

Generating supply chain value

Will Atkinson

Meat & Livestock Australia

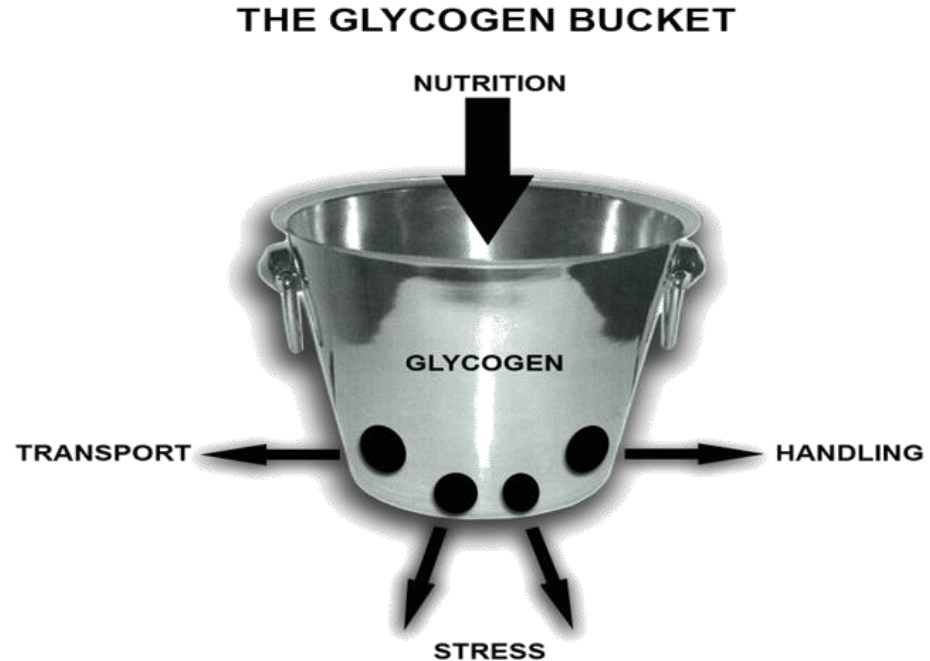
Overview

- Drivers of eating quality – Beef and Sheepmeat
- What is your target market
- Performance benchmarking

Drivers of eating quality

Maximise glycogen levels

- Nutrition
- Mixing, drafting
- Animal health
- Heifers in oestrus
- Weather events
- Loading/unloading



Beef - The MSA Index

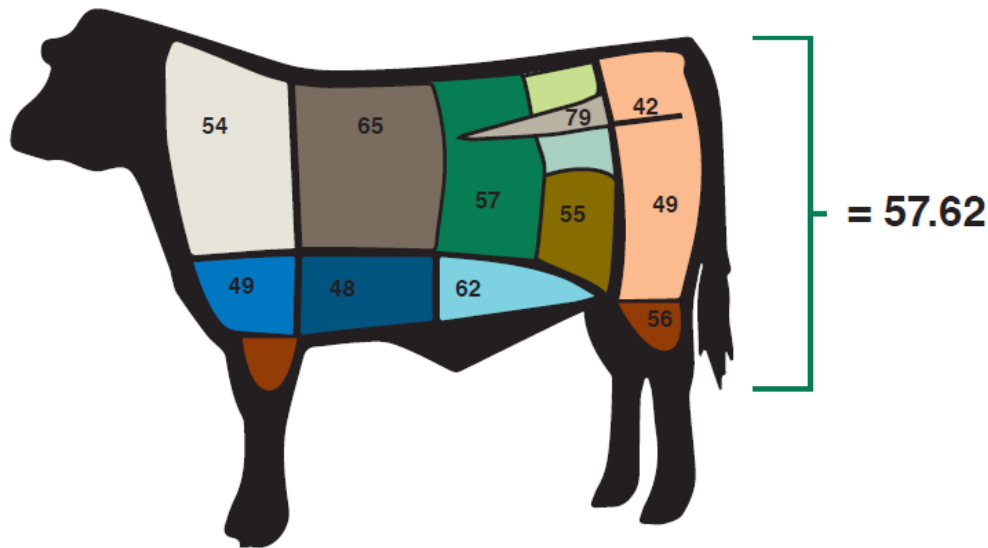


Illustration for example purposes only

- A **single number** to indicate the overall quality of a carcass
- A weighted average of 39 eating quality scores of the primals
- Benchmarking tool to measure performance.



