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COMMISSION DECISION

of 19 December 2008

authorising methods for grading pig carcases in Spain

(notified under document number C(2008) 8477)

(Only the Spanish text is authentic)

(2009/11/EC)

(OJ L 6, 10.1.2009, p. 79)

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THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Regulation (EEC) No 3220/84 of 13 November 1984 determining the Community scale for grading pig carcases [1], and in particular Article 5(2) thereof,

Whereas:

(1) Under Article 2(3) of Regulation (EEC) No 3220/84, the grading of pig carcases is to be determined by estimating the lean meat content by means of statistically proven assessment methods based on the physical measurement of one or more anatomical parts of the pig carcase. The authorisation of grading methods is subject to compliance with a maximum tolerance for statistical error in assessment. This tolerance is defined in Article 3(2) of Commission Regulation (EEC) No 2967/85 of 24 October 1985 laying down detailed rules for the application of the Community scale for grading pig carcases [2].

(2) Commission Decision 88/479/EEC [3] authorises four methods (DEST, FOM, HGP and Autofom) for grading pig carcases in Spain.

(3) Due to technical adaptations, Spain has asked the Commission to authorise the update of two methods (FOM and Autofom), the utilisation of two new methods (Ultrafom 300 and VCS2000) and the repeal of two methods (HGP and DEST), and has presented the results of its dissection trials in the second part of the protocol provided for in Article 3(3) of Regulation (EEC) No 2967/85.

(4) Examination of this request has revealed that the conditions for authorising these grading methods are fulfilled.

[1] OJ L 301, 20.11.1984, p. 1.
[2] OJ L 285, 25.10.1985, p. 39.
[3] OJ L 234, 24.8.1988, p. 20.

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(5) In accordance with the second subparagraph of Article 2(1) of Regulation (EEC) No 3220/84 Member States may be authorised to provide for a presentation of pig carcases different from the one specified in that Article where commercial practice or technical requirements warrant such a derogation. In Spain, commercial practice may require also the removal of the forefeet from the pig carcases, in addition to the removal of the tongue, bristles, hooves, genital organs, fare flat, kidneys and diaphragm as required by Article 2(1) of Regulation (EEC) No 3220/84.

(6) No modification of the apparatus or grading methods may be authorised except by means of a new Commission Decision adopted in the light of experience gained. For this reason, the present authorisation may be revoked.

(7) For the sake of clarity, Decision 88/479/EEC should be repealed and replaced by a new Decision.

(8) The measures provided for in this Decision are in accordance with the opinion of the Management Committee for the Common Organisation of Agricultural Markets,

HAS ADOPTED THIS DECISION:

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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 Council Regulation (EC) No 1234/2007 ([1]) in Spain:

(a) the ‘Fat-O-Meat’er (FOM)’ apparatus and the assessment methods related thereto, details of which are given in Part 1 of the Annex;

(b) the ‘Fully automatic ultrasonic carcase grading (Autofom)’ apparatus and the assessment methods related thereto, details of which are given in Part 2 of the Annex;

(c) the ‘Ultrafom 300’ apparatus and the assessment methods related thereto, details of which are given in Part 3 of the Annex;

(d) the ‘Automatic vision system (VCS2000)’ apparatus and the assessment methods related thereto, details of which are given in Part 4 of the Annex;

(e) the ‘Fat-O-Meat’er II (FOM II)’ apparatus and the assessment methods related thereto, details of which are given in Part 5 of the Annex;

(f) the ‘AutoFOM III’ apparatus and the assessment methods related thereto, details of which are given in Part 6 of the Annex;

(g) the ‘manual method (ZP)’ with a ruler and the assessment methods related thereto, details of which are given in Part 7 of the Annex.

([1]) OJ L 299, 16.11.2007, p. 1.

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The manual method ZP with a ruler, referred to in point (g) of the first paragraph, shall only be authorised for abattoirs:

(a) where the number of slaughters does not exceed 500 pigs per week on yearly average basis; and

(b) having a slaughter line with a capacity to process no more than 40 pigs per hour.

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Article 2

By way of derogation from Article 2 of Regulation (EEC) No 3220/84, pig carcases may be presented also without forefeet before being weighed and graded. In this case, in order to establish quotations for pig carcases on a comparable basis, the recorded hot weight shall be increased by 0,840 kilograms.

Article 3

Modifications of the apparatus or the assessment methods shall not be authorised.

Article 4

Decision 88/479/EEC is repealed.

Article 5

This Decision is addressed to the Kingdom of Spain.

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ANNEX

METHODS FOR GRADING PIG CARCASES IN SPAIN

Part 1

FAT-O-MEATER (FOM)

1. Grading of pig carcases shall be carried out by means of the apparatus termed 'Fat-O-Meater (FOM)'.

2. The apparatus shall be equipped with a probe of 6-millimetre diameter containing a photodiode of the Siemens SFH 950 type and a photodetector (type SFH 960), having an operating distance of between 3 and 103 millimetres. The results of the measurements are converted into estimated lean meat content by means of a computer.

