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COMMITTEE FOR TRADE, INDUSTRY AND
ENTERPRISE DEVELOPMENT

Working Party on Standardization of
Perishable Produce and Quality Development

Specialized Section on Standardization of Meat
9th session, 27-29 March 2000, Geneva

**REPORT OF THE NINTH SESSION
ADDENDUM 2**

Bovine specific section

Note by the Secretariat: The addendum contains the text of the bovine specific requirements as agreed by the Specialized Section. The text is submitted to the Working Party (together with Addenda 1 and 3) for adoption as a new UN/ECE standard for bovine carcases and cuts.

GE.00-

UN/ECE Standard
Concerning the standardization, marketing, and
Commercial quality of

Beef Carcasses and Cuts
Moving in International Trade

Bovine Specific (Section 2)

1.1.0   FOREWORD

The purpose of this Standard is to define and describe commercial quality and merchandising requirements of beef carcasses and cuts moving into international trade as fit for human consumption. It is recognized that many other requirements of food standardization and veterinary control must be complied with to market beef meat across international borders. The standard does not attempt to prescribe those aspects which are covered elsewhere, and throughout the standard, such provisions are left to national or international legislation, or requirements of the importing country.

The standard includes photographs of carcasses and selected commercial cuts to facilitate a better understanding of its provisions with a view to ensuring a wide application in international trade.

1.2.0   Scope

The standard applies to carcasses and/or associated meat cuts from bovine animals, marketed as fit for human consumption, demonstrating a characteristic red beef colour.

1.3.0   Field of application

The purpose of this Standard is to define certain aspects of quality and cutting requirements of beef carcasses and cuts intended to be sold in international trade.

The Standard contains references to other international agreements, standards and codes of practice which have the objective of maintaining the quality after dispatch and of providing guidance to governments on certain aspects of food hygiene, labelling and other matters which fall outside the scope of the Standard. Codex Alimentarius Commission Standards, Guidelines, and Codes of Practice should be consulted as the competent international reference concerning health and sanitation requirements.

1.4.0   General requirements

The following areas are dealt with in ~~section 1~~ the General Requirements Standards for Meat Carcasses and Cuts ~~covering general issues~~, which apply to trade in all mammalian meats.

Provisions concerning refrigeration

Provisions concerning condition
Provisions for evaluating fat thickness in certain cuts
Provisions concerning meat and fat colour and pH
Provisions concerning origin and production history
Provisions concerning packing, storage, and transport
Labelling information for marketing units for meat
Authority for conformity assessment[1]
EAN•UCC codification system

1.4.1   Provisions concerning external fat

External fat is measured in accordance with the provisions outlined in the General Requirements. This standard provides for the codification of beef cuts in international trade to have external fat levels specified to the following categories:

Peeled Denuded, surface membrane removed
Peeled Denuded
Practically free (75% lean/seam surface removed)
3 mm maximum fat thickness
6 mm maximum fat thickness
13 mm maximum fat thickness
25 mm maximum fat thickness

1.4.2   Provisions concerning marbling

Marbling or intra-musculature fat is one of the criteria commonly used in determining meat quality. There are two available systems recommended in this standard. The two systems are:

       i)   The USDA system
      ii)   The AUS-MEAT system

1.4.2.1   Selection of a marbling standard.

The USDA system is based upon a photographic scale is based upon the USDA system. The range demonstrates various degrees of marbling on a six point scale of increasing order of marbling content of 1-6, named "Slight, Small, Modest, Moderate, Slightly Abundant and Moderately Abundant", respectively.

The AUS-MEAT system is based upon a photographic scale of seven chips (numbering 0 to 6) which are in order of increasing marbling content.

Users of both systems select the appropriate photograph that matches their requirements but are advised to

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[1] This point refers to the Accredited Certifying Authority covered in the general requirements for individual countries.

use the full system. Details <u>can be found in (Standards - Bovine Carcase and Cuts)</u> and systems details can be accessed through either USDA or AUS-MEAT directly.

