a) the 'Capteur Gras/Maigre — Sydel (CGM)' apparatus and the assessment methods related thereto, details of which are given in Part 1 of the Annex;
- (b) the 'Giralda Choirometer Pork Grader (PG 200)' apparatus and the assessment methods related thereto, details of which are given in Part 2 of the Annex;
- (c) the 'Hennessy Grading Probe (HGP 4)' apparatus and the assessment methods related thereto, details of which are given in Part 3 of the Annex;
- (d) the 'Fat-O-Meat'er (FOM II)' apparatus and the assessment methods related thereto, details of which are given in Part 4 of the Annex;
- (e) the 'OptiScan TP' apparatus and the assessment methods related thereto, details of which are given in Part 5 of the Annex;

<sup>(1)</sup> OJ L 299, 16.11.2007, p. 1.

<sup>(2)</sup> OJ L 337, 16.12.2008, p. 3.

<sup>(3)</sup> OJ L 39, 8.2.1997, p. 17.

- (f) the 'CSB Image-Meater' apparatus and the assessment methods related thereto, details of which are given in Part 6 of the Annex;
- (g) the 'VCS 2000' apparatus and the assessment methods related thereto, details of which are given in Part 7 of the Annex;
- (h) the 'AutoFOM III' apparatus and the assessment methods related thereto, details of which are given in Part 8 of the Annex.

*Article 2*

Modifications of the authorised apparatus or assessment methods shall not be allowed, unless those modifications are explicitly authorised by Commission Implementing Decision.

*Article 3*

Decision 97/107/EC is repealed.

However, up to 30 September 2012, Belgium may continue to apply the methods for grading pig carcasses authorised under Decision 97/107/EC.

*Article 4*

This Decision is addressed to the Kingdom of Belgium.

Done at Brussels, 19 July 2012.

*For the Commission*

Dacian CIOLOȘ

*Member of the Commission*

## ANNEX

## METHODS FOR GRADING PIG CARCASSES IN BELGIUM

## PART 1

**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 shall be between 0 and 105 mm. The values measured shall be converted into estimated lean meat content by the CGM itself.
3. The lean meat content of a carcass shall be calculated according to the following formula:

$$\hat{Y} = 66,09149 - 0,82047 \times X_1 + 0,10762 \times X_2$$

where:

$\hat{Y}$  = the estimated percentage of lean meat in a carcass,

$X_1$  = the thickness of backfat (including rind) in millimetres, measured 6 cm off the split line between the third and the fourth last ribs,

$X_2$  = the thickness of the dorsal muscle in millimetres, measured at the same time, in the same place and in the same way as  $X_1$ .

This formula shall be valid for a carcass weighing between 60 and 130 kilograms.

## PART 2

**Giralda choirometer pork grader (PG200)**

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 'Giralda Choirometer Pork Grader (PG 200)'.
2. The PG200 apparatus shall be equipped with a probe (Siemens KOM 2110) 6 mm in width, a light diode (LED Siemens F 28) and a light sensor (Siemens F 232). The operating distance shall be between 0 and 125 mm. The values measured shall be converted into estimated lean meat content by the PG200 apparatus itself.
3. The lean meat content of a carcass shall be calculated according to the following formula:

$$\hat{Y} = 70,09860 - 0,84616 \times X_1 + 0,091860 \times X_2$$

where:

$\hat{Y}$  = the estimated percentage of lean meat in a carcass,

$X_1$  = the thickness of backfat (including rind) in millimetres, measured perpendicularly to the back of the carcass (7 cm off the split line on the outside and  $\pm$  4 cm off the split line on the inside) between the third and the fourth last ribs,

$X_2$  = the thickness of the dorsal muscle in millimetres, measured at the same time, in the same place and in the same way as  $X_1$

This formula shall be valid for a carcass weighing between 60 and 130 kilograms.

## PART 3

**Hennessy grading probe (HGP4)**

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 'Hennessy Grading Probe (HGP4)'.
2. The HGP4 apparatus shall be equipped with a probe of 5,95 millimetres diameter (and of 6,3 millimetres at the blade on top of the probe) containing a photodiode and photodetector and having an operating distance of between 0 and 120 millimetres. The results of the measurements shall be converted into estimated lean meat content by means of the HGP4 apparatus itself or a computer linked to it.

3. The lean meat content of a carcass shall be calculated according to the following formula:

$$\hat{Y} = 70,37871 - 0,86986 \times X_1 + 0,080138 \times X_2$$

where:

$\hat{Y}$  = the estimated percentage of lean meat in a carcass,

$X_1$  = the thickness of backfat (including rind) in millimetres, measured 6 cm off the split line between the third and the fourth last ribs,

$X_2$  = the thickness of the dorsal muscle in millimetres, measured at the same time, in the same place and in the same way as  $X_1$ .

