

# — AUS-MEAT — LANGUAGE

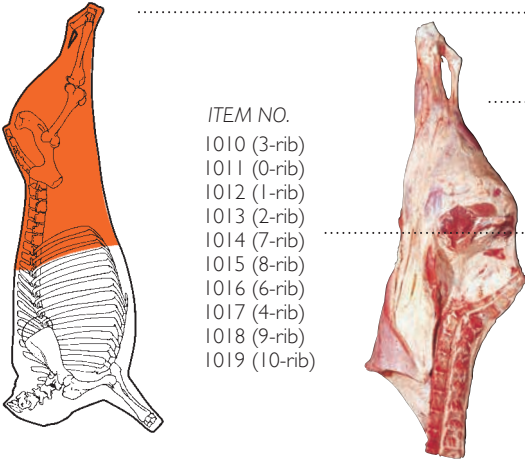
*The AUS-MEAT Language is a common language which uses objective descriptions to describe meat products accurately to meet market requirements both nationally and internationally. The Language is a national uniform description system based on objective carcase measurements used in the classification of Australian meat and livestock.*

# HOW TO USE THIS HANDBOOK

The Handbook of Australian Meat (HAM) is designed to enable Exporters and Importers of Australian product to communicate detailed specifications and descriptions of red meat items using the same common Language. AUS-MEAT has assigned a distinct four-digit number for every primal cut and offal product derived

from beef, veal, sheep and goat. Primal cuts are a muscle, or group of muscles, (Bone in or Boneless) which are defined by detailed cutting lines using objective measurements (e.g. rib number), standard descriptions and directions.

## HOW TO READ AND UNDERSTAND THE SPECIFICATIONS



**ITEM NO.**

- 1010 (3-rib)
- 1011 (0-rib)
- 1012 (1-rib)
- 1013 (2-rib)
- 1014 (7-rib)
- 1015 (8-rib)
- 1016 (6-rib)
- 1017 (4-rib)
- 1018 (9-rib)
- 1019 (10-rib)

**HINDQUARTER** 1010

**SKELETAL SHADED AREA**  
Indicates the location of the product.

**MEAT IMAGE**  
Reflects accurate cutting lines to detailed specification.

**ITEM NUMBER (HAM No.)**  
Item number is reference to specification details and rib number variations.

**HAM NO.**  
Indicating Cut Name - Hindquarter

**PRODUCT DESCRIPTION**  
Name of the product cut or item.

**POINTS REQUIRING SPECIFICATION**  
Additional criteria that can be used to specify a purchaser's requirements for a specific product item.

**Hindquarter** is prepared from a Carcase Side by the separation of the Hindquarter and Forequarter by a cut along the specified rib, at right angles to the vertebral column through to the ventral portion of the Flank.

Points requiring specification:

- Rib number required.
- Diaphragm removed.

This 8th Edition of the Handbook of Australian Meat contains a selected list of detailed products and codes but it is by no means a full comprehensive list of products registered with AUS-MEAT.

## FURTHER DETAILS

Australian Meat specifications and product code listings can be obtained by contacting your AUS-MEAT accredited meat supplier. Details of Accredited meat establishments can be found at [www.ausmeat.com.au](http://www.ausmeat.com.au)

Australian Meat Industry stakeholders can access the Handbook of Australian Meat database through their AUS-MEAT online membership. For more details contact AUS-MEAT at [ausmeat@ausmeat.com.au](mailto:ausmeat@ausmeat.com.au)

# CHECK LIST GUIDE FOR ORDERING AUSTRALIAN RED MEAT

When ordering Australian Red Meat products the following list of items can be used to assist you with the development of your product specifications.



## IDENTIFY YOUR SPECIES AND CATEGORY

Select the species and Category (Basic or Alternative) that you require: e.g. Beef / Veal / Bull / Lamb / Mutton / Goat. (See Species and Category listing)

## SELECT THE PRODUCT DESCRIPTION AND ITEM NUMBER

Select the product from the Handbook of Australian Meat by product description and unique product code number (HAM No.).

## SELECT THE LIVESTOCK PRODUCTION SYSTEM

Options may include:

1. Grass Fed - This would include any species of animal raised in a Grass Fed production system either certified (Pasture fed) or non-certified.
2. Grain Fed - Would include any species of animal processed through an Australian industry certified Grain Fed program.
3. Organic - Production methods that conform to the legislation of the importing country concerning organic production.
4. Other systems - Other production systems agreed between buyer and seller.

