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COMMISSION DECISION
of 3 March 1988
authorizing methods for grading pig carcasses in the United Kingdom

(Only the English text is authentic)

(88/234/EEC)

(OJ L 105, 26.4.1988, p. 15)

Amended by:

	Official Journal		
	No	page	date
► <u>M1</u> Commission Decision of 22 July 1988 (88/478/EEC)	L 234	17	24.8.1988
► <u>M2</u> Commission Decision of 19 November 1992 (92/557/EEC)	L 358	22	8.12.1992
► <u>M3</u> Commission Decision of 12 July 1993 (93/445/EEC)	L 208	36	19.8.1993
► <u>M4</u> Commission Decision of 26 May 1994 (94/336/EC)	L 150	34	16.6.1994
► <u>M5</u> Commission Decision of 27 July 1994 (94/567/EC)	L 215	28	20.8.1994

▼B**COMMISSION DECISION****of 3 March 1988****authorizing methods for grading pig carcasses in the United Kingdom****(Only the English text is authentic)**

(88/234/EEC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,

Having regard to Council Regulation (EEC) No 2759/75 of 29 October 1975 on the common organization of the market in pigmeat⁽¹⁾, as last amended by Regulation (EEC) No 3906/87⁽²⁾, and in particular Article 4 (6) thereof,

Having regard to Council Regulation (EEC) No 3220/84 of 13 November 1984 determining the Community scale for grading pig carcasses⁽³⁾, as amended by Regulation (EEC) No 3530/86⁽⁴⁾, and in particular Article 5 (2) thereof,

Whereas Article 2 (3) of Regulation (EEC) No 3220/84 provides that the grading of pig carcasses must be determined by estimating the content of lean meat in accordance with statistically proven assessment methods based on the physical measurement of one or more anatomical parts of the pig carcass; whereas the authorization of grading methods is subject to compliance with a maximum tolerance for statistical error in assessment; whereas this tolerance has been defined in Article 3 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 carcasses⁽⁵⁾;

Whereas the Government of the United Kingdom has requested the Commission to authorize the use of three methods for grading pig carcasses on its territory (excluding Northern Ireland) and has submitted the information required in Article 3 of Regulation (EEC) No 2967/85; whereas an examination of this request has revealed that the conditions for authorizing the said grading methods are fulfilled;

Whereas Article 2 of Regulation (EEC) No 3220/84 lays down that Member States may be authorized to provide for a presentation of pig carcasses different from the standard presentation defined in the same Article where commercial practice or technical requirements warrant such a derogation;

Whereas in the United Kingdom commercial practice does not require that the tongue is removed from the pig carcass; whereas this should be taken into account in adjusting the weight for standard presentation;

Whereas in accordance with Article 2 (3) of Regulation (EEC) No 2967/85 and by way of derogation from Article 2 (1) and (2) thereof, the weight of the cold carcass may be calculated by reference to pre-determined scales of absolute weight reductions if the reductions for individual weight classes correspond, as far as possible, to the reductions calculated in percentage terms; whereas the United Kingdom has notified the determination of such a scale to the Commission;

Whereas no modification of the apparatus or grading method may be authorized except by means of a new Commission Decision adopted in the light of experience gained; whereas, for this reason, the present authorization may be revoked;

⁽¹⁾ OJ No L 282, 1. 11. 1975, p. 1.

⁽²⁾ OJ No L 370, 30. 12. 1987, p. 11.

⁽³⁾ OJ No L 301, 20. 11. 1984, p. 1.

⁽⁴⁾ OJ No L 326, 21. 11. 1986, p. 8.

⁽⁵⁾ OJ No L 285, 25. 10. 1985, p. 39.

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Whereas the measures provided for in this Decision are in accordance with the opinion of the Management Committee for Pigmeat,

HAS ADOPTED THIS DECISION:

Article 1

The use of the following methods is hereby authorized for grading pig carcasses pursuant to Regulation (EEC) No 3220/84 in the United Kingdom, excluding Northern Ireland:

- the apparatus termed ‘Intrascop (Optical Probe)’ and assessment methods related thereto, details of which are given in Part 1 of Annex I,
- the apparatus termed ‘Fat-O-Meater (FOM)’ and assessment methods related thereto, details of which are given in Part 2 of Annex I,
- the apparatus termed ‘Hennessy Grading Probe (HGP II)’ and assessment methods related thereto, details of which are given in Part 3 of Annex I,

▼M2

- the apparatus termed ‘CBS Ultra-Meater’ and the assessment method related thereto, details of which are given in Part 4 of Annex I,

▼M3

- the apparatus ‘Ultra-FOM’ and the assessment method related thereto, details of which are given in Part 5 of Annex I.