This formula shall be valid for a carcass weighing between 60 and 130 kilograms.

#### PART 4

##### Fat-O-Meat'er (FOM II)

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 'Fat-O-Meat'er (FOM II)'.
2. The apparatus is a new version of the Fat-O-Meat'er measurement system. The FOM II consists of an optical probe with a knife, a depth measurement device having an operating distance of between 0 and 125 millimetres and a data acquisition and analysis board — Carometec Touch Panel i15 computer (Ingress Protection IP69K). The results of the measurements shall be converted into estimated lean meat content by the FOM II apparatus itself.
3. The lean meat content of a carcass shall be calculated according to the following formula:

$$\hat{Y} = 68,85997 - 0,94985 \times X_1 + 0,088314 \times X_2$$

where:

$\hat{Y}$  = the estimated percentage of lean meat in a carcass,

$X_1$  = the thickness of backfat (including rind) in millimetres, measured perpendicularly to the back of the carcass (7 cm off the split line on the outside and  $\pm$  4 cm off the split line on the inside) between the second and third last ribs,

$X_2$  = the thickness of the dorsal muscle in millimetres, measured at the same time, in the same place and in the same way as  $X_1$ .

This formula shall be valid for a carcass weighing between 60 and 130 kilograms.

#### PART 5

##### OptiScan TP

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 'OptiScan TP'.
2. The Optiscan-TP apparatus shall be equipped with a digital imager taking an illuminated photo of the two measurement points on the carcasses. The images shall be the base for the calculation of fat and muscle thickness according to the two points method 'Zwei-Punkte Messverfahren (ZP)'.

The results of the measurements shall be converted into estimated lean meat content by means of the Optiscan-TP apparatus itself. The photos are saved and can later be controlled. The integrated Bluetooth® interface permits easy data transfer.

3. The lean meat content of a carcass shall be calculated according to the following formula:

$$\hat{Y} = 58,81491 - 0,64150 \times X_1 + 0,16873 \times X_2$$

where:

$\hat{Y}$  = the estimated percentage of lean meat in a carcass,

$X_1$  = the minimal thickness of fat (including rind) in millimetres, over the *M. gluteus medius*,

$X_2$  = the thickness of the lumbar muscle in millimetres, measured as the shortest distance from the front (cranial) end of the *M. gluteus medius* to the upper (dorsal) edge of the spinal canal.

This formula shall be valid for a carcass weighing between 60 and 130 kilograms.

## PART 6

**CSB Image Meater (CSB)**

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 'CSB Image-Meater'.
2. The CSB-Image-Meater apparatus is an online picture-processing system where via a camera system carcass's halves are automatically filmed. The picture data is then processed in a computer by special picture processing software. The CSB-Image-Meater variables shall be 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.
3. The lean meat content of a carcass shall be calculated according to the following formula:

$$\hat{Y} = 71,65733 - (0,22223 \times S) + (0,032383 \times F) - (0,20522 \times MS) + (0,053050 \times MF) - (0,13195 \times WL) - (0,16384 \times WaS)$$

where:

- $\hat{Y}$  = the estimated percentage of lean meat in a carcass,
- S = the minimal thickness of fat (including rind) in millimetres, over *M. gluteus medius*,
- F = the thickness of the lumbar muscle in millimetres, measured as the shortest distance from the front (cranial) end of *M. gluteus medius* to the upper (dorsal) edge of the spinal canal,
- MS = the average thickness of fat over *M. gluteus medius* (mm),
- MF = the average muscle depth below *M. gluteus medius* (mm),
- WL = the average length of vertebrae including spinal disks (mm),
- WaS = the average thickness of fat over the 1st measured vertebra (a) (mm)

4. The measuring points are described in Part II of the protocol presented to the Commission by Belgium in accordance with Article 23(4) of Regulation (EC) No 1249/2008.

This formula shall be valid for a carcass weighing between 60 and 130 kg.

