

**COMMISSION IMPLEMENTING DECISION****of 17 July 2014****authorising methods for grading pig carcasses in Sweden and repealing Decision 97/370/EC***(notified under document C(2014) 4946)***(Only the Swedish text is authentic)**

(2014/476/EU)

THE EUROPEAN COMMISSION,

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

Having regard to Regulation (EU) No 1308/2013 of the European Parliament and of the Council of 17 December 2013 establishing a common organisation of the markets in agricultural products and repealing Council Regulations (EEC) No 922/72, (EEC) No 234/79, (EC) No 1037/2001 and (EC) No 1234/2007 <sup>(1)</sup>, and in particular Article 20 (p) thereof,

Whereas:

- (1) Point 1 of Section B.IV of Annex IV to Regulation (EU) No 1308/2013 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, and only statistically proven assessment methods based on the physical measurement of one or more anatomical parts of the pig carcass may be authorised. The authorisation of grading methods should be 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 <sup>(2)</sup>.
- (2) By Commission Decision 97/370/EC <sup>(3)</sup>, the use of three methods for grading pig carcasses in Sweden was authorised.
- (3) As the authorised grading methods need technical adaptation, Sweden has requested the Commission to authorise the replacement of the formula used in the 'Intra-scope (Optical Probe)', 'Hennessy Grading Probe (HGP II)' and 'AutoFom' methods, as well as to authorise two new methods 'Fat-O-Meat'er II (FOM II)' and 'Hennessy Grading Probe 7 (HGP 7)' for grading pig carcasses on its territory. Sweden has presented a detailed description of the dissection trial, indicating the principles on which the new formula are based, the result 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.
- (4) Examination of that request has revealed that the conditions for authorising those new formula and methods are fulfilled. Those formula and methods should therefore be authorised in Sweden.
- (5) Modifications of the apparatuses or grading methods should not be allowed, unless they are explicitly authorised by Commission Implementing Decision.
- (6) For reasons of clarity and legal certainty, a new decision should be adopted. Decision 97/370/EC should therefore be repealed.
- (7) The measures provided for in this Decision are in accordance with the opinion of the Committee for the Common Organisation of the Agricultural Markets,

<sup>(1)</sup> OJ L 347, 20.12.2013, p. 671.

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

<sup>(3)</sup> Commission Decision 97/370/EC of 30 May 1997 authorizing methods for grading pig carcasses in Sweden (OJ L 157, 14.6.1997, p. 19).

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 IV to Regulation (EU) No 1308/2013 in Sweden:

- (a) the 'Intra-scope (Optical Probe)' apparatus and the assessment methods related thereto, details of which are given in Part I of the Annex;
- (b) the 'Hennessy Grading Probe 2 (HGP 2)' apparatus and the assessment methods related thereto, details of which are given in Part II of the Annex;
- (c) the 'AutoFom III' apparatus and the assessment methods related thereto, details of which are given in Part III of the Annex;
- (d) the 'Fat-O-Meat'er II (FOM II)' apparatus and the assessment methods related thereto, details of which are given in Part IV of the Annex;
- (e) the 'Hennessy Grading Probe 7 (HGP 7)' apparatus and the assessment methods related thereto, details of which are given in Part V of the Annex.

*Article 2*

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

*Article 3*

Decision 97/370/EC is repealed.

*Article 4*

This Decision shall apply from 1 July 2014.

*Article 5*

This Decision is addressed to the Kingdom of Sweden.

Done at Brussels, 17 July 2014.

*For the Commission*  
Dacian CIOLOŞ  
*Member of the Commission*

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## ANNEX

## METHODS FOR GRADING PIG CARCASSES IN SWEDEN

## PART I

**Intrascopie (Optical Probe)**

1. The rules provided for in this Part shall apply when the grading of pig carcasses is carried out by means of the apparatus termed 'Intrascopie' (Optical Probe).
2. The Intrascopie shall be equipped with a hexagonal shaped probe with a maximum width of 12 mm (and of 19 mm at the blade on top of the probe) containing a viewing window and light source together with a sliding barrel.
3. The lean meat content of the carcass shall be calculated according to the following formula:

$$Y = 68,1839 - 0,55266 \times SP\_F1$$

where:

SP\_F1: The thickness of the back fat including rind in mm, measured at 8 cm off the midline immediately behind the last rib

4. The formula shall be valid for carcasses weighing between 50 and 120 kg.

## PART II

**Hennessy Grading Probe 2 (HGP 2)**

1. The rules provided for in this Part shall apply when the grading of pig carcasses is carried out by means of the apparatus termed 'Hennessy Grading Probe 2 (HGP 2)'.
2. Hennessy probe reflectance spectroscopy records profiles of the measurements generated from recording in fractions of millimeters, distances of penetration together with back scattered light signals.
3. Specific optical band widths are selected to provide the optimum information obtainable between and within the various tissues of the species being objectively analyzed.
4. The apparatus Hennessy Grading probe shall be equipped with a probe of 5,95 mm diameter with an abutting blade of 6,3 mm containing a photodiode (Siemens LED of the type LYU 260-EO and photo detector of the type 58 MR) and having an operational distance between 0 and 120 mm.
5. The results of the measurements shall be transformed in terms of estimated lean meat content by means of the HGP2 itself as well as a computer linked to it.
6. The lean meat content of the carcass shall be calculated according to the following formula:

$$Y = 68,9849 - 0,61123 \times GP2\_F1 - 0,28522 \times GP2\_F2 + 0,0242 \times GP2\_M$$

where:

GP2\_F1: The thickness of back fat including rind in mm, measured at 8 cm off the midline immediately behind the last rib

GP2\_F2: The thickness of back fat including rind in mm measured at 6 cm off the midline 12 cm towards the head compared with F1.