## STATE YOUR REQUIRED SLAUGHTER SYSTEM

This may include ritual slaughter procedures such as halal or kosher and appropriate certifications.

## IDENTIFY ADDITIONAL PRODUCT QUALITY REQUIREMENTS

1. Chiller Assessment - specify your requirements for Marbling, Meat and Fat colour (refer to chiller assessment language for other criteria).
2. Meat Standards Australia Grading - specify your primal cut, quality grade 3, 4 or 5 star, recommended cooking method and required ageing period.

## STATE YOUR PRODUCT PREPARATION REQUIRED

This will include points requiring specification and the following may be considered:

Minimum and maximum weight range, fat depth, denuded, rib numbers, lean content, muscle content, trim variations (tail length), tendon length, membrane / silverskin removal.

## DETERMINE YOUR PACKAGING, STORAGE AND TRANSPORT

Options may include:

1. Packaging - Specify how the product is contained e.g. Vacuum Packed (VAC), Individually wrapped (IW). See list of packaging methods available.
2. Labelling - must meet minimum Australian labelling requirements. Specify details in addition to the mandatory information, i.e. other language details included, e.g. Best Before, Nutrition Information Panel.
3. Product condition - Product may be specified as Fresh, Chilled, Frozen or Aged Frozen.
4. Transport / Delivery - State transport and delivery requirements.

# — IDENTIFYING — CARCASS CATEGORY DESCRIPTIONS BY DENTITION

(BASIC AND ALTERNATIVE)

AUS-MEAT has utilised the objective Carcass measurements, in particular dentition, to form Basic and Alternative Category descriptors for Bovine (Veal/Beef/Bull), Ovine (Lamb/Mutton/Ram) and Caprine (Goat). Dentition is the eruption of permanent incisor teeth as an animal gets older. Dentition ranges from zero up to a maximum of eight permanent incisor teeth.

Categories for all species are divided into BASIC CATEGORIES and ALTERNATIVE CATEGORIES, and all have a unique coded cipher.

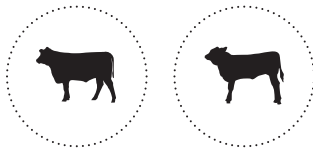
## BASIC CATEGORY

Animals assessed for Basic Category ranging from zero permanent incisor teeth and up to eight permanent incisor teeth (0-8) are grouped as the following species:

- Bovine – (Veal/ Beef/ Bull)
- Ovine – (Lamb/ Mutton/ Ram) and
- Caprine – (Goat).

## ALTERNATIVE CATEGORIES

Alternative Categories are determined by grouping permanent incisor eruptions to indicate the progressive chronological age of animals. Alternative Category for the species Bovine, Ovine, and Caprine are individually coded and identified by the application of a unique category cipher that describes the sex of the animal represented under that species description.



## BOVINE – BASIC CATEGORIES (VEAL / BEEF / BULL)

DENTITION	DESCRIPTION	CATEGORY / CIPHER
<p>0</p>	<p><b>VEAL - Female or castrate or entire male</b> bovine that:</p> <ul style="list-style-type: none"> <li>• Has no evidence of eruption of permanent incisor teeth.</li> <li>• Weighs no more than 150kg (HSCW).</li> <li>• In males shows no evidence of SSC.</li> <li>• Shows youthfulness and Veal colour (Veal meat colour must not exceed the AUS-MEAT Veal meat colour standard V5).</li> </ul>	<p><b>VEAL * V *</b> <b>OPTIONAL VEAL CLASSES:</b> <b>REFER VEAL SECTION</b></p>
<p>0 - 8</p>	<p><b>BEEF - Female or castrate or entire male</b> bovine that:</p> <ul style="list-style-type: none"> <li>• In males shows no evidence of Secondary Sexual Characteristics (SSC).</li> <li>• Dentition range for this category is 0 to 8 permanent incisor teeth.</li> </ul>	<p><b>BEEF * A *</b> <b>OR</b> <b>BEEF</b></p>
<p>0 - 8</p>	<p><b>BULL - Derived from entire or castrate male</b> bovine animals showing signs of Secondary Sexual Characteristics (SSC).</p> <ul style="list-style-type: none"> <li>• (SSC) in bovine are defined by the following well developed aspects:                             <ul style="list-style-type: none"> <li>- Muscles on the neck and shoulder.</li> <li>- Inguinal canal and prominent erector muscle</li> <li>- Penis stub.</li> <li>- Pubic tubercle.</li> </ul> </li> </ul> <p>A smaller triangular lean area within the region of the topside, relatively scarce scrotal fat and dark muscle colour</p>	<p><b>BULL * B *</b></p>
<p><b>BULL &amp; BEEF - A combination pack</b> containing mixed product derived from Categories Bull *B* and Beef *A* must be described as bull and beef or with the cipher *BA*</p>		<p><b>BULL &amp; BEEF *BA*</b></p>

