COMMISSION DECISION

of 13 June 1991

authorizing methods for grading pig carcases in Denmark

(Only the Danish text is authentic)

(91/358/EEC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,

Having regard to Council Regulation (EEC) No 3220/84 of 13 November 1984 determining the Community scale for grading pig carcases [1], as last amended by Regulation (EEC) No 3577/90 [2], and in particular Article 5 (2) thereof,

Whereas Article 2 (3) of Regulation (EEC) No 3220/84 provides that the grading of pig carcases 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 carcase; 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 carcases [3];

Whereas the use of the apparatus termed 'Klassificeringscenter' ('KC') and the apparatus termed 'Fat-O-Meater/Manuel Klassificering' ('FOM/MK') have been authorized for Denmark by Commission Decision 89/253/EEC [4];

Whereas the Danish Government has requested the Commission to authorize the use of one more method for grading pig carcases on its territory 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 method are fulfilled;

Whereas a new Decision should be adopted to include all three methods for the sake of clarity; whereas, as a consequence, Decision 89/253/EEC should be repealed;

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

Whereas in Denmark the technical requirements relating to the use of the grading method and, consequently, commercial practice, necessitate the removal of the kidneys, the flare fat and the diaphragm; whereas this should be taken into account in adjusting to the weight for standard presentation;

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

HAS ADOPTED THIS REGULATION:

Article 1

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

— the apparatus termed 'Klassificeringscenter' ('KC') and the assessment method related thereto, details of which are given in Part 1 of the Annex,

— the apparatus termed 'Fat-O-Meater/Manuel Klassificering' ('FOM/MK') and the assessment method related thereto, details of which are given in Part 2 of the Annex,

— the apparatus termed 'Ultra-FOM' and the assessment method related thereto, details of which are given in Part 3 of the Annex.

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

[1] OJ No L 301, 20. 11. 1984, p. 1.
[2] OJ No L 353, 17. 12. 1990, p. 23.
[3] OJ No L 285, 25. 10. 1985, p. 39.
[4] OJ No L 105, 17. 4. 1989, p. 19.

Article 2

Notwithstanding the standard presentation referred to in Article 2 of Regulation (EEC) No 3220/84, the flare fat, the kidneys and the diaphragm shall be removed from pig carcases before being weighed and, in the case when the 'KC' or 'FOM/MK' apparatus is used, before being graded. In order to establish quotations for pig carcases on a comparable basis, the recorded hot weight shall be increased by 2,7 %.

Article 3

Modification of the apparatus or of the assessment methods (measurement sites or formulae) shall not be authorized.

Article 4

Decision 89/253/EEC is hereby repealed.

Article 5

This Decision is addressed to the Kingdom of Denmark.

Done at Brussels, 13 June 1991.

For the Commission

Ray MAC SHARRY

Member of the Commission

ANNEX

METHODS FOR GRADING PIG CARCASES IN DENMARK

PART 1

Klassificeringscenter (KC)

1. Grading of pig carcases shall be carried out by means of the apparatus termed 'Klassificeringscenter' ('KC').

2. The apparatus shall be equipped with 17 probes of six millimetres each containing a photodiode (Siemens SFH 950-LD242 II) and a photodetector (Siemens SFH 960-PB 103) and having an operating distance of between one and 180 millimetres.

   The results of the measurements are converted into estimated lean meat content by means of a central unit.

