



meat standards australia
sheepmeat

Meat Standards Australia is the world's only consumer based eating quality grading system.



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msa sheepmeat



Eating quality is of paramount importance to red meat consumers. **Meat Standards Australia (MSA)** is designed to take the guess work out of buying and cooking Australian lamb and sheepmeat.

All sheepmeat underpinned by the MSA trademark has met strict criteria to ensure it meets consumer expectations for tenderness, juiciness and flavour. MSA sheepmeat is labelled with a recommended cooking method, according to standards developed by consumer taste panels. Over 90,000 consumer taste tests of lamb and sheepmeat products have been completed.

Integrity

All participants in the program are licensed to use the MSA trademark, and certify products via an approved Quality Management System in accordance with the MSA Standards Manual. Licensees are subject to independent random audit programs for compliance to the Standards. MSA® Standards are backed by independent audit to the AS/NZS ISO 9001/2008 Standard.

developing the *msa standards*

Meat and Livestock Australia (MLA), research partners and industry have undertaken research and development into defining and improving lamb and sheepmeat eating quality.

The sheepmeat eating quality (SMEQ) research program was established due to the need to maintain strong consumer demand for sheepmeat and the opportunity to extract additional value from lamb, hogget and mutton cuts.

The MSA sheepmeat program is based on a supply chain approach, with all sectors required to contribute to improving the overall eating quality of lamb and sheepmeat.

production



An important element contributing to **eating quality** is the on-farm management of sheep.

Breed

Merino and Merino crosses require more careful management to reduce effects associated with stress.

Sheep age

Sheepmeat category is determined by dentition of the animal. Lamb is the premium product however some cuts of hogget and mutton also have potential for high eating quality.

Finishing

Sheep that are 1st and 2nd cross Merino require a minimum weight gain of 100grams/day for 2 weeks prior to consignment. Animals with greater than 50% Merino content require at least 150grams/day for 2 weeks prior to consignment.

Sheep carcase specifications

Minimum weight requirements are $\geq 16\text{kg}$ hot standard carcase weight (HSCW) for sucker (milk fed lamb) and $\geq 18\text{kg}$ HSCW for all weaned lambs, hogget and mutton. All carcases must have a minimum fat score 2 (over 5mm at the GR site).

pre-slaughter handling

Sheep and lambs must be handled in a way that stress is minimal to optimise eating quality.

- Minimum 2 weeks off shears (wool length $\geq 5\text{mm}$).
- Total time off feed must not to be greater than 48 hours before slaughter.
- Animals are to have access to water at all times while not in transit.
- A minimum of 2 weeks at consignment property before dispatch.
- Maximum time in transit of 24 hours.
- MSA sheep are accepted via direct consignment and saleyard selling pathways provided all MSA Standards are met.

processing



Implementation of the **MSA sheepmeat program** is intended to measure and control systems and standards against known critical control points within an enterprise's total quality management system.

Lairage

The time in lairage must be monitored to ensure total time off feed prior to processing, including transport, does not exceed 48 hours. Total time off water must be less than 24 hours.

Ultimate pH (pHu)

The rate of carcass pH and temperature decline is measured, taking into account electrical inputs and chilling rate. The temperature at which the carcass enters rigor (pH6) is critical when determining and optimising eating quality.

Carcass hanging

The carcass can be suspended using the traditional Achilles hang method or by tenderstretch, which involves suspending the carcass by the pelvis. Tenderstretching particularly improves the eating quality of hindquarter cuts.

Ageing

Eating quality can improve with ageing of meat which occurs on the carcass or as a cut within a vacuum sealed bag. All MSA sheepmeat has a minimum ageing period of 5 days before it is sold to the consumer.

QA system

Processors must have Quality Assurance systems in place to meet MSA standards. Processors must be AUS-MEAT accredited.

Identification

MSA eligible carcasses must maintain their identification throughout processing.

sheepmeat cuts

CUT	HAM*	GRILL	ROAST	STIR FRY	C/ ROLE
Leg Chump / On	4800		●●		
Leg 'Easy Carve'	4821		●●		
Leg Chump / Off	4820		●●		
Chump	4790		●●		
Chop		●●●			
Hindshank	5031				●●
Leg Chump / On (Boneless)	5080		●●		
Rolled / Tied			●●		
Topside	5073			●●	
Silverside	5071			●●●	
Thick Flank (Round)	5076	●●	●●	●●	
Chump (Rump)	5130	●●	●●	●●	●●
Topside Den	5077			●●	
Outside (Den)	5075			●●●	
Knuckle (Round)	5072	●●	●●	●●●	
Rump (Den)	5074	●●●	●●●	●●	●●
Loin	4880		●●●		
Shortloin	4880		●●●		
Rolled			●●●		
Noisettes		●●●	●●●		
Chop		●●●			
Eye of Shortloin	5150	●●●		●●●	
Rack	4932		●●●		
Rack Cap / On (Frenched)	4756		●●●		
Cutlet		●●●			

LAMB (L) ●
 HOGGET (H) ●
 MUTTON (M) ●

The following tables outline the **eligible sheepmeat cuts and cooking methods for lamb, hogget and mutton in the MSA sheepmeat program, once all standards have been met.**

sheepmeat cuts (cont.)

