



THE UNIVERSITY OF  
MELBOURNE

# Dry aged Sheepmeat A new opportunity



GOVERNMENT OF  
WESTERN AUSTRALIA

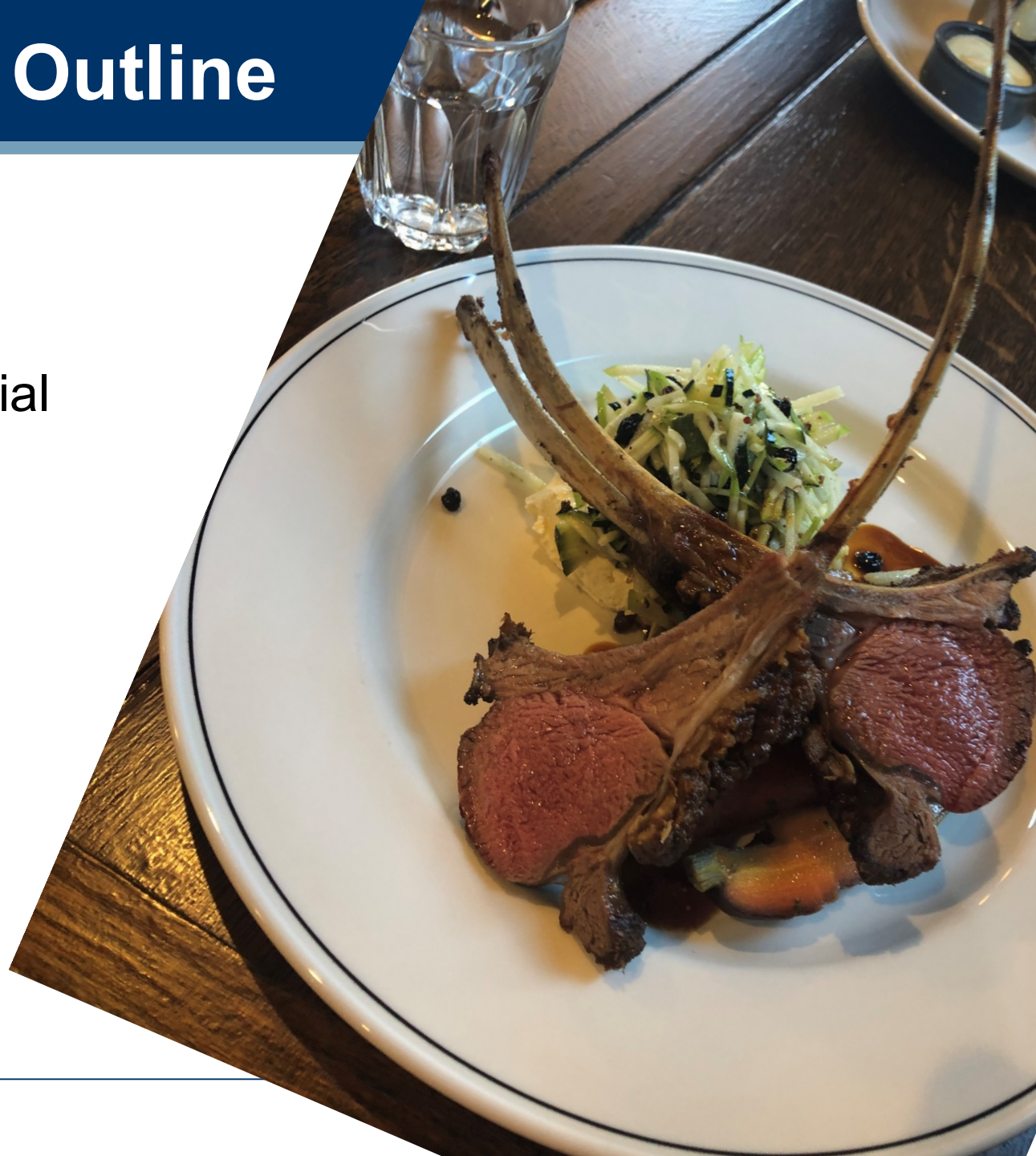
Department of  
Primary Industries and  
Regional Development