\* SSC: Secondary Sexual Characteristics



# BOVINE – ALTERNATIVE CATEGORIES (BEEF)

DENTITION	DESCRIPTION	CATEGORY / CIPHER
0 	Carcase is derived from <b>castrate or entire male</b> bovine that: <ul style="list-style-type: none"> <li>• Has 0 permanent incisor teeth.</li> <li>• Has no evidence of Secondary Sexual Characteristics (SSC).</li> </ul>	<b>YEARLING STEER</b> * YS * * Up to 18 months
0 	Carcase is derived from <b>female, castrate or entire male</b> bovine that: <ul style="list-style-type: none"> <li>• Has 0 permanent incisor teeth.</li> <li>• Has no evidence of Secondary Sexual Characteristics (SSC).</li> </ul>	<b>YEARLING BEEF</b> * Y * * Up to 18 months
0 - 2 	Carcase is derived from <b>castrate or entire male</b> bovine that: <ul style="list-style-type: none"> <li>• Has no more than 2 permanent incisor teeth.</li> <li>• Has no evidence of Secondary Sexual Characteristics (SSC).</li> </ul>	<b>YOUNG STEER</b> * YGS * * Up to 30 months
0 - 2 	Carcase is derived from <b>female, castrate or entire male</b> bovine that: <ul style="list-style-type: none"> <li>• Has no more than 2 permanent incisor teeth.</li> <li>• Has no evidence of Secondary Sexual Characteristics (SSC).</li> </ul>	<b>YOUNG BEEF</b> * YG * * Up to 30 months
0 - 4 	Carcase is derived from <b>castrate or entire male</b> bovine that: <ul style="list-style-type: none"> <li>• Has no more than 4 permanent incisor teeth.</li> <li>• Has no evidence of Secondary Sexual Characteristics (SSC).</li> </ul>	<b>YOUNG PRIME STEER</b> * YPS * * Up to 36 months
0 - 4 	Carcase is derived from <b>female, castrate or entire male</b> bovine that: <ul style="list-style-type: none"> <li>• Has no more than 4 permanent incisor teeth.</li> <li>• Has no evidence of Secondary Sexual Characteristics (SSC).</li> </ul>	<b>YOUNG PRIME BEEF</b> * YP * * Up to 36 months
0 - 7 	Carcase is derived from <b>castrate or entire male</b> bovine that: <ul style="list-style-type: none"> <li>• Has no more than 7 permanent incisor teeth.</li> <li>• Has no evidence of Secondary Sexual Characteristics (SSC).</li> </ul>	<b>PRIME STEER</b> * PRS * * Up to 42 months
0 - 7 	Carcase is derived from <b>female, castrate or entire male</b> bovine that: <ul style="list-style-type: none"> <li>• Has no more than 7 permanent incisor teeth.</li> <li>• Has no evidence of Secondary Sexual Characteristics (SSC).</li> </ul>	<b>PRIME BEEF</b> * PR * * Up to 42 months
0 - 7 	<b>OX</b> – Carcase is derived from <b>female (only)</b> bovine that: <ul style="list-style-type: none"> <li>• Has no more than 7 permanent incisor teeth.</li> </ul>	<b>OX</b> * S * * Up to 42 months
0 - 8 	<b>STEER</b> – Carcase is derived from <b>castrate or entire male</b> bovine that: <ul style="list-style-type: none"> <li>• Has up to 8 permanent incisor teeth.</li> <li>• Has no evidence of Secondary Sexual Characteristics (SSC).</li> </ul> <i>(Note: product from this category may be included in the * S * OX category)</i>	<b>STEER * SS *</b> * Any age
0 - 8 	Carcase is derived from <b>female</b> bovine that: <ul style="list-style-type: none"> <li>• Has 8 permanent incisor teeth.</li> </ul>	<b>COW</b> * C * * All ages

