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COMMISSION DECISION

of 14 November 2006

authorising methods for grading pig carcases in France

(notified under document number C(2006) 5400)

(Only the French text is authentic)

(Text with EEA relevance)

(2006/784/EC)

(OJ L 318, 17.11.2006, p. 27)

Amended by:

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►**M1**	Commission Decision 2007/510/EC of 17 July 2007	L 187	47	19.7.2007
►**M2**	Commission Decision 2008/293/EC of 4 April 2008	L 98	16	10.4.2008
►**M3**	Commission Decision 2008/677/EC of 28 July 2008	L 221	30	19.8.2008

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(2006/784/EC)

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 97/28/EC ([3]) authorises a main method for grading pig carcases in France. Two other methods may also be used subject to the equivalence of results.

(3) In view of technical developments in the herd, the French Government has asked the Commission to authorise the use of new formulae for the methods used under Decision 97/28/EC and has presented the elements required under Article 3 of Regulation (EEC) No 2967/85 to this end.

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

(5) No modification of the apparata 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.

(6) For the sake of clarity Decision 97/28/EC should be repealed and replaced by this Decision.

(7) The measures provided for in this Decision are in accordance with the opinion of the Management Committee for Pigmeat,

HAS ADOPTED THIS DECISION:

([1]) OJ L 301, 20.11.1984, p. 1. Regulation last amended by Regulation (EC) No 3513/93 (OJ L 320, 22.12.1993, p. 5).
([2]) OJ L 285, 25.10.1985, p. 39. Regulation last amended by Regulation (EC) No 1197/2006 (OJ L 217, 8.8.2006, p. 6).
([3]) OJ L 12, 15.1.1997, p. 30. Decision amended by Decision 97/473/EC (OJ L 200, 29.7.1997, p. 64).

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Article 1

The use of the following methods is hereby authorised for grading pig carcases pursuant to Regulation (EEC) No 3220/84 in France:

(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 *CSB Ultra-Meater* apparatus and the assessment methods related thereto, details of which are given in Part 2 of the Annex;

(c) the *manual method (ZP)* and the assessment methods related thereto, details of which are given in Part 3 of the Annex;

▼M1

(d) the *Autofom* apparatus and the assessment methods related thereto, details of which are given in Part 4 of the Annex;

(e) the *UltraFom 300* apparatus and the assessment methods related thereto, details of which are given in Part 5 of the Annex;

▼M2

(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.

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The manual method (ZP) may be applied only in slaughterhouses which do not exceed a weekly slaughtering of 200 pigs.

Article 2

Notwithstanding the standard presentation referred to in Article 2 of Regulation (EEC) No 3220/84, pig carcases may be presented with the tongue attached during weighing and grading. In this case, in order to establish quotations for pig carcases on a comparable basis, the recorded hot weight shall be reduced by 0,5 %.

Article 3

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

Article 4

Decision 97/28/EC is hereby repealed.

However, up to 17 December 2006, France may continue to apply the methods for grading pig carcases authorised under Decision 97/28/EC in place of the methods laid down by this Decision.

Article 5

This Decision is addressed to the French Republic.

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ANNEX

METHODS FOR GRADING PIG CARCASES IN FRANCE

PART 1

Capteur Gras/Maigre — Sydel (CGM)

1. Grading of pig carcases is carried out by means of the apparatus known as 'Capteur Gras/Maigre — Sydel (CGM version 01-A)'.

2. The apparatus shall be equipped with a high-definition Sydel probe 8 mm in diameter, a light-emitting infra-red diode (Honeywell) and two light sensors (Honeywell). The operating distance shall be between 0 and 95 mm.

   The results of the measurements shall be converted into estimated lean meat content by the CGM itself.

▼M3

3. The lean meat content of carcases shall be calculated using the following formula:

   $$\hat{Y} = 62{,}19 - 0{,}729\ G2 + 0{,}144\ M2$$

   where:

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

   G2 = the thickness of the fat (including rind), between the third and fourth last ribs, at 6 cm off the dorsal midline, at a trajectory parallel to this line (in millimetres),

   M2 = the thickness of the muscle, between the third and fourth last ribs, at 6 cm off the dorsal midline, at a trajectory parallel to this line (in millimetres).