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

$$\hat{Y} = 66{,}91 - 0{,}895\ X1 + 0{,}144\ X2$$

where:

$\hat{Y}$ = the estimated lean meat content (in percentage),

X1 = the thickness of the fat between the third and fourth last rib at 60 mm of the midline of the carcase (in millimetres),

X2 = the thickness of muscle measured at the same time and in the same place as X1 (in millimetres).

This formula shall be valid for carcases weighing between 60 and 120 kilograms.

Part 2

FULLY AUTOMATIC ULTRASONIC CARCASE GRADING (AUTOFOM)

1. Pig carcase grading shall be carried out using the apparatus termed 'Fully automatic ultrasonic carcase grading (Autofom)'.

2. The apparatus shall be equipped with sixteen 2 MHz ultrasonic transducers (Krautkrämer, SFK 2 NP), with an operating distance between transducers of 25 mm.

   The ultrasonic data shall comprise measurements of back fat thickness and muscle thickness.

   The results of the measurements are converted into estimated lean meat content using a computer.

3. The carcase's lean meat content shall be calculated on the basis of 34 measurement points using the following formula:

$$\hat{Y} = 70{,}59614 - 0{,}0904 \cdot V22 - 0{,}23033 \cdot V23 - 0{,}15558 \cdot V44 + 0{,}086638 \cdot V46 - 0{,}09965 \cdot V48 - 0{,}10002 \cdot V49 - 0{,}11624 \cdot V51 - 0{,}05561 \cdot V52 - 0{,}04854 \cdot V53 - 0{,}0432 \cdot V54 - 0{,}00282 \cdot V55 + 0{,}051829 \cdot V57 + 0{,}036795 \cdot V58 - 0{,}00519 \cdot V59 - 0{,}0269 \cdot V60 - 0{,}06432 \cdot V61 - 0{,}05323 \cdot V62 - 0{,}05229 \cdot V64 - 0{,}0523 \cdot V65 + 0{,}005645 \cdot V72 - 0{,}06505 \cdot V73 - 0{,}04587 \cdot V74 + 0{,}015041 \cdot V77 + 0{,}030928 \cdot V78 - 0{,}08024 \cdot V79 - 0{,}07275 \cdot V80 - 0{,}07497 \cdot V85 - 0{,}06818 \cdot V86 - 0{,}06875 \cdot V87 - 0{,}04742 \cdot V90 - 0{,}00698 \cdot V91 + 0{,}046485 \cdot V92 - 0{,}10403 \cdot V93 + 0{,}160475 \cdot V123$$

where:

$\hat{Y}$ = the estimated lean meat content of the carcase,

V22, V23, … V123 are the variables measured with the Autofom.

4. Descriptions of the measurement points and the statistical method can be found in Part II of the Spanish protocol forwarded to the Commission in accordance with Article 3(3) of Regulation (EEC) No 2967/85.

   This formula shall be valid for carcases weighing between 60 and 120 kilograms.

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Part 3

ULTRAFOM 300

1. Grading of pig carcases shall be carried out by means of the apparatus termed 'Ultrafom 300'.

2. The apparatus shall be equipped with an ultrasonic probe at 4 MHz (Krautkrämer MB 4 SE). The ultrasonic signal is digitised, stored and processed by a microprocessor (type Intel 80 C 32). The results of the measurements shall be converted into estimated lean meat content by means of the Ultrafom apparatus itself.

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

$$\hat{Y} = 69{,}22 - 1{,}023\ X1 + 0{,}116\ X2$$

where:

$\hat{Y}$ = the estimated lean meat content (in percentage),

X1 = the thickness of the fat between the third and fourth last rib at 70 mm of the midline of the carcase (in millimetres),

X2 = the thickness of muscle measured at the same time and in the same place as X1 (in millimetres).

This formula shall be valid for carcases weighing between 60 and 120 kilograms.

Part 4

AUTOMATIC VISION SYSTEM (VCS2000)

1. Grading of pig carcases is carried out by means of the apparatus termed 'Automatic vision system (VCS2000)'.

2. The apparatus VCS 2000 is a picture-processing system for automatically determining the trade values of pork carcase halves. The system is used online within the slaughtering production system where via a camera system the carcase halves are automatically filmed. The picture data is then processed in a computer by special picture processing software.