▼M2

As regards the apparatus ‘CBS Ultra-Meater’, it is laid down that after the end of the measurement procedure it must be possible to verify on the carcass that the apparatus measured the values of measurement X_1 and X_2 on the site provided for in Annex I, Part 4, point 3. The corresponding marking of the measurement site must be made at the same time as the measurement procedure.

▼M3

As regards the apparatus ‘Ultra-FOM’, it is laid down that after the end of the measurement procedure it must be possible to verify on the carcass that the apparatus measured the values of measurement X_1 , X_2 and X_3 on the site provided for in Annex I Part 5 point 3. The corresponding marking of the measurement site must be made at the same time as the measurement procedure.

▼M1*Article 1a*

The use of the following methods is hereby authorized for grading pig carcasses pursuant to Regulation (EEC) No 3220/84 in Northern Ireland:

- the apparatus termed ‘Intrascop (Optical Probe)’ and assessment methods related thereto, details of which are given in Part 1 of Annex IA,
- the apparatus termed ‘Mark II Ulster Probe’ and assessment methods related thereto, details of which are given in Part 2 of Annex IA,

▼M5

- the apparatus termed ‘Fat-O-Meater (FOM)’ and assessment methods related thereto, details of which are given in Part 3 of Annex IA.

▼M1*Article 2*

Notwithstanding the standard presentation referred to in Article 2 of Regulation (EEC) No 3220/84, pig carcasses may be presented in the United Kingdom of Great Britain and Northern Ireland, with the tongue attached before being weighted and graded. In order to establish quota-

▼M1

tions for pig carcasses on a comparable basis, the recorded hot weight shall be reduced by 0,3 kg.

▼M4*Article 2a*

Notwithstanding the standard presentation referred to in Article 2 (1) of Regulation (EEC) No 3220/84, the flare fat, the kidneys and the diaphragm need not be removed from pig carcasses before being weighed and graded. In order to establish quotations for pig carcasses on a comparable basis, the recorded hot weight shall be reduced:

- for pig carcasses up to 56 kg, by 0,7 kg
- for pig carcasses from 56,5 to 74,5 kg; by 1,1 kg
- for pig carcasses of 75 kg and over, by 1,6 kg.

▼M1*Article 3*

Notwithstanding Article 2 (1) and (2) of Regulation (EEC) No 2967/85 the weight of the cold carcass shall be calculated in the United Kingdom of Great Britain and Northern Ireland, by reference to the scale of absolute reductions of the warm weight shown in Annex II.

▼B*Article 4*

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

Article 5

This Decision is addressed to the United Kingdom.

▼**B**

ANNEX I

Methods for grading pig carcasses in the United Kingdom (excluding Northern Ireland)

PART I

Intrascop (Optical Probe)

1. Grading of pig carcasses shall be carried out by means of the apparatus termed 'Intrascop (Optical Probe)'.
2. The apparatus shall be equipped with a hexagonal-shaped probe of a maximum width of 12 millimetres (and of 19 millimetres at the blade at the top of the probe) containing a viewing window and a light source, a sliding barrel calibrated in millimetres, and having an operating distance of between 3 and 45 millimetres.
3. The lean meat content of the carcass shall be calculated according to one of the following two formulae:

$$\hat{y} = 64,8 - 0,69x_1 + 0,095x_2 - 0,42x_3$$

or

$$\hat{y} = 65,5 - 1,15x_1 + 0,076x_2,$$

where:

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

x_1 = the thickness of backfat (including rind) in millimetres, measured at 6 centimetres off the midline of the carcass at the last rib (measurement known as 'P₂'),

or

the average thickness of backfat (including rind) in millimetres measured at 4 and 7,5 centimetres respectively off the midline of the carcass at the last rib (measurement known as '½ (P₁ + P₃)'),

x_2 = the weight of the cold carcass in kilograms,

x_3 = the thickness of backfat (including rind) in millimetres, measured at 6 centimetres off the midline of the carcass, between the third and fourth last ribs (measurement known as 'rib-fat').

The two formulae shall be valid for carcasses weighing between 30 and 120 kilograms.