NOTE: *Although the codification system discussed in section 1.4.5 (beef specific coding) allows for purchasers to designate either the USDA, AUS-MEAT or another system, it only allows for the specific coding of AUS-MEAT individual marbling chips.*

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1.4.<u>3</u>   Provisions concerning <u>lean</u> ~~meat~~ and fat colour

Normal lean beef demonstrates a characteristic red colour. Meat with a pHU[2] above 6.0 is considered dark, firm and dry meat (DFD). pHU is measured in m. longissimus dorsi according to ISO 2917:1974 "Meat and meat products". Any other methods or conditions of pH must be defined by contractual agreement. Meat colour could be evaluated organoleptically in fresh cross-section of fixed muscle using an available colour guide. A range of meat colour for too dark (DFD) or too light meat (veal) and the representative muscle is defined in contractual agreement.

NOTE:
i)   In the lean meat colour scale the number in brackets represents the corresponding AUS-MEAT's index reference on which the system is based.
ii)   It should be noted that other colour references are available and that these can be used if specified in the contractual terms together with any required pH parameters.
iii)   It should be noted that the above is only indicative and that the full system and working parameters should be accessed for commercial use.

Contact addresses for system details:

UN/ECE
Trade Division
Food Standards Officer
Palais des Nations
CH-1211 Geneva 10

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[2] pHU means ultimate pH

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1.4.4 Provisions concerning Origin and Production History

The following options that may be specified by the purchaser require traceability systems to be in place. Traceability requires a verifiable method of identification of bovine animals, carcasses, cartons and cuts at all stages of production. The identification numbers must be applied and recorded correctly guaranteeing a link between them. If used, traceability procedures must be agreed on by the Authority for Conformity Assessment referred to in paragraph 4.8. of the General Conditions.

The EAN•UCC System provides global language of traceability by means of multi-industry standards for identification and communication for products, services and locations. They may be used by organizations for traceability purposes across the supply chain to track and trace beef products between the farm and retail outlets. For information on using the EAN•UCC System please refer to the "Traceability of Beef" guidelines obtainable from EAN International or national EAN organizations.

Contact addresses for EAN•UCC System details:

EAN International   Uniform Code Council (UCC)
145 rue Royale   Princeton Pike Corporate Centre
B-1000 Brussels   1009 Lenox Drive, suite 202
Belgium   Laurenceville
                            New Jersey 08648
Tel: +32-2-227 10 20   USA
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1.4.4.1 Beef Category

The standard provides for the categorization of beef into eight categories:

- Intact male (evidence of sex traits, greater than 24 months)
- Young intact male (less than 24 months)
- Steer (young castrate)
- Heifer (young female, uncalved)
- Steer and/or Heifer
- Young Cow (mature female < 5 years)
- Old Cow (mature female >5 years)
- Young bovine (6-12 months)

1.4.4.2 *Production, & Feeding and Animal Identification Systems*

- *Intensive systems* describe production methods which include restricted stocking, housing and feeding regimes developed to promote rapid growth. Specific standards need to be defined between buyer and seller.
- *Extensive systems* describe production methods which include relatively unrestricted access to natural forage, *'forage fed'*, for the majority of the animals' lives. Specific standards need to be defined between buyer and seller.
- *Organic systems* describe production methods which follow internationally recognized standards or national standards if they are more restrictive. Specific standards need to be defined between buyer and seller.
- *Husbandry systems* that control specific animal treatments (such as Hormonal Growth Promotants) which follow internationally recognized standards or national standards if they are more restrictive.
- *Other systems* must be described by the seller.