Beef - Key drivers of the MSA Index

Carcase Input	Size of effect on the MSA Index (units)	Relative Importance
HGP Status	-5	Very High
Milk-fed Vealer	4	Very High
Saleyard	-5	Very High
MSA Marbling	0.15	High
Hump Height	-0.7	High
Ossification	- 0.6	High
Rib Fat	0.1	Medium
Hot Standard Carcase Weight	0.01	Low
Gender	0.3	Low



MSA Sheepmeat Model

- Recent development based on over a decade of R&D
- Based on untrained consumer sensory scores (gold standard)
- Enabled by objective measurement technology
- Relationship to traits that explain eating quality variation



The MSA Sheepmeat Model

Inputs

Hot standard carcase weight
(HSCW)

Lean meat yield
(LMY%)

Intramuscular fat
(IMF%)

Electrical stimulation

Ageing

Modified atmospheric
packaging



Outputs

Leg



Shortloin



Rack



Shoulder



Rump



Knuckle



Topside



Outside



Grill



Roast

Sheepmeat R&D – Enabling Technology



MEQ Probe



**Microwave
Device**



Miniprobos

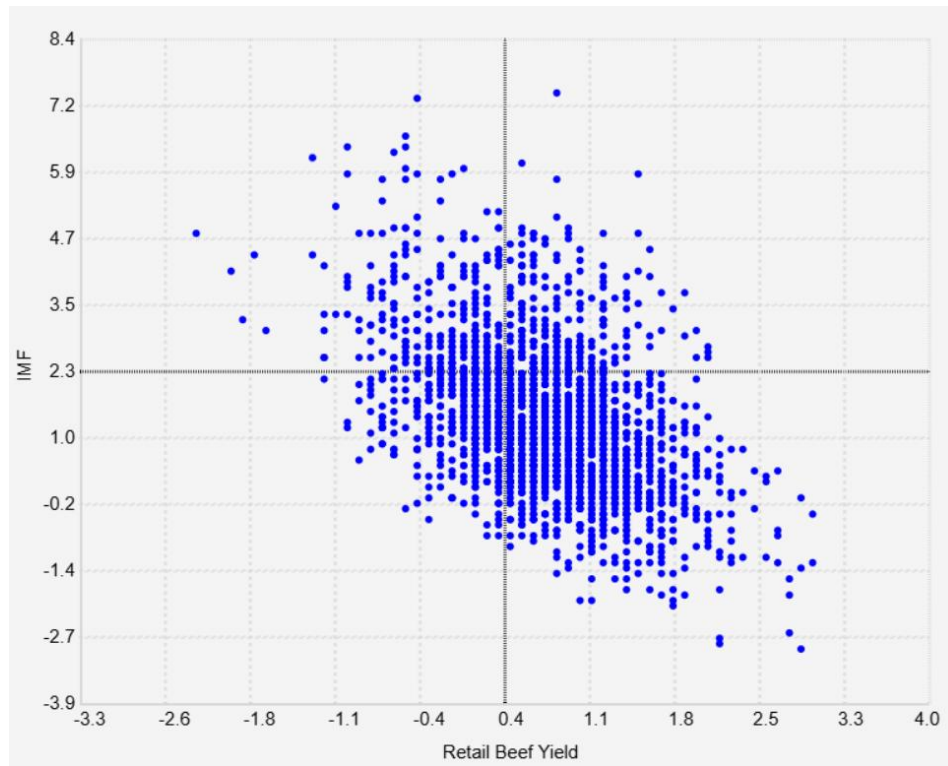


NMR

What is your target market?

What is your target market?

- **Align your breeding objective**
 - Bred Well, Fed Well
 - Don't chase extremes or single traits
 - Balance is key
- **Trading**
 - What do you know about your livestock?
 - What information do you gather?



