



Specialized Section on Standardization of Meat

Progress Report, Ian King (Chair)

Seventy-fourth session WP.7

Geneva 12-14 November 2018



Specialized Section on Standardization of Meat –2018

Symposium “Sustainable international e-trade for me(a)t”

Speakers from around the world:

- “Sustainable meat trade and e-solutions—the example of China’s inspection and quarantine procedures of importing meat products”;
- “Combining e-business with global standards (such as UNECE standards) to foster sustainable international meat trade”;
- “Facilitating trade—the Dutch experience with e-certificates for meat export”;
- “Agri-food e-standards in the international supply chain”;
- “Meat-messaging—case presentation of an e-system between the United States and Australia”
- “Making eating quality possible—harmonizing electronic data collection systems worldwide”.
- Presentations:
<http://www.unece.org/index.php?id=47825>.



Specialized Section on Standardization of Meat –2-4 July 2018

Symposium “Sustainable international e-trade for me(a)t”

Demonstrated:

- how countries and private sector develop/implement e-commerce, e-inspection methods and e-certifications to make international meat trade more efficient, time- and cost-wise by facilitating procedures.
- The e-trade example showed new way of applying international standard language to facilitate trade of meat on electronic platforms and need to prepare the meat standards for electronic trade.

E- tools presented at the symposium provide efficient options for international meat trade and prevent and reduce food waste caused by produce held back for regulatory or administrative reasons and reduce the risk for fraud.

Next symposium in 2019.



Specialized Section on Standardization of Meat

2-4 July 2018

Attendance (40)

- Albania, Australia, Chile, China, France, Ireland, Netherlands, Poland, Portugal, Serbia, United Kingdom, United States of America, Uruguay; International Trade in Endangered Species of Wild Fauna and Flora (CITES), International Meat Secretariat, United Nations Conference on Trade and Development (UNCTAD), World Trade Organization/Standards and Trade Development Facility (WTO/STDF); Agriculture and Food Development Authority of Ireland (Teagasc), AUS-Meat Limited, AUS-QUAL Pty, Birkenwood PT, Gira Consultants, INRA, Institut de l'Elevage, International Meat Secretariat (IMS) International Meat Sector (IMS), INZAR, Meat and Livestock Australia (MLA), MLA Europe, Polish Beef Association, PrimeX Connect, Texas Tech University, University of Novi Sad, United Nations Interim Administration Mission in Kosovo (UNMIK)

Amendments to Current Standards

- **Goose meat** : Submitted for adoption to the 74th session of the Working Party as new addition to the existing standard.
- **Porcine meat**: Submitted for adoption to the 74th session of the Working Party as a new addition to the existing standard.
- **Ovine meat** : Submitted for adoption to the 74rd session of the Working Party as new addition to the existing standard.

Specialized Section on Standardization of Meat – progress in 2018 **Eating quality update**

- Specialized Section reviewed in detail the Rapporteurs group's proposed **Research Guidelines complementing the UNECE Standard for Bovine Meat**, to provide the full application to the reference standards listed (meat colour reference standards; fat colour reference standard marbling reference standard as well as newly proposed pH measurement standard, a hump height reference standard, a skeletal ossification reference standard and an animal age reference standard). ***Agreement to use Australian Beef Carcase Assessment System.**
- The Specialized Section took note that the **International Foundation on Eating Quality had been established** to facilitate the work, data collection and data storage on eating quality. This helps raise greater interest, align research and outcomes and facilitate the sharing of results. Collected data is stored in a common databank with a shared data component accessible for research purposes. **The foundation's ("International Meat Research 3G Foundation") scientific reference group has sub-working groups that submit proposals and recommendations to the UNECE Rapporteurs group.**
- The Specialized Section agreed to use the **Meat Standard Australia (MSA) standard as the new research methodology for eating quality of bovine meat at UNECE level** to be published on the UNECE web site.
- **The Specialized Section submits the Research Guidelines for adoption by the Working Party.**

AUSTRALIAN BEEF CARCASS ASSESSMENT SYSTEM

Beef and Veal Chiller Assessment Language



Flip Marbling
Reference Standard

0 1 2 3 4 5 6

Confirm answer

Assessment Rules

Marbling

Marbling is scored by comparing the proportion of Marbling Fat to meat at the surface of the assessment site, that lies within the M. longissimus dorsi boundary, against the proportion of Marbling to meat depicted in the Marbling Reference Standards.