## PART 7

**VCS 2000**

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 'VCS 2000'.
2. The VCS 2000 apparatus is an online picture-processing system where via a camera system the carcass halves are automatically filmed. The picture data is then processed in a computer by special picture processing software. The results of the measurements shall be converted into estimated lean meat content.
3. The lean meat content of a carcass shall be calculated according to the following formula:

$$\hat{Y} = 51,85549 + (0,013351 \times TL1) + (0,020216 \times TL4) + (0,012917 \times TL6) - (0,0061754 \times TL7) + (0,014479 \times TL8) - (0,000020016 \times HF13) - (0,0067020 \times HL7) - (0,015821 \times HL8) + (10,97550 \times HV1) - (0,000010969 \times HF26) - (0,00043912 \times HF28) - (0,000021232 \times HF31) - (0,000019406 \times HF34) - (0,024227 \times HL15) - (0,00998666 \times HL17) - (0,0085447 \times HL18) - (0,020238 \times HL20) - (0,0086577 \times HL21) - (0,0076468 \times HL23) - (0,0074809 \times HL24) + (0,074204 \times HV19) - (0,0058634 \times HL31) - (0,015560 \times SBAR1) - (0,015265 \times SBAR2) - (0,019170 \times SBAM2) + (0,043510 \times VBAM2) - (0,026957 \times FBAR4) - (0,010999 \times KBAR4) - (0,018434 \times FBAM4) - (0,017239 \times SBAR5) + (0,072272 \times VBAM5) - (0,0071030 \times SBAM5) + (0,068737 \times VBM5) - (3,68219 \times TL2/TL8) - (1,17220 \times TL5/TL8) - (3,19090 \times TL7/TL8) + (4,49917 \times TL1/TL5) + (9,13323 \times TL4/TL5) + (4,82528 \times TL6/TL5) - (6,62198 \times HL15/HL7) - (2,36961 \times HL17/HL7) - (1,75295 \times HL18/HL7) - (5,58346 \times HL20/HL7) - (1,66395 \times HL23/HL7) + (2,85610 \times HL30/HL7) + (0,0034487 \times HL1/HL18) + (0,0036430 \times HL4/HL18) + (0,0046569 \times HL9/HL18) + (0,096880 \times HL10/HL18) + (0,0051002 \times HL12/HL18) + (0,076501 \times HL13/HL18) + (0,0054646 \times HL14/HL18) - (1,49515 \times HL15/HL18) - (1,18547 \times HL20/HL18) + (0,082962 \times HL27/HL18) + (0,071890 \times HL30/HL18) + (0,086655 \times HL32/HL18) + (44,62296 \times HF2/HF1) - (44,62325 \times HF3/HF1) + (26,92160 \times HF4/HF1) - (2,60469 \times HF26/HF1) - (138,22300 \times HF28/HF1) - (5,26517 \times HF31/HF1) - (4,09877 \times HF34/HF1) + (108,30840 \times HF37/HF1) + (8,05099 \times HF40/HF1) + (0,30959 \times HF4/HF26) + (1,21963 \times HF20/HF26) - (20,88758 \times HF28/HF26) + (1,67606 \times HF37/HF26) + (0,15193 \times HF40/HF26)$$

where:

$\hat{Y}$  = the estimated percentage of lean meat in a carcass,

TL1, TL4, TL6 ... HF40/HF26 are the variables measured by VCS 2000.

4. The measuring points are described in Part II of the protocol presented to the Commission by Belgium in accordance with Article 23(4) of Regulation (EC) No 1249/2008.

This formula shall be valid for a carcass weighing between 60 and 130 kg.

#### PART 8

##### AutoFOM III

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 '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 backfat 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 a carcass shall be calculated according to the following formula:

$$\begin{aligned} \hat{Y} = & 72,82182 - (0,055746 \times R2P2) - (0,056757 \times R2P3) - (0,054895 \times R2P4) - (0,055823 \times R2P6) - \\ & (0,056800 \times R2P7) - (0,054876 \times R2P8) - (0,056419 \times R2P10) - (0,055541 \times R2P11) - (0,022251 \times \\ & R2P13) - (0,022702 \times R2P14) - (0,051975 \times R2P15) - (0,030301 \times R2P16) + (0,011064 \times R3P1) + \\ & (0,011312 \times R3P3) + (0,011353 \times R3P5) + (0,011789 \times R3P6) + (0,012286 \times R3P7) + (0,010915 \times \\ & R3P9) - (0,033450 \times R4P7) - (0,020275 \times R4P8) - (0,032423 \times R4P9) - (0,038300 \times R4P10) - \\ & (0,062709 \times R4P11) - (0,027456 \times R4P12) - (0,052494 \times R4P13) - (0,064748 \times R4P15) - (0,076343 \times \\ & R4P16) \end{aligned}$$

where:

$\hat{Y}$  = the estimated percentage of lean meat in a carcass,

R2P2, R2P3, R2P4 ... R4P16 — are the variables measured by AutoFOM III,

4. The measuring points are described in Part II of the protocol presented to the Commission by Belgium in accordance with Article 23(4) of Regulation (EC) No 1249/2008.

This formula shall be valid for a carcass weighing between 60 and 130 kg.