William  
**Angliss**  
Institute

Melindee Hastie, Robin Jacob, Robyn Warner , Long Huynh, Steve Bonney



- Introduction
- Objectives
- Outcomes of the trial
  - Consumer insights
  - Cooking concepts
  - Eating quality
  - Willingness to pay
  - Yield





## Why ?

Value adding to sheepmeat  $\longrightarrow$  increased margins,  
improved sustainability and access to the premium market  
(local and export)

- Mutton is heavily discounted compared to lamb
- Ability to switch from wool to meat production
- Option if live export is banned



Optimise the process for dry aged sheepmeat (DASM)

Test eating quality and willingness to pay via MSA

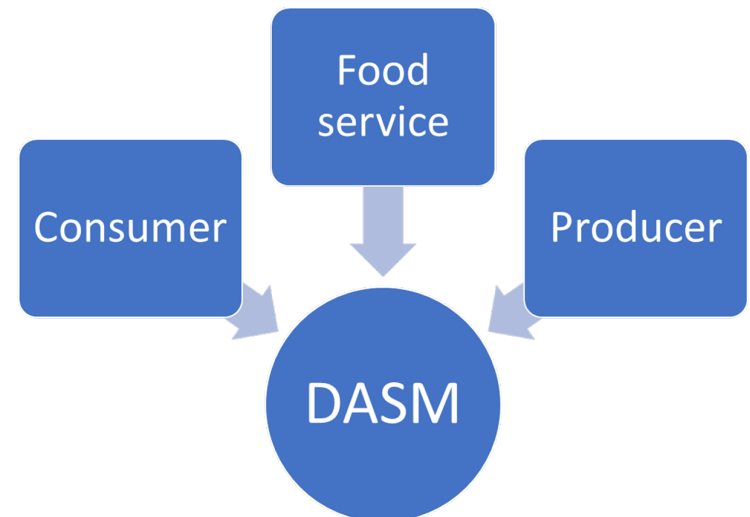
Voice of the consumer

- How do they purchase and use sheepmeat
- What does premium look like to the consumer

Voice of the end users –

Foodservice, butchers and chefs

- How to use the whole carcase
- What do they need from the product ?
- Preferred formats
- How do we get to premium ?





## Consumer Engagement

QMA focus groups

Asian vs non-Asian

How do you select sheepmeat?

How do you use sheepmeat?

What does premium look like?

## Chef Engagement

QMA focus groups, CATA,

Concept ideation,

Recipe development,

Pricing, Cooking method,

Eating occasion, Preferred cuts

## Process Development

Sensory testing and Willingness to pay

2 ageing methods (wet and dry)

x 4 ageing periods (2, 4, 6, 8 weeks)

for loin and leg

540 consumers, 3240 samples



# Consumer Engagement

**QMA focus groups**

**Asian vs non-Asian**

How do you select sheepmeat?

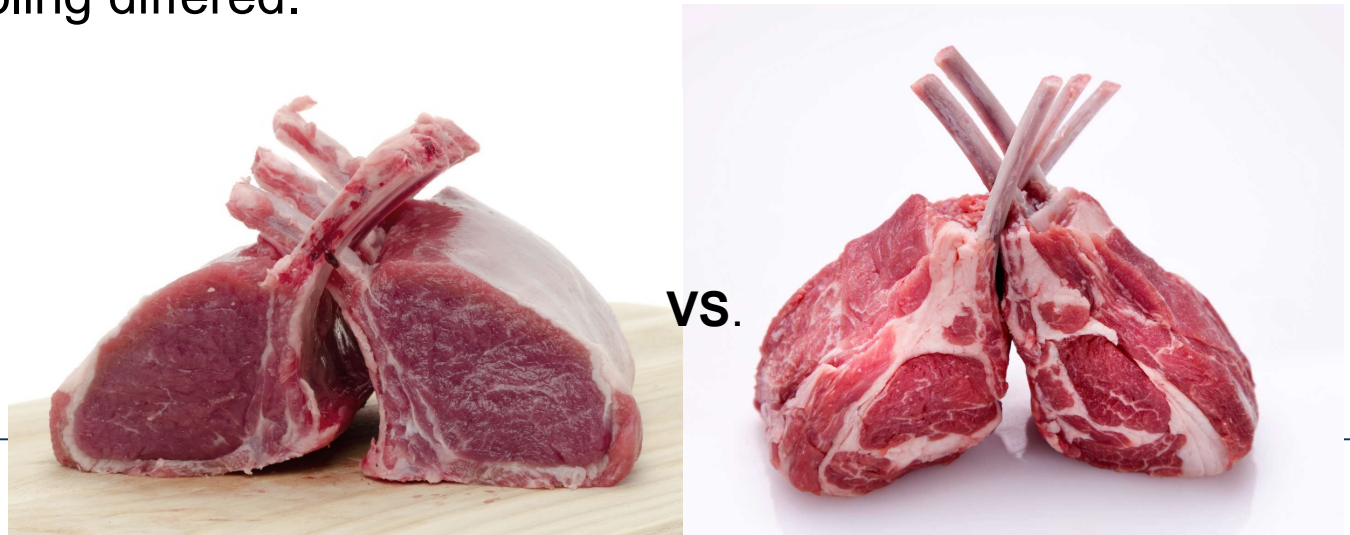
How do you use sheepmeat?