1.4.4.3 *Slaughter systems*

- *Traditional* – stunning prior to bleeding is the accepted traditional system
- *Kosher* – appropriate ritual slaughter procedures must be specified
- *Halal* – appropriate ritual slaughter procedures must be specified
- *Other* – any other method of slaughter must be specified by seller/buyer
- *None specified*

1.4.4.4 *Post slaughter processing*

- *Electrical stimulation* – if this is specified the system parameters must be agreed within the contractual terms.
- *Method of carcase suspension* – if different from traditional Achilles tendon suspension then the required method must be specified.
- *Chilling regimes* – if a specific chilling procedure is required then this must be specified.
- *Maturation processes* – any specific requirements must be specified.
- *Other requirements* – must be specified.
- *None specified.*

1.4.5 Beef specific coding

The following tables demonstrate the general application of the 14 ~~13~~ field, ~~18~~ 20 digit UN/ECE using the EAN/UCC coding scheme to bovine species specification. See appendix 1 for details.

UN/ECE Bovine Standard Coding

Data Field	Code Range	Specified Use	Data Field Ref.
Mandatory			
~~Beef~~ Species/Class	0 – 9 ~~1~~	1	1
~~Sub-primal~~ Cut	0 - 9999	0-999<u>9</u>	<u>2</u>
Refrigeration	0 - 9	1 - 3	11
Optional – requiring traceability			
Category (Sex/Type/Age)	0 - 9	0 - 8	<u>3</u>
Feeding System	0 - 9	0 - 5	<u>4</u>
<u>Certification</u> <u>Grade/Classification</u> <u>Third party certification</u> <u>Animal Identification</u>	0 - 9~~9~~	0 – ~~1~~ <u>7</u>	<u>5</u>
Slaughter Systems	0 - 9	0 - 4	<u>6</u>
Post slaughter processing	0-9	0 - 1	<u>7</u>
Optional – not requiring traceability			
External Fat	0 - 9	<u>0</u> ~~1~~ - 7	<u>8</u>
Marbling	0 - 9	0 - 8	9
Colour - (Meat/Fat)	0 - 99	0 - 99	10
Weight Range	0 - 9	0 - 1	12
Packing	0 – 9	0 - 7	13
<u>Reserve</u>	<u>000 - 999</u>	<u>None</u>	<u>14</u>

1.4.5.1 *Use codes for beef specific coding*

Data Field	Specified Use Code	Code Description

1.   Species

1   =   Beef

2.   Four digit cut code defined in Standard ~~Defined~~

3.   Category

0   =   Not Specified
1   =   Intact male (evidence of sex traits, greater than 24 months)
2   =   Young intact male (less than 24 months)
3   =   Steer (young castrate)
4   =   Heifer (young female, uncalved)
5   =   Steer and/or Heifer
6   =   Young Cow (mature female < 5 years)
7   =   Old Cow (mature female >5 years)
8   =   Young bovine (6-12 months)

4.   Feeding System

0   =   Not Specified
1   =   Intensive
2   =   Extensive
3   =   Organic
4   =   Husbandry
5   =   Other

5.   Certification

0   =   Not Specified
1   =   Grade/Classification Specified
2   =   Third Party Certification Specified
3   =   Animal Identification Specified
4   =   Grade/Classification and Third Party Certification Specified
5   =   Grade/Classification and Animal Identification Specified
6   =   Third Party Certification and Animal Identification Specified
7   =   Grade/Classification, Third Party Certification and Animal Identification Specified

6.   Slaughter Systems

0	=	Not Specified
1	=	Traditional – Stunning prior to bleeding is the accepted traditional system
2	=	Kosher – appropriate ritual slaughter procedures must be specified
3	=	Halal – appropriate ritual slaughter procedures must be specified
4	=	Other – any other method of slaughter must be specified by seller/buyer

7.   Post Slaughter Processing

0	=	Not Specified
1	=	Specified

8.   External fat thickness/level

0	=	Not Specified
1	=	Peeled Denuded, surface membrane removed
2	=	Peeled Denuded
3	=	Practically free (75% lean/seam surface removed)
4	=	3 mm maximum fat thickness
5	=	6 mm maximum fat thickness
6	=	13 mm maximum fat thickness
7	=	25 mm maximum fat thickness