PART 2

Fat-O-Meater (FOM)

1. Grading of pig carcasses 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 millimetres diameter containing a photodiode of the Siemens SFH 950/960 type and 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 carcass shall be calculated according to the following formula:

$$\hat{y} = 59,0 - 0,58x_1 - 0,32x_3 + 0,18x_4$$

where

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

x_1 = the thickness of backfat (including rind) in millimetres, measured at 6 centimetres off the midline of the carcass at the last rib (measurement known as 'P₂'),

or

the average thickness of backfat (including rind) in millimetres, measured at 4 and 7,5 centimetres respectively off the midline of the carcass at the last rib (measurement known as '½ (P₁ + P₃)'),

x_3 = the thickness of backfat (including rind) in millimetres, measured at 6 centimetres off the midline of the carcass between the third and fourth last ribs (measurement known as 'rib-fat'),

▼B

x_4 = the thickness of muscle in millimetres, measured at the same time and in the same place as x_3 (measurement known as 'rib-muscle').

The formula shall be valid for carcasses weighing between 30 and 120 kilograms.

PART 3

Hennesy Grading Probe (HGP II)

1. Grading of pig carcasses shall be carried out by means of the apparatus termed 'Hennesy Grading Probe (HGP II)'.
2. The apparatus shall be equipped with a probe of 5,95 millimetres diameter (and of 6,3 millimetres at the blade of the top of the probe) containing a photodiode (Siemens LED of the type LYU 260-EO and photodetector of the type 58 MR) 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 HGP II itself or a computer linked to it.
3. The lean meat content of the carcase shall be calculated according to the following formula:

$$\hat{y} = 62,5 - 0,62x_1 - 0,46x_3 + 0,16x_4$$

where

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

x_1 = the thickness of backfat (including rind) in millimetres, measured at 6 centimetres off the midline of the carcase at the last rib (measurement known as 'P₂'),

or

the average thickness of backfat (including rind) in millimetres measured at 4 and 7,5 centimetres respectively off the midline of the carcase at the last rib (measurement known as ' $\frac{1}{2}(P_1 + P_3)$ '),

x_3 = the thickness of backfat (including rind) in millimetres, measured at 6 centimetres off the midline of the carcase between the third and fourth last ribs (measurement known as 'rib-fat'),

x_4 = the thickness of muscle in millimetres, measured at the same time and in the same place as x_3 (measurement known as 'rib-muscle').

The formula shall be valid for carcasses weighing between 30 and 120 kilograms.

▼M2

PART 4

CSB Ultra-Meater

1. Grading of pig carcasses shall be carried out by means of the apparatus termed 'CSB Ultra-Meater'.
2. The apparatus shall be equipped with ultrasound head, ultrasound equipment, image generating board, computer, video recorder and printer.
The apparatus shall be equipped with a Pie Medical Netherlands 3,5 MHz scanner.
The distance from the marking point to the centre of the ultrasonic head shall be 12 cm.
The results of the measurements shall be converted into estimated lean meat content by means of the CSB Ultra-Meater apparatus itself.
3. The lean meat content of the carcase should be calculated according to the following formula:

$$\hat{y} = 65,1 - 1,158x_1 + 0,176x_2$$

where:

\hat{y} = the estimated percentage of lean meat in the carcase.

x_1 = the thickness of backfat (including rind) in millimetres, measured at 6 cm off the dorsal midline of the carcase, between the third and fourth last ribs.

x_2 = the thickness of muscle in millimetres, measured at the same time and in the same place as x_1 .

▼ M2

The formula shall be valid for carcasses weighing between 30 and 120 kilograms.

▼ M3

PART 5

Ultra-FOM

1. Grading of pig carcasses shall be carried out by means of the apparatus termed 'Ultra-FOM'.
2. The apparatus shall be equipped with an ultrasonic probe at 4 MHz (Krautkrämer MB 4 SE). The ultrasonic signal is digitized, stored and processed by a micro-processor (type intel 80 C 31).

The results of the measurements shall be converted into estimated lean meat content by means of the Ultra-FOM apparatus itself.

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

$$\hat{y} = 70,35 - 0,687x_1 - 0,686x_2 + 0,034x_3$$

where:

- \hat{y} = estimated percentage of lean meat in the carcass,
- x_1 = the thickness of backfat (including rind) in millimetres, measured at 6 cm off the midline of the carcass, at the last rib,
- x_2 = the thickness of backfat (including rind) in millimetres, measured at 6 cm off the midline of the carcass, between the third and fourth last ribs,
- x_3 = the thickness of muscle in millimetres, measured at 6 cm off the midline of the carcass, between the third and fourth last ribs.