\* Chronological age as shown is approximate only



# BOVINE – ALTERNATIVE CATEGORIES (BULL)

DENTITION	DESCRIPTION	CATEGORY / CIPHER
<p>0</p>	<p>Carcase derived from <b>entire male</b> not assessed for SSC.</p> <ul style="list-style-type: none"> <li>Has no evidence of eruption of permanent incisor teeth.</li> <li>Carcase weighs more than 150kg *(HCSW).</li> </ul>	<p><b>YEARLING ENTIRE</b> * YE *</p>
<p>0 - 2</p>	<p>Carcase derived from <b>entire male</b> not assessed for SSC.</p> <ul style="list-style-type: none"> <li>Has no evidence of eruption of more than 2 permanent incisor teeth.</li> <li>Carcase weighs more than 150kg *(HCSW).</li> </ul>	<p><b>YOUNG ENTIRE</b> * YGE *</p>
<p>0 - 2</p>	<p>Carcase derived from <b>castrate or entire male</b> bovine that:</p> <ul style="list-style-type: none"> <li>Has no evidence of eruption of more than 2 permanent incisor teeth.</li> <li>Show signs of Secondary Sexual Characteristics (SSC).</li> <li>Carcase weighs more than 150kg *(HCSW).</li> </ul>	<p><b>YOUNG BULL</b> * BYG *</p>

\* (HSCW) Hot Standard Carcase Weight.



# OVINE – BASIC CATEGORIES (SHEEPMEAT)

DENTITION	DESCRIPTION	CATEGORY / CIPHER
<p>0</p>	<p><b>LAMB</b> means meat derived from an ovine animal that:</p> <ul style="list-style-type: none"> <li>is under 12 months of age; or</li> <li>does not have any permanent incisor teeth in wear.</li> </ul> <p><b>Grain Fed Lamb (Symbol GF)</b></p>	<p><b>LAMB * L *</b> * 12 months (approx.)</p>
<p>1 - 8</p>	<p><b>MUTTON</b> means meat derived from:</p> <ul style="list-style-type: none"> <li>a female ovine animal that has at least one (1) permanent incisor tooth in wear; or</li> <li>a castrated male ovine animal that:                             <ul style="list-style-type: none"> <li>has at least one (1) permanent incisor tooth in wear; and</li> <li>shows no evidence of Secondary Sexual Characteristics (SSC)</li> </ul> </li> </ul>	<p><b>MUTTON</b> * M * * Over 10 months</p>
<p>1 - 8</p>	<p><b>RAM</b> means meat derived from:</p> <ul style="list-style-type: none"> <li>an entire male ovine animal that:                             <ul style="list-style-type: none"> <li>has at least one (1) permanent incisor tooth in wear; or</li> <li>shows evidence of Secondary Sexual Characteristics (SSC); or</li> </ul> </li> <li>a castrated male ovine animal that shows evidence of Secondary Sexual Characteristics (SSC)</li> </ul>	<p><b>RAM * R *</b> * Over 10 months</p>

\* Chronological age as shown is approximate only



# OVINE – ALTERNATIVE CATEGORIES (SHEEPMEAT)




DENTITION	DESCRIPTION	CATEGORY / CIPHER
<p>0</p>	<p><b>YOUNG LAMB</b> means a young <b>female or castrate male</b> ovine that:</p> <ul style="list-style-type: none"> <li>• Has 0 permanent incisor teeth (In addition)</li> <li>• Has no eruption of permanent upper molar teeth</li> </ul> <p><b>Milk Fed Lamb (Symbol MF)</b></p> <ul style="list-style-type: none"> <li>• Lamb that has not been weaned. Younger than 8 weeks</li> </ul>	<p><b>YOUNG LAMB</b> * YL * * Up to 5 months only</p>
<p>1 - 2</p>	<p><b>HOGGET</b> means meat derived from:</p> <ul style="list-style-type: none"> <li>• A female or castrate male ovine animal that has one (1) but no more than two (2) permanent incisor teeth in wear; and</li> <li>• In males shows no evidence of Secondary Sexual Characteristics (SSC).</li> </ul>	<p><b>HOGGET * H * OR YEARLING MUTTON YEARLING SHEEP MEAT</b> * 10 to 18 months</p>
<p>1 - 8</p>	<p><b>EW E</b> means meat derived from a female ovine animal that:</p> <ul style="list-style-type: none"> <li>• Has at least one (1) permanent incisor tooth in wear.</li> </ul>	<p><b>EW E MUTTON</b> * E * * Over 10 months</p>
<p>1 - 8</p>	<p><b>WETHER</b> means meat derived from a castrate male ovine animal that:</p> <ul style="list-style-type: none"> <li>• Has at least one (1) permanent incisor tooth in wear; and</li> <li>• Shows no evidence of Secondary Sexual Characteristics (SSC).</li> </ul>	<p><b>WETHER MUTTON</b> * W * * Over 10 months</p>