If the Marbling score falls between two Standards, the lower of the two scores is assigned.

If the marbling matches that of an individual Marbling Reference Standard the carcass is given the score of that Reference Standard.

Fat within the M. longissimus dorsi that is attached to the edge of the M. longissimus dorsi may be included as Marbling fat from the point of intrusion at which it narrows to 1 mm in width, in an undisturbed state, for the first time. Intermuscular (seam) fat protruding into the M. longissimus dorsi and connective tissue must not be considered when assessing the Marbling score.

Question Number 1

Your Answer 4

AUSTRALIAN BEEF CARCASE ASSESSMENT SYSTEM

Chiller Assessment Language



The Australian Beef Carcase Chiller Assessment System (ABCAS) was developed to enable Licensed Enterprises to assess, grade or class carcases using a uniform set of standards under controlled conditions. Chiller Assessment provides a means of describing meat characteristics and of classifying product prior to packaging. These characteristics include the colour of meat and fat, the amount of marbling, eye muscle area, the rib fat and the maturity of the carcase.

Assessments are made by qualified assessors and results are allocated to the carcase and provide a means of (carcase) selection according to individual contract specifications.

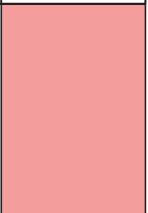
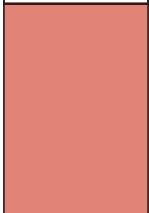
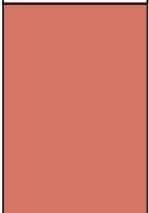
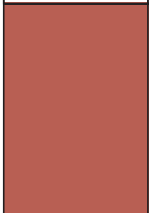
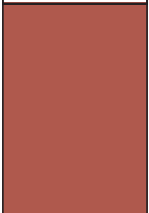
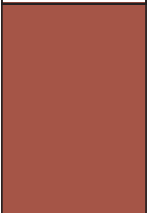
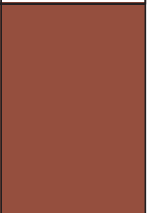

The ABCAS Chiller Assessment Language is only available to Licensed processors.




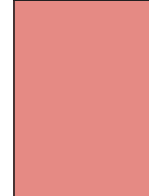
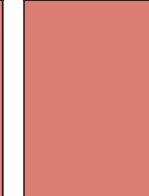
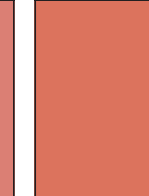
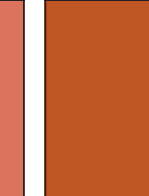
BEEF AND VEAL MEAT COLOUR



Meat Colour is the predominant colour of the rib eye muscle (M. longissimus dorsi). Meat colour (Beef and/or Veal) is assessed on the chilled carcass at the bloomed rib eye muscle area (M. longissimus dorsi) and is scored against the AUS-MEAT Meat Colour Reference Standards.

1A	1B	1C	2	3	4	5	6	7
								Colour darker than the 6 chip

Beef Colours displayed show the darkest colour of each grading and it is a guide only, not a true representation.

V1	V2	V3	V4	V5
				



Veal Colours displayed show the darkest colour of each grading and it is a guide only, not a true representation.