3. The lean meat content of the carcase shall be calculated on the basis of at least seven measurements taken from 15 measuring-points as are indicated in paragraph 4 and according to one of the 10 formulae below:

$\hat{y}_1 = 62{,}7967 - 0{,}2420 \times S\,2 - 0{,}1770 \times S\,9 - 0{,}1806 \times S\,11 - 0{,}1915 \times S\,13 - 0{,}2164 \times S\,14 - 0{,}1644 \times S\,16 + 0{,}1080 \times K\,11 + 0{,}0826 \times V$

$\hat{y}_2 = 62{,}2743 - 0{,}1353 \times S\,3 - 0{,}1716 \times S\,9 - 0{,}1750 \times S\,11 - 0{,}2105 \times S\,13 - 0{,}2104 \times S\,14 - 0{,}1832 \times S\,16 + 0{,}1147 \times K\,11 + 0{,}0825 \times V$

$\hat{y}_3 = 63{,}5026 - 0{,}2409 \times S\,2 - 0{,}2375 \times S\,7 - 0{,}1609 \times S\,11 - 0{,}2156 \times S\,12 - 0{,}2742 \times S\,14 - 0{,}1001 \times S\,15 + 0{,}1271 \times K\,11 + 0{,}0615 \times V$

$\hat{y}_4 = 61{,}8765 - 0{,}2622 \times S\,2 - 0{,}1496 \times S\,9 - 0{,}1669 \times S\,11 - 0{,}2109 \times S\,13 - 0{,}2262 \times S\,16 + 0{,}1259 \times K\,11 - 0{,}0837 \times T\,6 + 0{,}1010 \times V$

$\hat{y}_5 = 62{,}8977 - 0{,}1293 \times S\,3 - 0{,}2390 \times S\,7 - 0{,}1563 \times S\,11 - 0{,}1804 \times S\,12 - 0{,}2288 \times S\,14 - 0{,}1696 \times S\,16 + 0{,}1242 \times K\,11 + 0{,}0678 \times V$

$\hat{y}_6 = 61{,}9166 - 0{,}2756 \times S\,2 - 0{,}1350 \times S\,9 - 0{,}1677 \times S\,11 - 0{,}1746 \times S\,12 - 0{,}2303 \times S\,16 + 0{,}1348 \times K\,11 - 0{,}0889 \times T\,6 + 0{,}0950 \times V$

$\hat{y}_7 = 61{,}3336 - 0{,}1514 \times S\,3 - 0{,}1480 \times S\,9 - 0{,}1642 \times S\,11 - 0{,}2324 \times S\,13 - 0{,}2452 \times S\,16 + 0{,}1311 \times K\,11 - 0{,}0744 \times T\,6 + 0{,}1002 \times V$

$\hat{y}_8 = 63{,}4821 - 0{,}2811 \times S\,2 - 0{,}2463 \times S\,7 - 0{,}1588 \times S\,12 - 0{,}2283 \times S\,13 - 0{,}2766 \times S\,14 + 0{,}0953 \times K\,12 - 0{,}0712 \times T\,8 + 0{,}1142 \times V$

$\hat{y}_9 = 60{,}0836 - 0{,}2340 \times S\,2 - 0{,}1077 \times S\,3 - 0{,}1973 \times S\,9 - 0{,}3010 \times S\,13 - 0{,}2501 \times S\,16 + 0{,}1024 \times K\,13 - 0{,}0902 \times T\,8 + 0{,}1535 \times V$

$\hat{y}_{10} = 62{,}5717 - 0{,}1617 \times S\,3 - 0{,}2846 \times S\,7 - 0{,}3165 \times S\,13 - 0{,}2584 \times S\,14 - 0{,}1219 \times S\,15 + 0{,}0988 \times K\,12 - 0{,}0677 \times T\,8 + 0{,}1195 \times V$

   where:

   $\hat{y}_1$ until $\hat{y}_{10}$ = the estimated percentage of lean meat in the carcase.

4. The measurement points are:

   S 2 = the thickness of backfat (including rind) in millimetres, measured at the centre of 3rd cervical vertebra, at 10,5 cm off the midline of the carcase.

   S 3 = the thickness of backfat (including rind) in millimetres, measured at the centre of 4th cervical vertebra, at 7 cm off the midline of the carcase.

   S 7 = the thickness of backfat (including rind) in millimetres, measured between 3rd and 4th hindmost thoracic vertebrae, at 23 cm off the midline of the carcase.