3. The lean meat content of the carcases shall be calculated on the basis of 70 measurement points according to the following formula:

$$\hat{Y} = 37{,}49855 + 0{,}017715 \cdot X_2 - 0{,}00075 \cdot X_{40} - 0{,}02522 \cdot X_{50} - 0{,}04549 \cdot X_{52} - 0{,}0000335 \cdot X_{59} - 0{,}000093 \cdot X_{62} - 0{,}0000814 \cdot X_{63} - 0{,}0000715 \cdot X_{64} - 0{,}0000494 \cdot X_{66} - 0{,}0000482 \cdot X_{67} - 0{,}00047 \cdot X_{69} + 0{,}000304 \cdot X_{70} + 0{,}00867 \cdot X_{77} - 0{,}03007 \cdot X_{79} - 0{,}04575 \cdot X_{81} - 0{,}01742 \cdot X_{82} - 0{,}01768 \cdot X_{83} - 0{,}03114 \cdot X_{84} - 0{,}02549 \cdot X_{85} - 0{,}0265 \cdot X_{92} - 0{,}03299 \cdot X_{95} - 0{,}02472 \cdot X_{99} - 0{,}0399 \cdot X_{102} + 0{,}020178 \cdot X_{103} - 0{,}04614 \cdot X_{106} + 0{,}012659 \cdot X_{107} + 0{,}012256 \cdot X_{110} + 0{,}015358 \cdot X_{113} - 0{,}23294 \cdot X_{116} + 0{,}010157 \cdot X_{117} - 0{,}07282 \cdot X_{120} + 0{,}126624 \cdot X_{142} + 6{,}052785 \cdot X_{2/6} - 13{,}2893 \cdot X_{14/10} + 7{,}287408 \cdot X_{77/51} - 4{,}09296 \cdot X_{79/51} - 11{,}4326 \cdot X_{81/51} - 1{,}28847 \cdot X_{82/51} - 0{,}57019 \cdot X_{83/51} - 5{,}21869 \cdot X_{84/51} - 2{,}92106 \cdot X_{85/51} + 8{,}274608 \cdot X_{88/51} + 9{,}886478 \cdot X_{91/51} - 0{,}00442 \cdot X_{47/79} - 0{,}04848 \cdot X_{50/79} + 0{,}227913 \cdot X_{54/79} + 2{,}845209 \cdot X_{77/79} + 0{,}018409 \cdot X_{86/79} - 0{,}00838 \cdot X_{89/79} + 0{,}007447 \cdot X_{94/79} + 136{,}5994 \cdot X_{27/20} + 182{,}973 \cdot X_{29/20} - 6{,}82665 \cdot X_{59/20} - 261\ 768 \cdot X_{61/20} - 7{,}85416 \cdot X_{62/20} - 3{,}8587 \cdot X_{63/20} - 16{,}6166 \cdot X_{64/20} - 59{,}2087 \cdot X_{65/20} - 3{,}21138 \cdot X_{66/20} - 6{,}96096 \cdot X_{67/20} + 20{,}91982 \cdot X_{68/20} - 109{,}736 \cdot X_{69/20} + 243{,}641 \cdot X_{70/20} + 29{,}84246 \cdot X_{73/20} + 15{,}50442 \cdot X_{74/20} - 0{,}30367 \cdot X_{36/59} - 2{,}07787 \cdot X_{40/59} - 0{,}38605 \cdot X_{42/59} - 1{,}90547 \cdot X_{69/59} + 3{,}554836 \cdot X_{70/59}$$

where:

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

X_2, X_{40}, … $X_{70/59}$ are the variables measured with the VCS2000.

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4. Descriptions of the measurement points and the statistical method can be found in Part II of the Spanish protocol forwarded to the Commission in accordance with Article 3(3) of Regulation (EEC) No 2967/85.

This formula shall be valid for carcases weighing between 60 and 120 kilograms.

▼M1

Part 5

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 are 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:

$$\hat{Y} = 64{,}53 - 0{,}876 \times X_1 + 0{,}181 \times X_2$$

where:

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

X_1 = the thickness of back-fat (including rind) in millimetres, measured perpendicularly to the back of the carcass at 6 cm of the split line, between the third and 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 carcasses weighing between 60 and 120 kilograms (warm weight).

Part 6

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 back fat thickness, muscle thickness and related parameters. The results of the measurements are 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:

$$\hat{Y} = 68{,}44293415 - (0{,}35254288 \times R2P10) - (0{,}31514342 \times R2P15) - (0{,}19383319 \times R2P16) + (0{,}02067879 \times R3P3) + (0{,}03303812 \times R3P5) + (0{,}02479771 \times R3P6) + (0{,}02710736 \times R3P7) + (0{,}02310621 \times R3P9) - (0{,}07075210 \times R4P10)$$

where:

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

R2P10, R2P15, R2P16,R3P3, R3P5, R3P6, R3P7, R3P9 and R4P10 are the variables measured by AutoFOM III,

4. The measuring points are described in Part II of the protocol presented to the Commission by Spain in accordance with Article 23(4) of Commission Regulation (EC) No 1249/2008 ([1]).

This formula is valid for carcasses weighing between 60 and 120 kg (warm weight).

([1]) OJ L 337, 16.12.2008, p. 3.

▼**M1**

Part 7

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 fat and of the thickness of the muscle.

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

$$\hat{Y} = 59{,}89 - 0{,}821 \times F + 0{,}157 \times M$$

where:

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

F = the minimum thickness of visible fat (including rind), in millimetres, on the midline of the split carcass in millimetres, covering the *M. gluteus medius*,

M = the visible thickness of the lumbar muscle, in millimetres, 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 valid for carcasses weighing between 60 and 120 kg (warm weight).