What does premium look like?



# Highlights

- Term “dry-aged” was understood as indicator of a premium product.
- Cooking styles varied greatly between Non-Asian and Asian groups.
- Non-Asian familiar with meat as the “Hero” ingredient on the plate and relied heavily on labelling or butcher advice when purchasing premium meat.
- Asians and Non-Asians recognised racks as most premium but their reactions to marbling differed.





# Chef Engagement

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# Engagement process



Degustation  
dinner /  
assessment -  
recipes  
produced

Concepts were then tested with  
chef groups in Perth and  
Melbourne

Ideation session run by William Angliss  
team and a number of concept dishes  
created and voted on

Entire DA mutton carcass prepped at William Angliss and  
included in a range of dishes and tasted by consumers  
and foodservice professionals

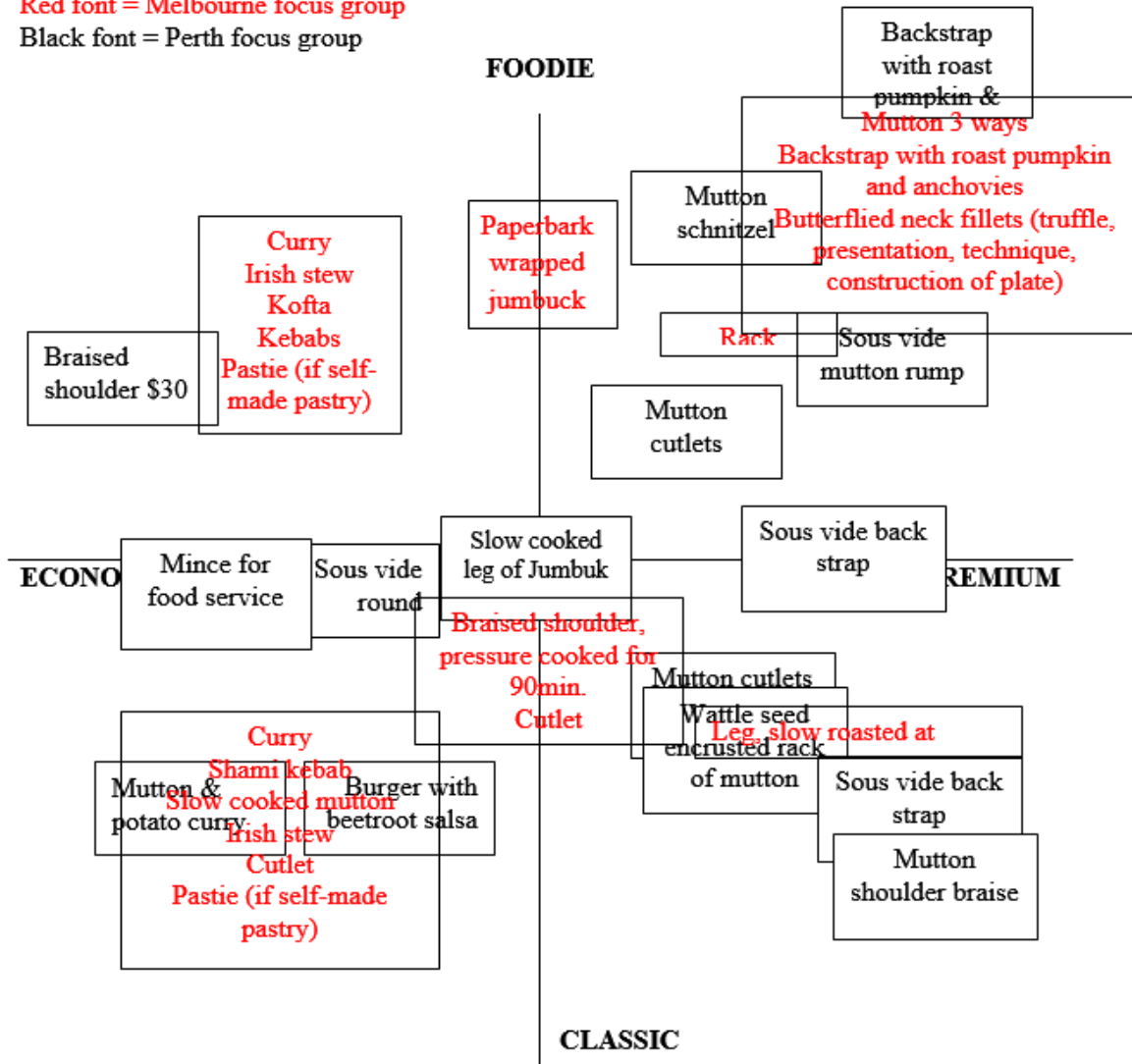




# Highlights

Red font = Melbourne focus group

Black font = Perth focus group





shoulder braised  
scored 8.6/9-braised  
in oven at 180°C for  
2.5 hours  
MTMT



Smoked mutton salad  
scored 8.5/9  
round/knuckle brined,  
smoked, slow cooked  
to 63°C  
LTLT



Piccata – scored >8/9  
silverside cut thinly  
against the grain and  
pan fried  
HTST





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cooking requirements  
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loin was one of the  
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Don't underestimate  
the convenience factor  
e.g. DA mince is  
versatile and very tasty



# Process Development

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# Process development method

WELLS/2016

81 Multipurpose  
merino carcasses



162 leg primals



162 loin primals



81 dry aged legs

81 wet aged legs

81 wet aged loins

81 dry aged loins

NB \* Ageing period was 2 , 4, 6 or 8 weeks for both wet and dry ageing treatments