GP2\_M: The thickness of the muscle in mm measured at the same time and in the same place as F2.

7. The formula shall be valid for carcasses weighing between 50 and 120 kg.

## PART III

**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 termed 'AutoFom III'.
2. The AutoFom III is based on ultrasound technology and provides a digitized 3-D scan of the carcass. The ultrasonic image is generated by 16 transducers embedded in a stainless steel array.
3. The lean meat content in a pig carcass according to the Union reference method is predicted by a formula on the basis of online variables extracted from an image made by ultrasound. More than 50 online variables are obtained from the image analysis. The statistical analysis reduces the information to two components, each of which is a linear combination of the same six online variables. The final formula is expressed by online variables:

$$Y = 55,2971 - 0,27747 \times R2P4 - 0,24594 \times R2P11 + 4,59557 \times R2P12 - 0,22981 \times R2P15 + 0,11882 \times R3P5 - 0,11719 \times R4P3$$

where:

R2P4: p2\_selected\_fat\_mm. The P2 fat measure at the selected position in mm.

R2P11: minpair\_value. A filter mask that selects two regions 14 cm apart is applied to the cross-section vector. This is the minimum of the filter result vector.

R2P12: P2\_skew. Relation of the selected P2 and the unselected P2. The actual point used is a little closer to the center, to make the value more tolerant to very tilted carcasses. Value is always greater than or equal to 1,0.

R2P15: minpair\_value v2. A second version of the minpair value.

*Meat/Rib interface*

R3P5: max\_meat\_mm. The maximum meat measure. Maximum rib position minus minimum fat position converted to mm.

*Fat 1 Inter-fat interface.*

The fat1 layer is measured at the ham and at 5.- 6. rib. These are called B points.

R4P3: fat1\_p2\_selected. The fat 1 measurements in the selected P2 point.

4. The formula shall be valid for carcasses weighing between 50 and 120 kg.

## PART IV

**Fat-O-Meat'er II (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 termed 'Fat-O-Meat'er II' (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 the carcass shall be calculated according to the following formula:

$$Y = 68,5549 - 0,5485 \times FOM\_F1 - 0,26491 \times FOM\_F2 + 0,0153 \times FOM\_M$$

where:

FOM\_F1: the thickness of backfat in mm, measured at 8 cm off the midline of the carcass between the third and fourth last lumbar vertebrae.

FOM\_F2: the thickness of backfat in mm, measured at 6 cm off the midline of the carcass between the third and fourth last ribs.

FOM\_M: the thickness of muscle in mm, measured at the same time and in the same place as F2

4. The formula shall be valid for carcasses weighing between 50 and 120 kg.

#### PART V

##### **Hennessy Grading Probe 7 (HGP 7)**

1. The rules provided for in this Part shall apply when the grading of pig carcasses is carried out by means of the apparatus termed 'Hennessy Grading Probe 7 (HGP 7)'.  
2. Hennessy probe reflectance spectroscopy records profiles of the measurements generated from recording in fractions of millimeters, distances of penetration together with back scattered light signals.  
3. Specific optical band widths are selected to provide the optimum information obtainable between and within the various tissues of the species being objectively analyzed.  
4. The apparatus Hennessy Grading probe shall be equipped with a probe of 5,95 mm diameter with an abutting blade of 6,3 mm containing a photodiode (Siemens LED of the type LYU 260-EO and photo detector of the type 58 MR) and having an operational distance between 0 and 120 mm.  
5. The results of the measurements shall be transformed in terms of estimated lean meat content by means of the HGP7 itself as well as a computer linked to it.  
6. The evaluation of the measuring curve slightly differs between HGP 2 and HGP 7.  
7. The lean meat content of the carcass shall be calculated according to the following formula:

$$Y = 69,199 - 0,70871 \times GP7\_F1 - 0,20261 \times GP7\_F2 + 0,0272 \times GP7\_M$$

where:

GP7\_F1: The thickness of back fat including rind in mm, measured at 8 cm off the midline immediately behind the last rib

GP7\_F2: The thickness of back fat including rind in mm measured at 6 cm off the midline 12 cm towards the head compared with F1.

GP7\_M: The thickness of the muscle in mm measured at the same time and in the same place as F2.

8. The formula shall be valid for carcasses weighing between 50 and 120 kg.
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