The formula shall be valid for carcasses weighing between 30 and 120 kilograms.

▼ **M1**

ANNEX I A

Methods for grading pig carcasses in Northern Ireland

PART 1

Intrascop (Optical Probe)

1. Grading of pig carcasses shall be carried out by means of the apparatus termed 'Intrascop (Optical Probe)'.
2. The apparatus shall be equipped with a hexagonal shaped probe of a maximum width of 12 millimetres (and of 19 millimetres at the blade at the top of the probe) containing a viewing window and a light source, a sliding barrel calibrated in millimetres and having an operating distance of between 3 and 45 millimetres.

▼ **M5**

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

$$\hat{y} = 77,6 - 0,95x_1 - 0,99x_2 + 0,03x_3$$

where:

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

x_1 = the thickness of back-fat (including rind) in millimetres, measured six centimetres off the midline of the carcass at the last rib (measurement known as 'P₂'),

x_2 = the thickness of back-fat (including rind) in millimetres, measured at six centimetres off the midline of the carcass, between the third and fourth last ribs (measurement known as 'rib-fat'),

x_3 = x_2 squared.

The formula shall be valid for carcasses weighing between 60 and 86 kilograms.

▼ **M1**

PART 2

Mark II Ulster Probe

1. Grading of pig carcasses shall be carried out by means of the apparatus termed 'Mark II Ulster Probe'.
2. The apparatus shall be equipped with an oval-shaped probe of a maximum width of 11 millimetres containing an infra-red light-emitting photodiode (TFK type TS-US 5402) with a peak wave-length frequency of 950 nm and a matching infra-red photodetector (TRW Optron type OP 500) and having an operating distance of between 0 and 50 millimetres. The results of the measurements shall be converted into estimated lean meat content by means of a computer.

▼ **M5**

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

$$\hat{y} = 81,4 - 0,75x_1 - 1,79x_2 + 0,05x_3$$

where:

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

x_1 = the thickness of back-fat (including rind) in millimetres, measured six centimetres off the midline of the carcass at the last rib (measurement known as 'P₂'),

x_2 = the thickness of back-fat (including rind) in millimetres, measured at six centimetres off the midline of the carcass, between the third and fourth last ribs (measurement known as 'rib-fat'),

x_3 = x_2 squared.

The formula shall be valid for carcasses weighing between 60 and 86 kilograms.

▼ M5

PART 3

Fat-O-Meater (FOM)

1. Grading of pig carcasses shall be carried out by means of the apparatus termed 'Fat-O-Meater (FOM)'.
2. The apparatus shall be equipped with a probe of six millimetres diameter containing a photodiode of the Siemens SFH 950/960 type and having an operating distance of between 3 and 103 millimetres. The results of the measurements are converted into estimated lean meat content of means of a computer.
3. The lean meat content of the carcase shall be calculated according to the following formula:

$$\hat{y} = 76,6 - 1,91x_1 - 0,39x_2 + 0,04x_3 + 0,06x_4$$

where:

- \hat{y} = the estimated percentage of lean meat in the carcase,
- x_1 = the thickness of back-fat (including rind) in millimetres, measured six centimetres off the midline of the carcase at the last rib (measurement known as 'P₂'),
- x_2 = the thickness of back-fat (including rind) in millimetres, measured at six centimetres off the midline of the carcase, between the third and fourth last ribs (measurement known as 'rib-fat'),
- x_3 = x_1 squared,
- x_4 = the thickness of muscle in millimetres, measured at the same time and in the same place as x_2 (measurement known as 'rib-muscle').

The formula shall be valid for carcasses weighing between 60 and 86 kilograms.

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ANNEX II

Scale of reductions applicable to the weight of hot pig carcasses in the United Kingdom*(in kilograms)*

Carcase weight range (hot)	Deduction to be applied according to the interval between the sticking of the pig and the weighing of the carcase			
	0 to 45 minutes	46 to 180 minutes	181 to 330 minutes	> 330 minutes
up to 56 kg	1,0	0,5	0,5	0
56,5 to 74,5 kg	1,5	1,0	0,5	0
75 kg and over	2,0	1,5	0,5	0