   This formula shall be valid for carcases weighing between 45 and 125 kg.

▼B

PART 2

CSB Ultra-Meater

1. Grading of pig carcases shall be carried out by means of the apparatus termed 'CSB Ultra-Meater version 3.0'.

2. The apparatus shall be equipped with a 3,5 MHz probe (Pie Medical). The operating distance shall be between 0 and 200 mm.

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

3. The lean meat content of carcases shall be calculated using the following formula:

   $$\hat{Y} = 62{,}68 - 0{,}921\ G + 0{,}204\ M$$

   where:

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

   G = the thickness of the fat (including rind), between the second and third last lumbar ribs, at 6 cm off the dorsal midline, at a trajectory perpendicular to the rind (in millimetres),

   M = the thickness of the muscle, between the second and third last lumbar ribs, at 6 cm off the dorsal midline, at a trajectory perpendicular to the rind (in millimetres).

   This formula shall be valid for carcases weighing between 45 and 125 kg.

PART 3

Manual method (ZP)

1. Grading of pig carcasses shall be carried out by use of the manual method (ZP).

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2. This method may be implemented using a ruler, with the gradings determined on the basis of the prediction equation. It is based on the manual measurement on the midline of the split carcase of the thickness of the fat and of the thickness of the muscle.

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

$$\hat{Y} = 55{,}99 - 0{,}514\ Gf + 0{,}157\ Mf$$

where:

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

Gf = the thickness of visible fat on the midline of the split carcase in millimetres, covering the *glutaeus medius* muscle (in millimetres),

Mf = the visible thickness of the lumbar muscle on the midline of the split carcase, measured as the shortest connection between the front (cranial) end of the *glutaeus medius* muscle and the upper (dorsal) edge of the vertebral canal (in millimetres).

This formula shall be valid for carcases weighing between 45 and 125 kg.

▼M1

PART 4

Autofom

1. Grading of pig carcasses is carried out by means of the apparatus known as 'Autofom'.

2. The apparatus shall be equipped with sixteen 2 MHz ultrasonic transducers (SFK Technology, K2KG), with an operating distance between transducers of 25 mm.

The ultrasonic data shall comprise measurements of backfat thickness and muscle thickness.

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 carcasses shall be calculated on the basis of 23 measuring points according to the following formula:

$$\hat{Y} = 69{,}4808 - 0{,}09178*X0 - 0{,}08778*X7 - 0{,}02047*X9 - 0{,}06525*X19 - 0{,}03135*X21 - 0{,}01352*X26 - 0{,}01257*X29 + 0{,}00660*X31 + 0{,}00726*X36 - 0{,}11207*X48 - 0{,}31733*X60 - 0{,}12530*X64 - 0{,}03016*X83 - 0{,}28903*X88 - 0{,}15229*X91 - 0{,}03713*X92 + 0{,}09666*X100 - 0{,}08611*X101 + 0{,}01797*X113 + 0{,}03736*X115 + 0{,}03356*X116 + 0{,}01313*X121 + 0{,}01547*X123$$

where

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

X0, X7 … X123 are the variables measured by Autofom.

4. The measuring points and the statistical method are described in Part II of the protocol presented to the Commission by France in accordance with Article 3(3) of Regulation (EEC) No 2967/85.

The formula shall be valid for carcasses weighing between 45 and 125 kg.

PART 5

Ultrafom 300

1. Grading of pig carcasses is carried out by means of the apparatus known as 'UltraFom 300'.

2. The apparatus shall be equipped with a 3,5 MHz ultrasound probe (SFK Technology 3,5 64LA), 5 cm in length, featuring 64 ultrasound transducers. The ultrasound signal shall be digitalised, recorded and analysed by a microprocessor.

The results of the measurements shall be converted into estimates of the percentage of lean meat by UltraFom itself.

▼M1

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

$$\hat{Y} = 66{,}49 - 0{,}891\ G + 0{,}104\ M$$

where

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

G = the thickness of the fat (including rind) between the second and third last ribs, at 7 cm off the dorsal midline, at a trajectory perpendicular to the rind (in millimetres),

M = the thickness of the muscle between the second and third last ribs, at 7 cm off the dorsal midline, at a trajectory perpendicular to the rind (in millimetres).