9.   Marbling

0	=	Not Specified
1	=	AUS-MEAT 0 Chip
2	=	AUS-MEAT 1 Chip
3	=	AUS-MEAT 2 Chip
4	=	AUS-MEAT 3 Chip
5	=	AUS-MEAT 4 Chip
6	=	AUS-MEAT 5 Chip
7	=	AUS-MEAT 6 Chip
8	=	USDA System Specified
9	=	Other System Specified

10.   Lean and Fat Colour

0	=	Not specified
1	=	Other system specified

The AUS-MEAT Lean and Fat Colour Chips can be coded into the item specification by the Lean Colour being the first digit (AUS-MEAT 1a – 7 Chips) and the AUS-MEAT Fat Colour being the second digit (AUS-MEAT 0 – 9 Chips). The following table demonstrates the coding matrix for using the AUS-MEAT Lean and Fat Colour Chips where lean colour is on the y-axis and fat colour is on the x-axis.

AUS-MEAT Fat Colour Chip											
		0	1	2	3	4	5	6	7	8	9
	1a	10	11								19
	1b	20	21								29
	1c	30	31								39
AUS-MEAT Lean Colour	2	40	41								49
	3	50	51								59
	4	60	61								69
	5	70	71								79
	6	80	81								89
	7	90	91								99

11.   Refrigeration

1 = Chilled

2 = Frozen

3 = Deep Frozen

12.   Weight Range

0   =   Not Specified

1   =   Specified

13   Packing

0   =   Not Specified

1   =   Carcasses and quarters – Chilled with or without packaging

2   =   Carcasses and quarters – Frozen/deep frozen packed to protect the products

3   =   Cuts – I.W. (Individually wrapped).

4   =   Cuts – Bulk packaged (plastic or wax-lined container).

5   =   Cuts – Vacuum-packed (VP).

6   =   Cuts – Modified Atmosphere Packed (MAP).

7   =   Cuts – Other.

14.   Reserved codes (always 000)

1.4.5.2 *Codification example*:

The item characterized by the 20-digit code 11643530104000105000 would be:

Field 1 Species = 1 (Beef)
Field 2 Cut = 1643 (Brisket)
Field 3 Category = 5 (Steer and/or Heifer)
Field 4 Feeding System = 3 (Organic)
Field 5 Certification = 0 (Unspecified)
Field 6 Slaughter Systems = 1 (Traditional)
Field 7 Post Slaughter Processing = 0 (Unspecified)
Field 8 External Fat = 4 (3mm maximum fat thickness)
Field 9 Marbling = 0 (Unspecified)
Field 10 Lean and Fat Colour = 00 (Unspecified)
Field 11 Refrigeration = 1 (Chilled)
Field 12 Weight Range code = 0 (Unspecified)
Field 13 Packing code = 5 (Vacuum Packaged)
Field 14 Reserved codes = 000

[Associated pictures are to be included in final document.]

1.   The customer orders, using the UN/ECE Standard for Bovine Carcasses and Cuts coding scheme.

[picture]

2.   On receipt of the order, the supplier translates the UN/ECE codes into its own trade item codes (i.e., Global Trade Item Number).

[picture]

3.   The supplier delivers the order to the customer. The goods are marked with the UCC/EAN-128 bar code standard. ~~containing the following data elements: Global Trade Item Number (GTIN), UN/ECE Standard Code, Net Weight in Kilograms, Use by Date and Batch Number.~~

[picture]

4.   The customer receives the order and the UCC/EAN-128 bar code scanned, thus allowing for the automatic update of commercial, logistics and administrative processes.

[picture]

5.   The physical flow of goods, marked with EAN/UCC standards, may be linked to the information flow using electronic data interchange (EDI - EANCOM® messages).

[Picture]