   S 9 = the thickness of backfat (including rind) in millimetres, measured between hindmost and 2nd hindmost thoracic vertebrae, at 21 cm off the midline of the carcase.

   S 11 = the thickness of backfat (including rind) in millimetres, measured between 4th and 5th hindmost thoracic vertebrae, at 3 cm off the midline of the carcase.

   S 12 = the thickness of backfat (including rind) in millimetres, measured between 2nd and 3rd hindmost thoracic vertebrae, at 7 cm off the midline of the carcase.

   S 13 = the thickness of backfat (including rind) in millimetres, measured between 1st lumbar vertebra and the last thoracic vertebra, at 6 cm off the midline of the carcase.

   S 14 = the thickness of backfat (including rind) in millimetres, measured 4 cm before the fore edge of the pubic bone, at 7 cm off the midline of the carcase.

   S 15 = the thickness of backfat (including rind) in millimetres, measured 1 cm behind the fore edge of the pubic bone, at 18 cm off the midline of the carcase.

   S 16 = the thickness of backfat (including rind) in millimetres, measured at the fore edge of the pubic bone, at 11 cm from midline of the carcase.

   K 11 = muscle thickness in millimetres, measured between 4th and 5th hindmost thoracic vertebrae, at 3 cm off the midline of the carcase.

   K 12 = muscle thickness in millimetres, measured between 2nd and 3rd hindmost thoracic vertebrae, at 7 cm off the midline of the carcase.

   K 13 = muscle thickness in millimetres, measured between 1st lumbar vertebra and hindmost thoracic vertebra, at 6 cm off the midline of the carcase.

   T 6 = total thickness in millimetres, measured between 4th and 5th hindmost thoracic vertebrae, at 19 cm off the midline of the carcase.

   T 8 = total thickness in millimetres, measured between 2nd and 3rd hindmost thoracic vertebrae, at 17 cm off the midline of the carcase.

   V = warm carcase weight in kilograms (excluding flare fat, kidneys and diaphragm).

   The formulae shall be valid for carcases weighing between 50 and 100 kilograms.

PART 2

Fat-O-Meater/Manuel Klassificering (FOM/MK)

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

2. The apparatus shall be equipped with a probe of six millimetres diameter containing a photodiode (Siemens SFH 950-LD 242 II) and a photodetector (Siemens SFH 960-BP 103) and having an operating distance of between one and 94 millimetres.

   The results of the measurements are converted into estimated lean meat content by means of a central unit.

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

   $\hat{y} = 60{,}7548 - 0{,}3724x_1 - 0{,}3702x_2 + 0{,}1337x_3 + 0{,}0356x_4$,

   where:

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

   x_1 = the thickness of backfat (including rind) in millimetres, measured at 8 cm off the midline of the carcase, between the third and fourth last lumbar vertebrae,

   x_2 = the thickness of backfat (including rind) in millimetres, measured at 6 cm off the midline of the carcase, between the third and fourth last ribs,

   x_3 = the thickness of muscle in millimetres, measured at the same time and in the same place as x_2,

   x_4 = warm carcase weight in kilograms (excluding the flare fat, the kidneys and the diaphragm).

The formula shall be valid for carcases weighing between 50 and 100 kilograms.

PART 3

Ultra-FOM

1. Grading of pig carcases 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 carcase should be calculated according to the following formula :

   $\hat{y} = 63{,}8662 - 0{,}4465\ x_1 - 0{,}5096\ x_2 + 0{,}1281\ x_3$

   where :

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

   x_1 = the thickness of backfat (including rind) in millimetres, measured at 7 cm off the midline of the carcase, between the third and fourth last lumbar vertebræ,

   x_2 = the thickness of backfat (including rind) in millimetres, measured at 7 cm off the midline of the carcase, between the third and fourth last ribs,

   x_3 = the thickness of muscle in millimetres, measured at the same time and in the same place as x_2.

   The formula shall be valid for carcases weighing between 50 and 100 kilograms.