CUT	HAM*	GRILL	ROAST	STIR FRY	C/ ROLE
Rack Cap / Off (Frenched)	4764		●●●		
Cutlet		●●●			
Backstrap	5109	●●●		●●●	
Eye of Rack	5153	●●●		●●●	
Forequarter	4972		●●		
Square Cut Shoulder	4990		●●		
Chop		●●			
Shoulder Rack (Frenched)	4739		●●		
Cutlet		●●			
Foreshank	5030				●
Oyster Cut Shoulder	4980		●●		
Shoulder (Easy Carve)	4994		●●		
Forequarter (Boneless)	5047		●●		
Shoulder Rolled / Netted	5050		●●		
Neck Fillet Roast	5059		●●		
Eye of Shoulder	5151		●●		
Tenderloin	5080	●●●			
Butt Tenderloin	5081	●●●			
Tenderloin / Butt Off	5082	●●●			
Breast & Flap	5010	No recommended cooking methods			
Neck	5020				
Spare Ribs	5015				

LAMB (L) ●
 HOGGET (H) ●
 MUTTON (M) ●



MSA product must be identified on the carton label and cooking method specified.

*HAM: Handbook of Australian Meat, 7th edition.

cooking



Cooking methods are some of the most important factors in consumer satisfaction and eating quality.

casserole

- Meat should be cut into 20mm cubes.
- Brush meat with oil instead of adding oil to dish.
- Brown meat in small batches (about 200g at a time) to seal in the juices. Set aside.
- Reduce heat and add onions, garlic and spices and sauté until transparent.
- Add flavourings, firm vegetables and liquid.
- Bring all ingredients to the boil and then reduce heat to low. Cover and simmer for approximately 2 hours or transfer to oven dish and cook in low oven (160°C) for 2 hours.
- Add soft vegetables in the last 20 minutes of cooking.

panfry / grill

- Minimum recommended thickness 15mm.
- Brush meat with oil instead of adding oil to pan.
- Ensure that cooking surface is hot. The meat should sizzle on contact.
- Place meat on surface and let cook until moisture appears, then turn (once only).
- Cook to desired degree of doneness.
- Place in a warm place, or cover with foil and rest for 3-5 minutes.

roast

- Preheat oven to recommended temperature - see table below.
- Place roast on a rack in a roasting tray.
- Follow suggested cooking times – see table below.
- Periodically check internal temperature using a meat thermometer.
- Remove from oven and cover with foil when cooked.
- Rest in warm place before carving against the grain.

SUGGESTED COOKING TIMES / 500G	Oven temp	Rare	Medium	Well done
Internal meat temperature		60°C	65-70°C	75°C

SHEEPMATE CUTS

Loin (boned and rolled), Leg or shoulder (bone in or easy carve)	180°C	20-25 min	25-30 min	30-35 min
Mini roast, rump, shortloin	220°C	15-20 min	20-25 min	25-30 min
Rack	200°C	20-25 min	30-35 min	40-45 min

stir fry

- If buying steaks cut into strips of meat to 75mm x 10mm x 10mm.
- Brush meat with oil instead of adding oil to wok.
- Ensure that cooking surface is hot. The meat should sizzle on contact.
- Brown meat in small batches (about 200g at a time) to keep the pan hot and prevent the meat from stewing.
- Remove from pan. Add aromatics (garlic, chilli and/or spices).
- Add vegetables and sauces, return meat and stir through.
- Heat through and be sure not to bring to the boil.
- Serve immediately.

msa accreditation



Lamb and sheepmeat companies have the opportunity to underpin their brand with the **MSA Trademark**. This assists in providing an eating quality assurance to the product.

This is subject to a brand license agreement with MLA, to ensure the integrity of the product. All lamb and sheepmeat sold under the license agreement must be MSA certified and the enterprise's quality systems must adhere to MSA Standards Manual for Trademark Usage.

MSA lamb and sheepmeat processors and brands may also choose to further refine their product specifications to differentiate their product from others in the market.

The Meat Standards Australia program allows end users to assure and communicate to their customers that their product has met stringent **MSA standards**.

End users including wholesalers, retailers and food service enterprises must be licensed by MLA and adhere to the MSA Standards Manual for Trademark Usage to ensure product integrity. Independent audits are conducted on all licensed participants to check compliance to the Standards.

Point of sale material is available to licensed end users for display and to inform customers.

All new Licensees must complete MSA End User Licensee Training to ensure compliance to the MSA Standards are understood. Other training programs are available to identify opportunities to capture value from the MSA program.

training

Training programs have been developed for all participants in the **MSA supply chain**. Training ranges from general program overviews to technical practical modules for the various supply chain sectors.

Producer workshops - can be tailored to suit group requirements. Workshops include how to become a MSA registered producer, MSA program background, producer recommendations and how to implement change on-farm to meet consumer expectations.

Saleyards and agents - provides MSA program overview and information regarding management of saleyard sheep to meet MSA licence requirements. This includes livestock handling and lairage conditions.

Processor training - consists of technical modules for on-site staff covering MSA standards and requirements based on each critical control point identified in processing. This training is a pre-requisite for MSA licensed processors.

MSA deliver on-site training courses. Processor operatives may undertake all training modules or be trained in their specific area of responsibility.

End user training - Includes information on how to eliminate eating quality failure using MSA technology, the factors impacting on eating quality and how to comply with MSA standards.

All MSA training programs may be customised for a particular supply chain.

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Published September 2012

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Further reading: MSA tips & tools sheepmeat information kit