FAT COLOUR



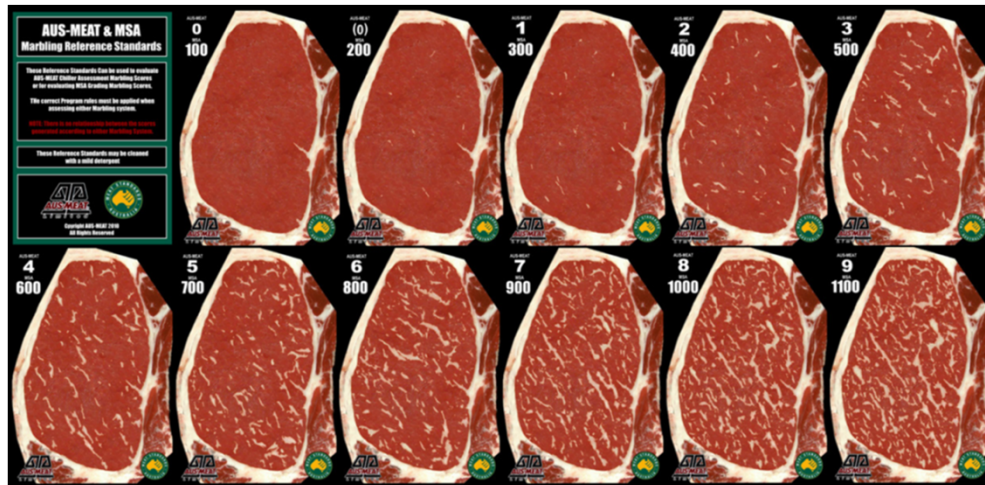
Fat colour is the intermuscular fat lateral to the rib eye muscle. It is assessed on the chilled carcass and scored against the AUS-MEAT Fat Colour Reference Standards. Fat colour is assessed by comparing the intermuscular fat colour lateral to the M. longissimus dorsi and adjacent to the M. iliocostalis and is scored against the AUS-MEAT Fat Colour Reference Standards.



0	1	2	3	4	5	6	7	8	9
									Colour darker than the 8 chip

Colours displayed show the darkest colour of each grading and it is a guide only, not a true representation.

MARBLING



Marbling is the fat that is deposited between muscle fibres of the M. longissimus dorsi muscle. Marbling is assessed and scored against the AUS-MEAT / MSA Marbling Reference Standards.

The AUS-MEAT Marbling system provides an indication of the amount of marbling in beef. The MSA Marbling System provides an additional indication of distribution and piece size.

Marbling is an assessment of the chilled carcass and scored by comparing the proportion of marble fat to meat at the surface of the assessment site which lies within the M. longissimus dorsi boundary.

Marbling may be assessed at any ribbing site from 5th-13th rib. The rib at which the measurement was performed must be nominated in company records.

RIB FAT MEASUREMENT

SUBCUTANEOUS

Subcutaneous Rib Fat measurement is a measurement in millimetres of the thickness of subcutaneous fat at a specified rib.

TOTAL

Total Rib Fat measurement is a measurement in millimetres of the thickness of subcutaneous fat and intermuscular fat at the specified rib.



CARCASE MATURITY & EYE MUSCLE AREA

CARCASE MATURITY

Maturity is an estimation of the development of a beef carcass determined by the degree of ossification of the dorsal spinous processes of the vertebrae, the fusing of the vertebrae, and the shape and colour of the rib bones.



EYE MUSCLE AREA (EMA)

EMA is the area of the surface of the M. longissimus dorsi at the ribbing site and is calculated in square centimetres. EMA may be measured at the 10th, 11th, 12th or 13th rib. EMA is measured manually using a plastic grid.



WHAT IS OsCAP?

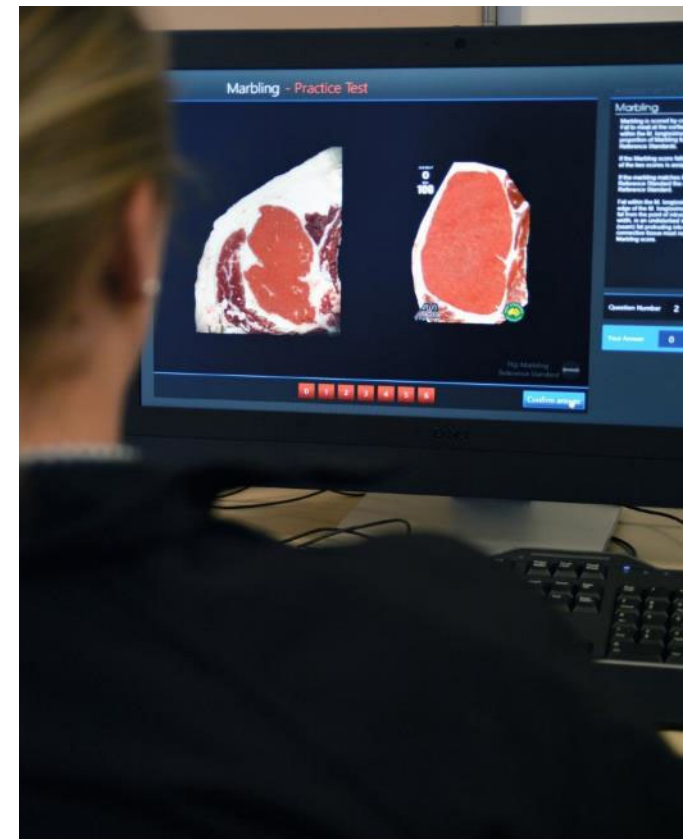
The Onsite Correlation and Practice Program (OsCap) is the worlds first objective computer calculated standard for training, correlating and maintaining the currency of Chiller Assessors.