\* Chronological age as shown is approximate only




## CAPRINE – BASIC CATEGORY (GOATMEAT)

DENTITION	DESCRIPTION	CATEGORY / CIPHER
0 - 8 	<b>GOAT</b> – Any caprine animal.	<b>GOAT</b> *G*

## CAPRINE – ALTERNATIVE CATEGORIES (GOATMEAT)

DENTITION	DESCRIPTION	CATEGORY / CIPHER
0 	Carcass derived from <b>female or male</b> caprine that: <ul style="list-style-type: none"> <li>• Has 0 permanent incisor teeth (in addition):</li> <li>• In male shows no evidence of Secondary Sexual Characteristics (SSC).</li> <li>• <b>CHEVON</b> can be used as an optional description for this category.</li> </ul>	<b>KID</b> * GK *
1 - 2 	Carcass derived from <b>female or castrate male</b> caprine that: <ul style="list-style-type: none"> <li>• Has 1 but no more than 2 permanent incisor teeth.</li> <li>• In castrate male has no evidence of Secondary Sexual Characteristics (SSC).</li> <li>• <b>CHEVON</b> can be used as an optional description for this category.</li> </ul>	<b>CAPRA</b> * GC *
0 - 8 	Carcass derived from <b>female</b> caprine that: <ul style="list-style-type: none"> <li>• Has up to 8 permanent incisor teeth.</li> </ul>	<b>DOE</b> * GD *
0 - 8 	Carcass derived from <b>castrate or entire male</b> caprine that: <ul style="list-style-type: none"> <li>• Has up to 8 permanent incisor teeth.</li> <li>• Has no evidence of Secondary Sexual Characteristics (SSC).</li> </ul>	<b>GOAT WETHER</b> * GW *
0 - 8 	Carcass derived from <b>male</b> caprine that: <ul style="list-style-type: none"> <li>• Has up to 8 permanent incisor teeth.</li> <li>• Shows Secondary Sexual Characteristics (SSC).</li> </ul>	<b>BUCK</b> * GB *

## CAPRINE – SUPPLEMENTARY SPECIFICATION

DENTITION	DESCRIPTION	CATEGORY / CIPHER
0 	<b>Kid Goat</b> definition may as an option be alternatively described as “ <b>CAPRETTO</b> ” but the Carcass must meet the following requirements: <ul style="list-style-type: none"> <li>• Be within the following weight classes (HSCW): Class 6 – up to 6 (kg), Class 8 – over 6 and up to 8 (kg), Class 10 – over 8 and up to 10 (kg), Class 12 – over 10 and up to 12 (kg)</li> <li>• Have pale pink meat colour of the internal flank muscle.</li> <li>• In male shows no evidence of Secondary Sexual Characteristics (SSC).</li> </ul>	<b>CAPRETTO</b> <b>KID</b> * GK *

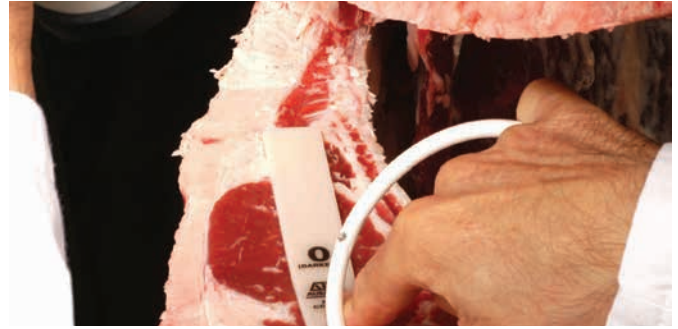




# AUSTRALIAN BEEF

# CARCASE EVALUATION

(BEEF AND VEAL 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. The scheme 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, rib fat thickness and the maturity of the Carcass.

Assessments are made by qualified assessors and results are allocated to the Carcass. This provides a means of (Carcass) selection according to individual characteristics contained in specifications.

The AUS-MEAT Chiller Assessment Language is only available to AUS-MEAT Accredited Enterprises, their clients and suppliers.

## MEAT COLOUR (MC)

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 colour reference standards.