Traits driving the outcomes

Market	Domestic	Export
HGP	N	N
Sex	M	M
HSCW (kg)	240	320
TBC	N	N
Hump	60	80
Ossification	120	200
MSA Marb.	320	600
RF	6	12
MSA Index	62.24	62.53



Understand the market requirements

MSA Specifications

- Compliance to pH and rib fat
- MSA Index *or* Boning group requirements

Establish and maintain relationships

- Feedlots
- Processors
- Buyers/Agents

Company Specifications

- Meat colour
- Fat colour
- HSCW
- P8 Fat



Performance benchmarking

How are you performing?

Finishers

- myMSA
- myFeedback – all carcase data
 - Animal disease and defect

Breeder/Backgrounders

- Performance from the feedlot?
- Through myFeedback



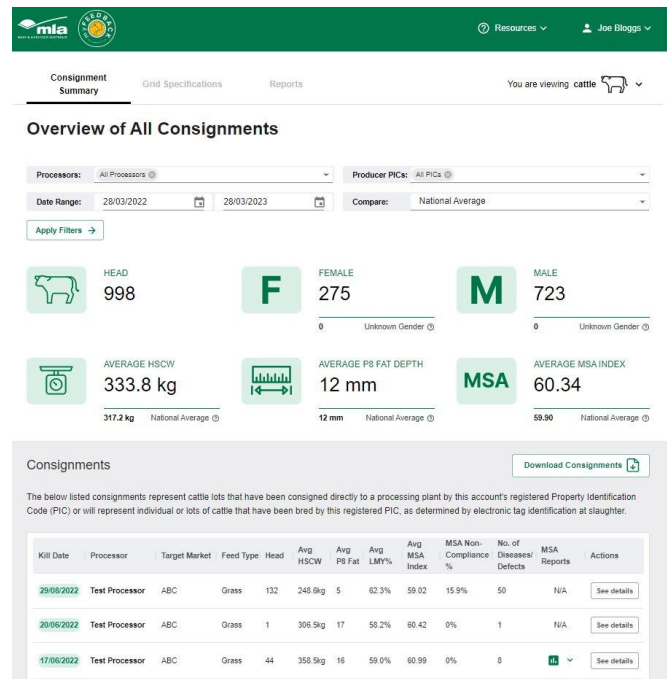
What is myFeedback

One system, more data, better insights

- Combining carcase, eating quality and disease & defect data in one single access point (NLIS, MSA, AHA, NLRS)
- System access will be available for all participating cattle and sheep producers, processors and brand owners.

Benefits for Producers

- Understand compliance to market specs and benchmark livestock performance
- Identify opportunities for proactive disease management & prevention
- Access to “Solutions to Feedback” to help improve performance





Animal Diseases and Defect by Carcase Traits

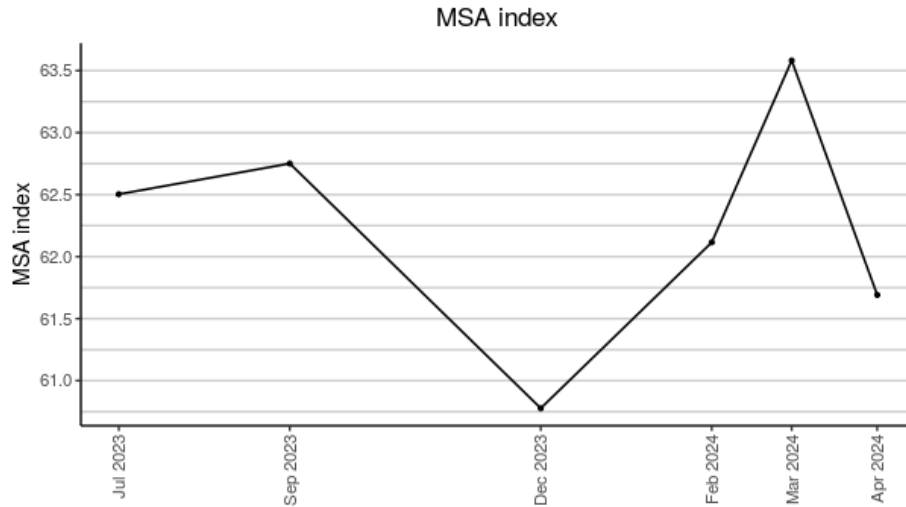
Selected Trait: MSA Index

Health Conditions	More Info	No. Head	Average MSA Index
Nephritis	Info	1,147	62.65
Healthy		11,314	63.00
Pneumonia	Info	3,163	63.15
Hydatids	Info	535	63.20
Abscess	Info	639	62.73
Fluke	Info	740	62.71