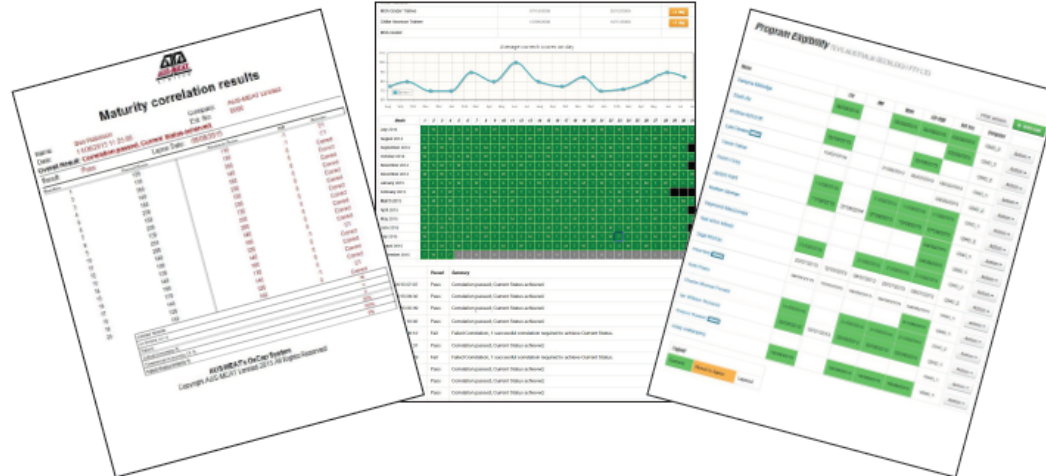
OsCap provides correlations for the following:

Meat Colour	Maturity
Fat Colour	Subcutaneous Rib Fat
Marbling	Total Rib Fat
Higher Marbling	Eye Muscle Area

OsCap also includes a practice mode that can be used for in house training purposes such as prior to attending an Chiller Assessors training course or simply to allow an assessor to tune more closely to the standard. OsCap provides instant feedback for each measurement completed by an assessor.

A comprehensive reporting system also provides records of correlations for Enterprise Quality Assurance systems.





Specialized Section on Standardization of Meat – progress in 2018 Sustainable Development Goals (SDGs)

The Specialized Section stressed importance of the Sustainable Development Goals (SDGs) for its work, particularly:

- linkages to the meat sector's economic role; reduction of environmental impacts and better resource utilization; product's use for food and non-food purposes; production of high-value protein with otherwise non-utilized resources (grass); and Specialized Section's standardization of by-products for consumption and further processing.
- need for objective research and scientific studies of livestock production impact on environment (see FAO's on sustainability and life-cycle assessment of livestock production systems.)
- development of national sustainability frameworks and need to identify their linkages with components included in the UNECE standards
- consider also possible negative impacts of e.g. poultry production and impact of the new manufactured meat products (artificial protein production).

The Specialized Section decided to work on a discussion at the next session in 2019 on SDGs and the above linkages

Specialized Section on Standardization of Meat – progress in 2018

Future work - New Standards/new work 2017/2018

Meat Symposium 2019 on e.g. consistency for standard development (private standards) and sustainability; food integrity, food fraud and traceability for meat). Explore the possibility of holding this symposium/workshop prior to the **August 2019 International Congress of Meat Science and Technology, ICoMST (Berlin)**.

- Study of the possibility to develop quality standards for fish meat (scope to be defined) aquaculture and sea
- Study of the possibility to align the ECE cut codes with the Harmonized Commodity Description and Coding System - HS codes
- Compilation of standards' implementation and utilization worldwide;
- Eating quality
- Ovine Standard
- Sustainable development Goals and the work of the Specialized Section on Meat

Important: close collaboration with the IMS, GS-1 and other partners.

Thank you

Ian King

**Chairman Specialized Section on Standardization
of Meat**