

AUSTRALIAN BEEF CARCASS EVALUATION
Beef and Veal Chiller Assessment Language



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Chiller Assessment Language

Chiller Assessment was developed to enable AUS-MEAT accredited Enterprises to assess, grade or class carcasses 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 AUS-MEAT Chiller Assessment Language is only available to AUS-MEAT accredited Enterprises, their clients and suppliers.



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 carcase at the bloomed rib eye muscle area (M. longissimus dorsi) and is scored against the AUS-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 carcase and scored against the AUS-MEAT fat colour reference standards.

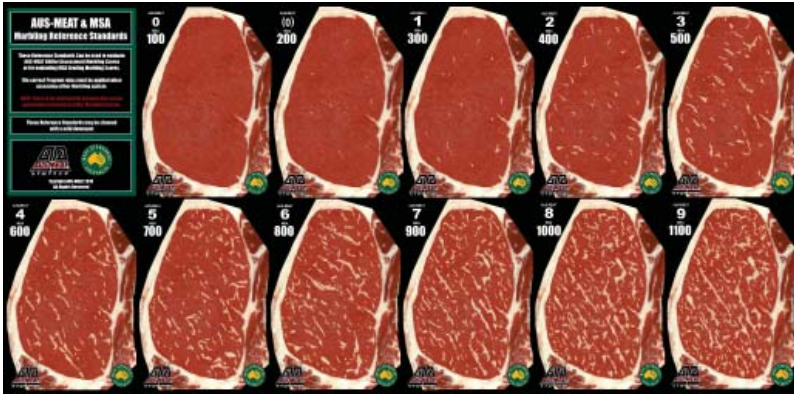
Fat colour is assessed by comparing the intermuscular fat colour lateral to the M. longissimus dorsi and adjacent to the M. iliocostalis and is scored against the AUS-MEAT Fat Colour reference standards.



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

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.



Maturity images depict MSA Standards

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.



NATIONAL FEEDLOT ACCREDITATION SCHEME (NFAS)

To be eligible for the description of Grain Fed Beef (Symbol GF), Grain Fed Young Beef (Symbol GFYG) or Grain Fed Finished (Symbol GFF), all cattle must be sourced from an NFAS accredited feedlot and be described on an NFAS Delivery Docket.

PRODUCTION

Cattle must be fed minimum ration. Rations must have an average metabolisable energy content greater than 10 megajoules (MJ) per kg dry matter. 'Grain' is the single highest component.

DEFINITIONS FOR GRAIN FED BEEF	DAYS ON HIGH ENERGY RATION	MINIMUM TIME ON FEED
GRAIN FED	80 Days	100 Days
GRAIN FED YOUNG BEEF	50 Days	70 Days (60 Days Females)
GRAIN FED FINISHED	28 Days	35 Days

CARCASE SPECIFICATIONS

MINIMUM CARCASS SPECIFICATIONS	AGE DENTITION MAXIMUM	FAT DEPTH MINIMUM	MEAT COLOUR	FAT COLOUR
GRAIN FED	6 Teeth or 7-8 teeth is acceptable where carcass maturity is \leq 280	7mm	1ABC - 3	0-3
GRAIN FED YOUNG BEEF	2 teeth	5mm	1ABC - 3	0-3
GRAIN FED FINISHED	Meet all Meat Standards Australia (MSA) grading requirements at production and meat processing to be eligible as GFF product			

* NOTE

Where meat colour score exceeds MC 3, product eligible to be labelled as GF / GFYG where:

- The feeding requirements and other GF / GFYG quality attributes are met;
- Carcasses meet all Meat Standards Australia (MSA) grading requirements at production and meat processing to be eligible as GF / GFYG; and
- No portion of the carcass is destined for the EU GF-HQB quota or any other markets with regulations that include meat colour criteria

MEAT STANDARDS AUSTRALIA (MSA)

Meat Standards Australia (MSA) Beef Grading Program predicts eating quality by grade, cooking method and ageing requirement to guarantee the tenderness of beef for consumers.

The MSA grade/s are determined by calculating the direct and interactive effects of factors which affect beef eating quality. Such factors include breed, sex, marbling, age, growth history, carcass quality attributes, processing methods and treatments.

MSA utilises the AUS-MEAT Chiller Assessment Language with the following assessments used: marbling, meat colour, fat colour, rib fat, eye muscle area and maturity. Additional measurements required for MSA grading include:

- Ultimate pH
- Hump height
- Subcutaneous fat distribution

For more information on the MSA Grading program visit the MLA website at www.mla.com.au/msa

Chiller Assessment Language can be found in AUS-MEAT National Accreditation Standards and Australian Meat Industry Classification System. For further information regarding Beef and Veal Language, contact AUS-MEAT Limited on (07) 3361 9200 for brochures or visit www.ausmeat.com.au for free download.