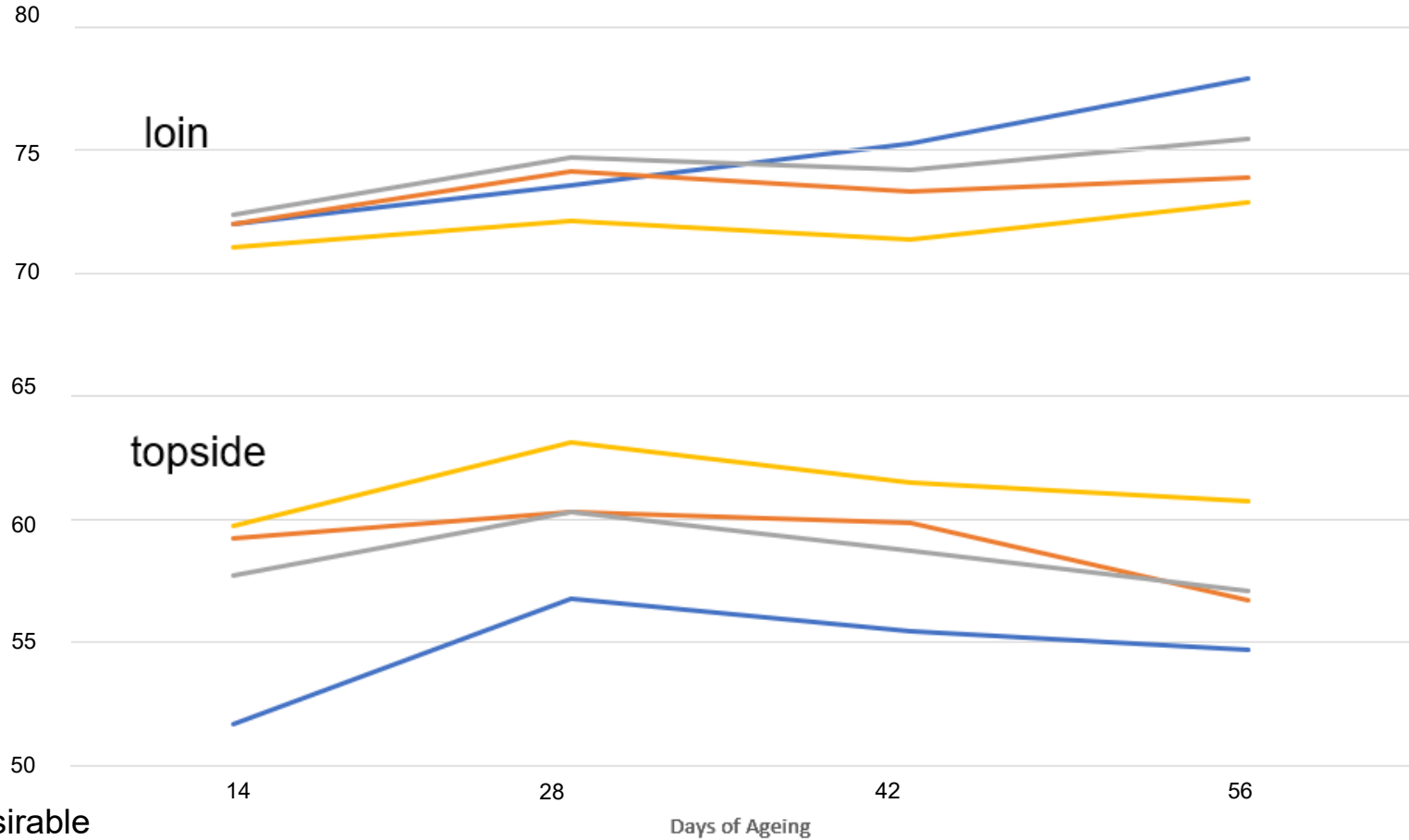


# Eating quality

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Most desirable

## Eating quality of loin and topside



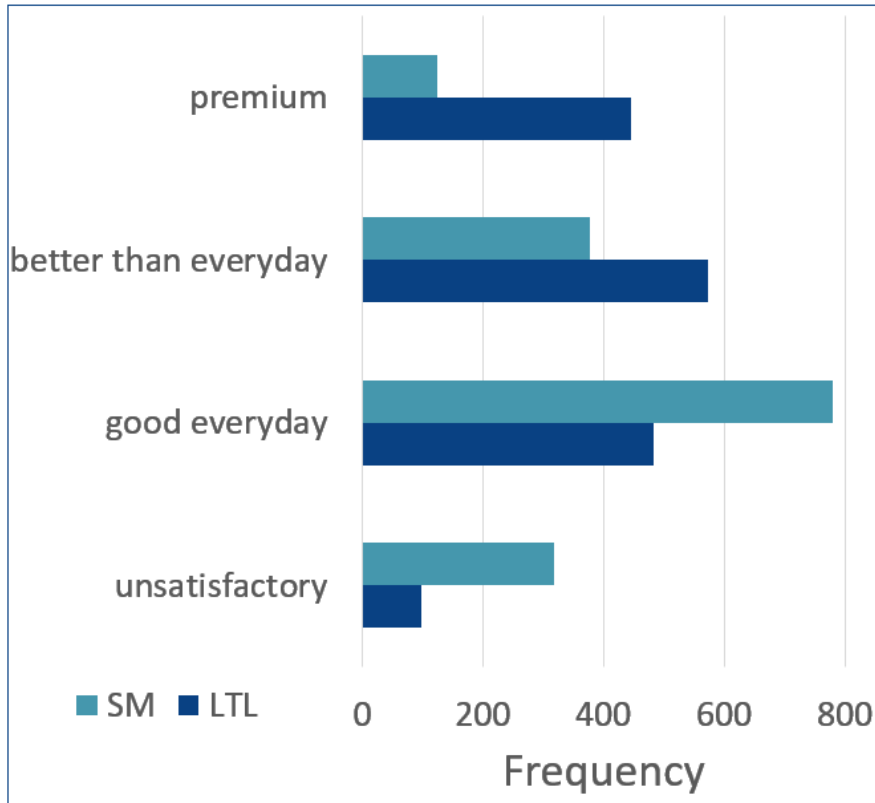
least desirable

tenderness Flavour liking Overall liking Juiciness

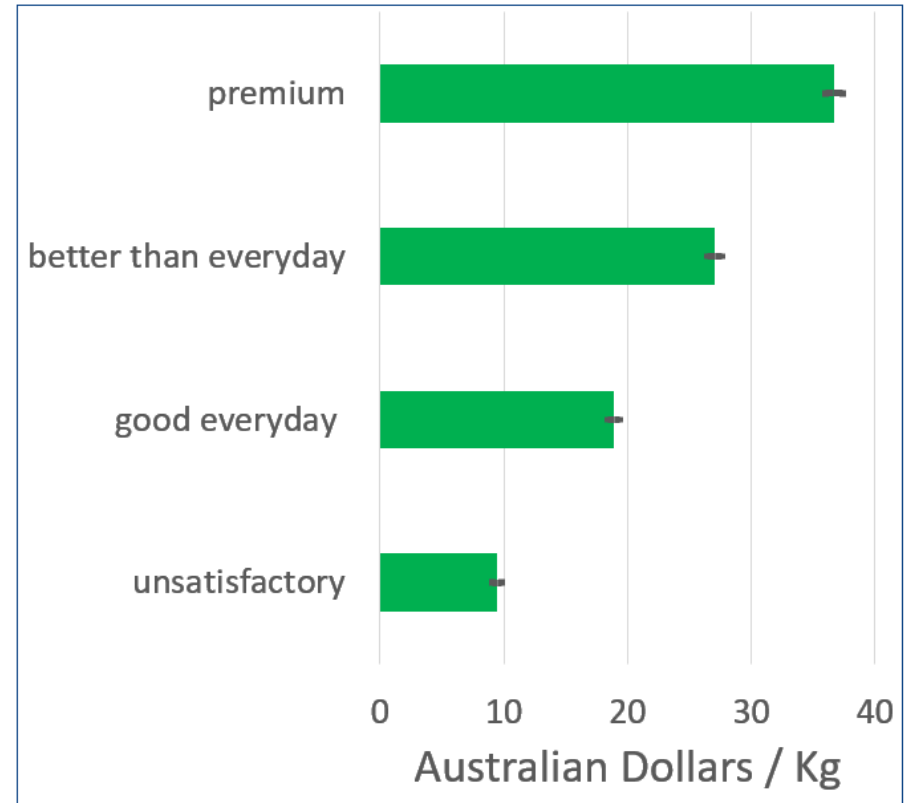