## VEAL MEAT COLOUR



V1                      V2                      V3                      V4                      V5

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

## BEEF MEAT COLOUR



1A                      1B                      1C                      2                      3                      4                      5                      6                      7

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

## FAT COLOUR (FC)

Fat Colour is the colour of the intermuscular fat lateral to the rib eye muscle (M. longissimus dorsi) and adjacent to the M. iliocostalis. It is assessed on the chilled Carcass and scored against the AUS-MEAT Fat Colour reference standards from 0 to 9



0                      1                      2                      3                      4                      5                      6                      7                      8                      9

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

## MARBLING (MB)

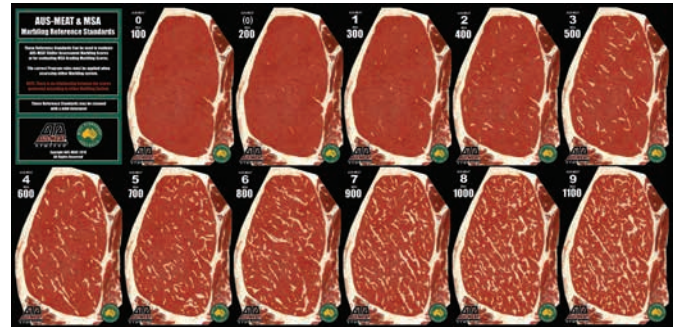
Marbling is the fat that is deposited between muscle fibres (intramuscular fat). Marbling is assessed on the chilled Carcase at the M.longissimus dorsi muscle and scored against the AUS-MEAT / MSA Marbling reference standards.

The AUS-MEAT Marbling system provides an indication of the amount of marbling in beef measured from 0 (least) to 6 (most). AUS-MEAT Marbling is assessed against the proportion of marbling to meat depicted in the Marbling reference standards. The MSA marbling system provides an additional indication of the distribution of marbling pieces, and is scored from 100 (least) to 1190 (most) in increments of ten (10). The AUS-MEAT marbling and the MSA marbling evaluation systems can be used together to provide more detail about the product.

The MSA grading system uses MSA marbling scores in the prediction of eating quality.

Chiller Assessors who assess AUS-MEAT marbling above marbling score 6 must hold a high marbling endorsement as well as holding the standard Chiller Assessment qualification.

**CHILLER ASSESSMENT ATTRIBUTE STATEMENT:** Use of Chiller Assessment language can be included after Chiller Assessment has been performed. Symbols include MB: Marbling, MC: Meat Colour, FC: Fat Colour. Conditions and guidelines for use are detailed in the AUS-MEAT Chiller Assessment Language.



## RIB FAT MEASUREMENT

### SUBCUTANEOUS RIB FAT MEASUREMENT (RF)

Subcutaneous Rib Fat measurement is a measurement in millimetres of the thickness of subcutaneous fat at a specified rib. The MSA grading system uses Rib Fat in the prediction of eating quality.

### TOTAL RIB FAT MEASUREMENT (TRF)

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



## EYE MUSCLE AREA (EMA)

Eye Muscle Area 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.

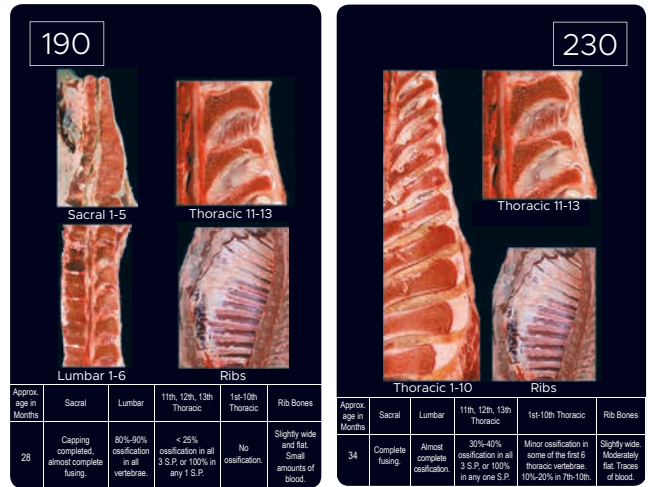
## MATURITY / OSSIFICATION (OSS)

Maturity scoring provides a scale for the assessment of physiological age of a beef carcass. The term, ossification, refers to the cartilage turning to bone in the spinous processes in three sections along the backbone - sacral (tail), lumbar (loin) and thoracic (head). The process starts in the sacral region in the form of red spots and as the process increases, turns to hard, yellow bones.