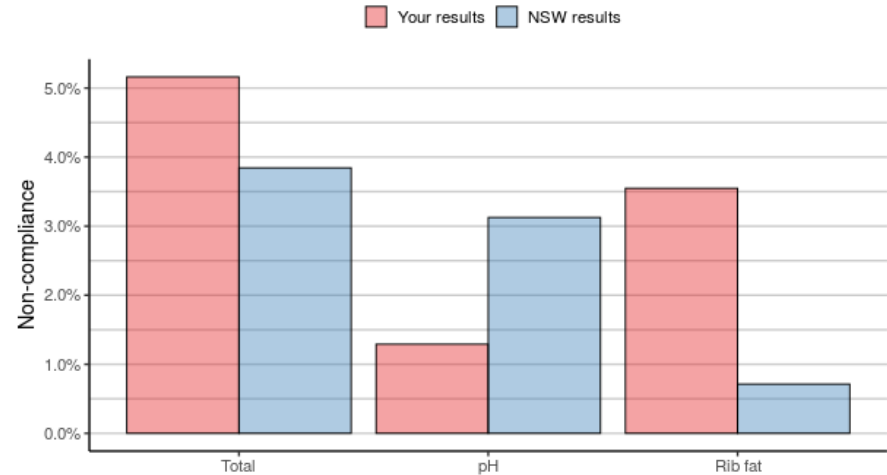
Benchmarking your performance

- Access benchmarking data in myMSA



Compliance

	Your results (n)	Your results (%)	NSW (n)	NSW (%)
Total carcasses	310		927957	
Non-compliant	16	5.2%	35673	3.8%
Non-compliant pH	4	1.3%	29008	3.1%
Non-compliant rib fat	11	3.5%	6613	0.7%