# Willingness to Pay

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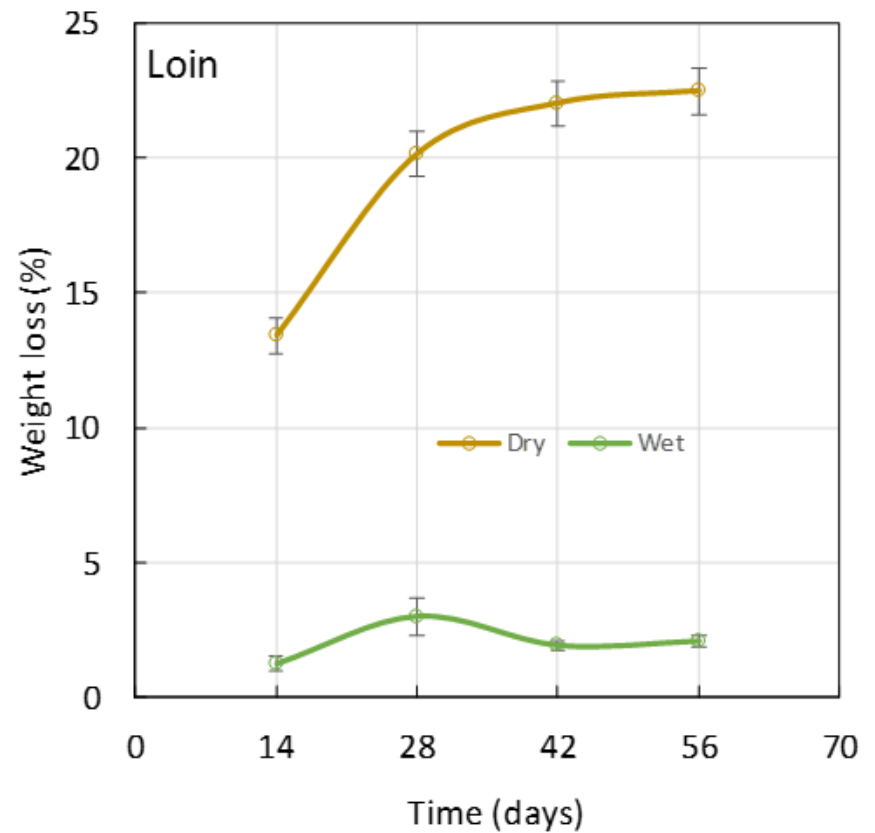
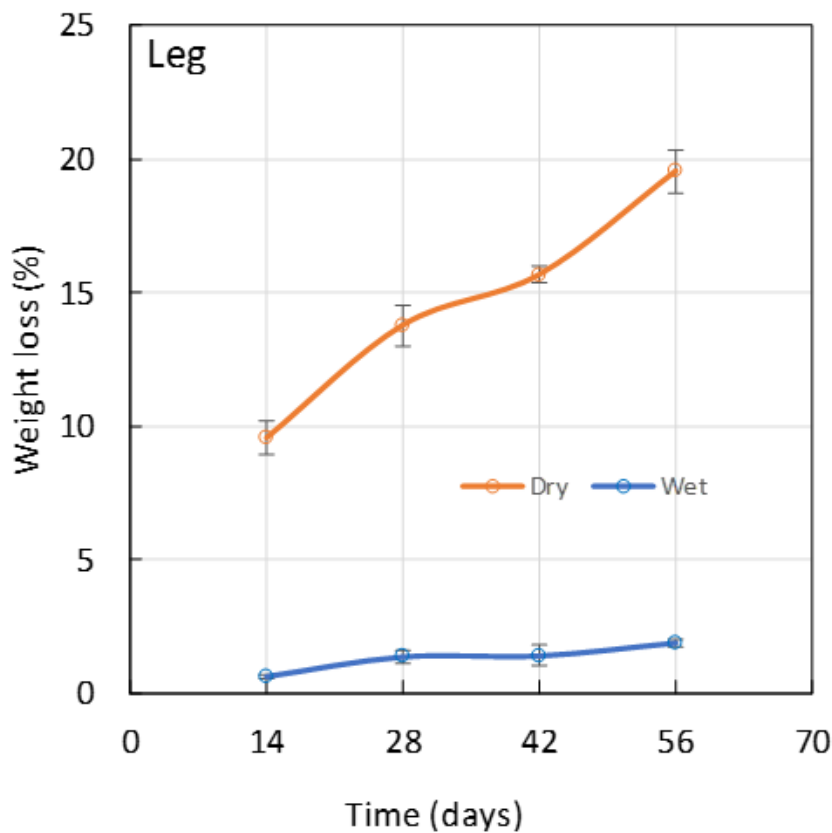
Quality category selection by consumers for LTL and SM



Willingness to pay for quality category



*Weight loss due to ageing (weight after ageing as % of initial weight before trimming) of leg and loin for dry and wet aged mutton*





Dry aged 14 days



Wet aged 14 days

- Fat score ranged from 2 (estimated tissue depth 6-10 mm;) to 5 (estimated tissue depth 20 mm and over)
- HCWT ranged from 22.8kg to 40.4kg

HCWT and Fat score were found to influence yield components for both leg and loin. Waste increases and Moisture loss decreases for carcasses with higher HCWT, and with higher fat scores.

For instance an increase in HCWT of 10kg decreases moisture loss in the loin by 6%, while an increase of fat score by 2 points, reduced moisture loss of the loin by 4.9%.

Therefore in order to reduce the impact of dry ageing on yield it is recommended to use carcasses of HCWT >28 Kg and fat score  $\geq 3$  for dry ageing.



## Any Questions ?