The formula shall be valid for carcasses weighing between 45 and 125 kg.

▼M2

PART 6

CSB Image-Meater

1. Grading of pig carcases is carried out by means of the apparatus known as 'CSB Image-Meater'.

2. The CSB Image-Meater consists in particular in a video camera, a PC equipped with an image-analysis card, a screen, a printer, a command mechanism, a rate mechanism and interfaces. The 11 Image-Meater variables are all measured at the split line: the measured values are transformed into an estimation of the lean meat percentage by a central unit.

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

$$\hat{Y} = 64{,}40 - 0{,}129\ G - 0{,}187\ MG - 0{,}068\ VaG + 0{,}003\ VbG - 0{,}368\ EG + 0{,}036\ V + 0{,}032\ MV - 0{,}024\ VaV + 0{,}034\ VbV - 0{,}024\ VcV + 0{,}022\ VdV$$

where:

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

G = ZP fat depth: the minimal fat depth (including rind) over the muscle *gluteus medius* (in millimetres),

MG = averaged fat depth over the muscle *gluteus medius* (in millimetres),

VaG = averaged fat depth over the lumbar vertebra 'a' (in millimetres),

VbG = averaged fat depth over the lumbar vertebra 'b' (in millimetres),

EG = averaged fat depth of the external subcutaneous fat layer over the lumbar vertebrae 'a' to 'd' (in millimetres),

V = ZP muscle depth: the minimal muscle depth between the anterior extremity of the muscle *gluteus medius* and the dorsal part of the medullar canal (in millimetres),

MV = averaged muscle depth of the muscles lumbar and *gluteus medius* (in millimetres),

VaV = averaged muscle depth over the lumbar vertebra 'a' (in millimetres),

VbV = averaged muscle depth over the lumbar vertebra 'b' (in millimetres),

VcV = averaged muscle depth over the lumbar vertebra 'c' (in millimetres),

VdV = averaged muscle depth over the lumbar vertebra 'd' (in millimetres).

The formula shall be valid for carcases weighing between 45 and 125 kg.

▼M2

PART 7

VCS 2000

1. Grading of pig carcases is carried out by means of the apparatus known as 'VCS 2000'.

2. The VCS 2000 is based on digital video image analysis. The major components are three cameras, lamps, an image-analysis computer, a server PC and positioning units. At the first station one camera takes an image of the external side of the ham. At the second station two cameras take images on the split line. From the images, 40 variables are extracted. These variables are mainly depths, widths, lengths and areas. The measured values are transformed into an estimation of the lean meat percentage by a central unit.

3. The lean meat content of carcases shall be calculated on the basis of 40 variables according to the following formula:

$$\hat{Y} = 122{,}458 + 0{,}05805 * X1 + 0{,}01449 * X2 - 0{,}02996 * X3 - 0{,}001585 * X4 - 39{,}297 * X5 - 47{,}553 * X6 + 38{,}877 * X7 - 0{,}1013 * X8 + 0{,}00004308 * X9 - 817{,}242 * X10 + 10{,}135 * X11 + 15{,}277 * X12 - 25{,}777 * X13 - 90{,}738 * X14 + 0{,}0005792 * X15 + 2{,}743 * X16 - 0{,}06866 * X17 + 3{,}511 * X18 - 0{,}1681 * X19 - 0{,}007867 * X20 - 0{,}1082 * X21 - 0{,}01290 * X22 + 0{,}02957 * X23 + 0{,}03856 * X24 - 0{,}003353 * X25 - 0{,}03378 * X26 - 0{,}01661 * X27 + 2{,}368 * X28 - 0{,}3133 * X29 - 0{,}01386 * X30 - 0{,}02100 * X31 - 0{,}01908 * X32 - 0{,}02442 * X33 + 0{,}06009 * X34 - 0{,}007792 * X35 - 2{,}598 * X36 - 7{,}632 * X37 - 0{,}004848 * X38 - 0{,}9099 * X39 - 20{,}514 * X40$$

where:

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

X1, X2, … X40 are the variables measured by VCS 2000.

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

The formula shall be valid for carcases weighing between 45 and 125 kg.