The shape and colour of the rib bones are also used to determine maturity. Maturity is measured in standardised increments with the lowest being 100 and the highest being 590.

Maturity is used as part of the Chiller Assessment language for beef when determining eligibility for 7 and 8 tooth Carcasses to be packed under the minimum standards Grain Fed Beef (GF).

The Meat Standards Australia (MSA) grading system uses Maturity score as one of the measurements to determine the eating quality outcome of a Carcass.



MATURITY IMAGE EXAMPLES ARE MSA STANDARDS



## MEAT STANDARDS AUSTRALIA (MSA) GRADING

Meat Standards Australia (MSA™) beef grading program predicts eating quality by cut and cooking method according to standards developed by consumer taste panels. MSA certified graders collate information provided from the cattle producer, supervise processing standards and assess each individual Carcass on its attributes known to influence the eating quality of beef. Such factors include breed, sex, Maturity, Hormonal Growth Promotants (HGP), Carcass quality attributes, processing methods. MSA utilises the AUS-MEAT Chiller Assessment language for the assessment of Marbling, Meat Colour, Fat Colour, Rib Fat, Eye Muscle Area and Carcass Maturity.

Additional measurements required for MSA grading include the following:

## HANG METHOD (HANG)

Traditionally, Carcasses are suspended by the achilles tendon. Alternatively some Australian processors have adopted tenderstretching in an attempt to increase the eating quality of cuts across a Carcass.

Tenderstretching, is an alternative means of hanging a Carcass during chilling. The two most common methods used in Australia, are by suspending the Carcass by either the pelvic bone or the ilio sacral ligament.

MSA graders record the hang method of Carcasses during grading.

MINIMUM MSA CARCASS REQUIREMENTS	
•	Subcutaneous Rib Fat depth of greater than 3 millimetres
•	Adequate subcutaneous fat distribution
•	Ultimate pH equal to or less than 5.70
•	Hide puller damage less than 10 x 10 cm on a single primal



A

## ULTIMATE pH (pHu)

Ultimate pH is a measurement of lactic acid within the muscle. Measurements are taken from a pH probe that is calibrated daily. The optimum pH level of meat is 5.70 and below, with levels above this ineligible to be MSA certified product.

The ultimate pH is primarily affected by the pre-slaughter treatment of the live animal, including nutrition and handling. The rate at which pH declines from the live state (approx pH 7.0) to the ultimate pH also affects eating quality. This is affected by post-slaughter treatments such as quantity of electrical inputs and temperature and is monitored by the processor to ensure compliance.

B

## HUMP HEIGHT (HUMP HT)

The breed content of each animal can have a significant effect on beef eating quality. To determine the Tropical Breed (Bos indicus) Content, the hump height of the Carcase is measured in gradients of 5mm.

The hump is measured by holding a ruler parallel to the ribs. The ruler is moved to the position of the greatest hump width and includes all of the meat from the top (dorsal) edge of the paddywhack (ligamentum nuchae) and across to the top (dorsal) surface of the rhomboideus (hump) muscle.

C

## FAT DISTRIBUTION (FAT DIST)

Fat distribution refers to the coverage and distribution of subcutaneous fat on a Carcase. An even coverage of subcutaneous fat enables uniform chilling rates throughout the Carcase.

An MSA grader ensures coverage is sufficiently adequate over the loin, fore and hindquarter.

# PACKAGING OF RED MEAT

Correct packaging of red meat is crucial to the overall quality and shelf life of the product, which in turn affects the return to the customer/ importer. The polythene covering (sheet or bag) must be of a size to adequately secure the meat content for exposure to outer contamination or freezer damage.

The different methods of packaging and symbols included on carton labels are shown below:

## PACKING METHODS

PRODUCT	DESCRIPTION
	<p><b>INDIVIDUALLY WRAPPED (IW)</b></p> <p>Indicates that the meat cut has been individually wrapped in an approved material, such as a sheet, stock netting or bag. These are most commonly used on larger primal cuts. <b>Individually Wrapped uses the symbol 'IW'.</b></p>
	<p><b>LAYER PACKED (LP)</b></p> <p>Indicates the product is packed into a carton containing two or more layers of meat with each layer separated by an approved material. Layer packed meat is most commonly used to layer small cut items (e.g. Flank Steaks or Backstraps). <b>Layer Packed uses the symbol 'LP'.</b></p>
	<p><b>MULTI WRAPPED (MW)</b></p> <p>Multi Wrapped indicates the meat has been packed in a single bag or covering and contains two or more cut items. This method is most commonly used for small and medium sized primal cut items (e.g. Chuck Tenders – Lamb Racks). <b>Multi Wrapped uses the symbol 'MW'.</b></p>
	<p><b>TRAY PACKED (TP)</b></p> <p>Tray packed meat is when the meat is packed into an open container or tray, and covered with a film. This is mainly used in smaller primal cuts or portioned meat. <b>Tray Packed uses the symbol 'TP'.</b></p>
	<p><b>MODIFIED ATMOSPHERE PACKED (MAP)</b></p> <p>Modified Atmosphere Packed indicates that packs (primal cuts or retail ready tray) are wrapped and are flushed with a mixture of gases to remove the oxygen. The packs are impermeable to gases and retain the modified gas atmosphere around the meat to preserve the meat quality and shelf life by restricting the amount of bacteria growth. <b>Modified Atmosphere Packed uses the symbol "MAP".</b></p>
	<p><b>VACUUM PACKED (VAC)</b></p> <p>Vacuum Packed involves the removal of air and oxygen from the packaging. This creates a vacuum and assists in the preservation of meat and improvement in meat quality due to the lack of oxygen around the meat that promotes bacterial growth. Vacuum packing is adapted to all methods of packaging, including:</p> <ul style="list-style-type: none"> <li>• Individually Wrapped – Vacuum Packed (IW/VAC)</li> <li>• Layer Packed – Vacuum Packed (LP/VAC)</li> <li>• Multi Wrapped – Vacuum Packed (MW/VAC)</li> <li>• Tray Packed – Vacuum Packed (TP/VAC)</li> <li>• Other Vacuum Packed Items (VAC)</li> </ul>

# LABELLING INFORMATION

A label is applied on cartons of packaged meat identifying the product and traceability aspect.



1. **GENERIC:** Statement Bone-in or Boneless and identification of species.
2. **COUNTRY OF ORIGIN:** This is an export requirement and is applied to all cartons from export establishments.
3. **CARCASE IDENTIFICATION:** Category cipher which identifies the Carcase age and sex (\*YG\*) or YOUNG BEEF.
4. **PRODUCT IDENTIFICATION:** Primal cut description (e.g. STRIPLOIN) as shown in the Handbook of Australian Meat. Common code cipher can be applied for customer country requirements (e.g. \*STL\*).
5. **PRIMAL WEIGHT RANGE:** Indicates that each primal cut in the carton is the minimum / maximum weight range as shown on the label.
6. **PACKAGING TYPE:** IW/VAC indicates that the product has been Individually Wrapped and Vacuum Packed.
7. **GSI - 128 BAR CODE:** Bar code that has been developed and compliant with the international meat industry guidelines.
8. **PACKED ON DATE:** Indicates the day, month, year and time that the product was packed into the carton.
9. **"BEST BEFORE" DATE:** Means the packaged date is at the end of the period for meat stored in accordance with any stated storage condition. Meat marked with "best before" date can continue to be sold after that date provided that the meat is not damaged, deteriorated or perished. Meat marked with "use by" date is prohibited from being sold after this date.
10. **NET WEIGHT:** Meat content of the carton less all the packing material and shown to two decimal places in kilograms and in some cases dual weights are shown in kilograms and pounds.
11. **BATCH NUMBER:** This is an in-house company identification number for a production batch for product trace back purposes when required.
12. **CARTON SERIAL NUMBER:** Serial number is the same as shown in the bar code.
13. **HALAL APPROVED:** Indicates that the product has been ritually slaughtered and certified by an approved Islamic organisation.
14. **ESTABLISHMENT NUMBER:** Plant registered Establishment number.
15. **AI STAMP:** Australia Federal Government Inspected stamp.
16. **REFRIGERATION STATEMENT:** Keep Chilled / Refrigerated indicates that the product in the carton has been held in a controlled chilled condition from time of packing.
17. **NUMBER OF PIECES:** Indicates the number of primal cuts in the carton.
18. **COMPANY CODE:** In-house identification code for the product in the carton.
19. **COMPANY NAME & ADDRESS:** Indicates the name of the packer of the product, but may also indicate the exporter or consignee. Head office name and address may also be used.

Other Label requirements: MSA eating quality information, Chiller Assessment Attribute statement, EU High Quality Beef, Animal Raising Claim information, other importing country requirements.