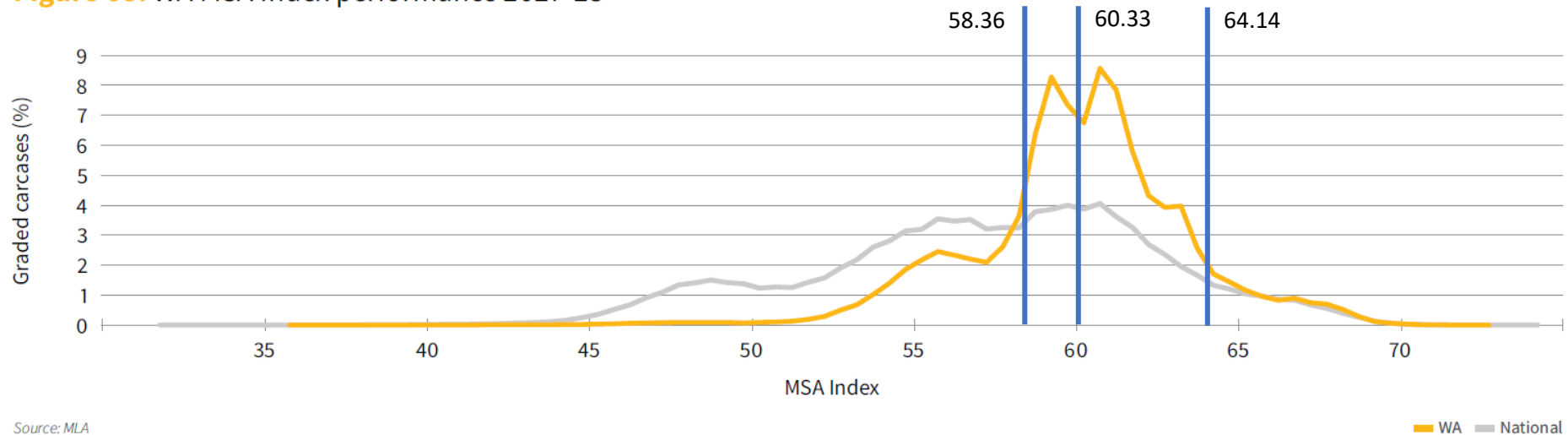


Benchmarking your performance



Benchmarking your performance

Figure 68: WA MSA Index performance 2021-23



Benchmarking your performance

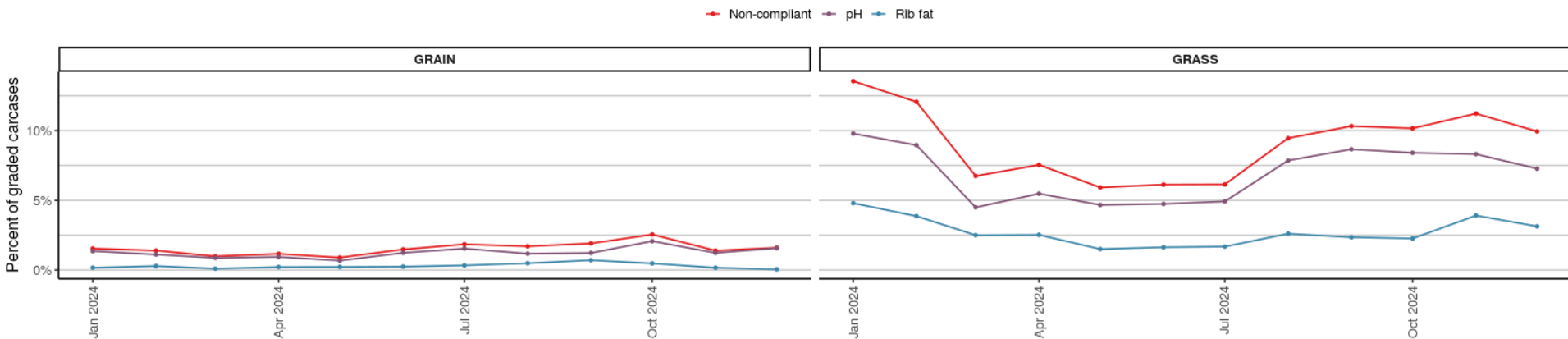
Table 41: WA percentile bands for MSA Index and their average carcase traits for HGP-free, non-grainfed cattle

	Top 1%		Top 5%		Top 10%		Top 25%		Top 50%		Bottom 25%		Bottom 10%		Bottom 5%		Bottom 1%	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
MSA Index	66.59	68.53	64.57	66.04	63.39	64.03	61.61	62.32	59.97	60.95	58.67	59.70	56.54	58.85	52.31	58.13	46.67	55.22
Carcase weight (kg)	244.0	255.4	247.2	261.9	259.4	299.0	271.7	303.5	265.1	303.6	252.5	284.1	253.1	273.8	268.4	277.6	227.9	283.8
Hump height (mm)	45	50	50	55	55	60	60	60	60	65	60	65	85	70	80	85	95	145
Ossification	130	100	140	110	140	130	150	130	170	150	190	170	250	170	460	170	510	160
MSA marbling	460	400	400	380	400	440	390	400	360	350	330	350	320	330	320	300	300	290
Rib fat (mm)	9	8	9	7	8	8	9	8	8	7	7	7	8	6	9	7	7	7

Reducing non-compliance

MSA compliance

- Pre-slaughter requirements
- pH < 5.71
- Rib Fat ≥ 3mm
- Adequate fat coverage across all primals



Take home messages

Drivers of eating quality

- Nutrition and stress management for glycogen reserves and positive trait growth
- MSA Sheepmeat model for individual carcass grading of sheepmeat

Target Market

- Know the target market you are aiming for to get the most value out of your production system.

Performance Benchmarking

- Understand your performance compared to our target
- Utilise the tools available to help pull the right levers on farm

Tools and resources

Links

- [myMLA](#)
- [myFeedback](#)
- [Solutions to Feedback Library](#)
- [myFeedback Video Guides](#)

Resources

- [Beef Eating Quality Insights](#)
- [Beef Tips and Tools](#)
- [MSA Sheepmeat Factsheet](#)