

Driving eating quality in Australia's beef herd

Understanding eating quality drivers and how on-farm decisions influence the MSA Index

1. The Australian Beef Eating Quality Insights Report
2. Driving eating quality on-farm
3. Bringing it back to your business

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1. Australian Beef Eating Quality Insights

- Current Australian eating quality performance
- Setting eating quality benchmarks
- South Australia snapshot

Purpose of the Australian Beef Eating Quality Insights report

- Understand the trends and drivers of eating quality.
- Demonstrate the impact of various production factors on the MSA Index
- Implement improvement strategies and create opportunities for improved returns

National snapshot (at 30 June 2019)



47,426

MSA registered producers



6.6 million

Head of cattle presented for
MSA grading

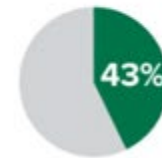


39

MSA licenced beef
processors

57.62

Average
MSA Index
for 2017-19



MSA graded cattle
represented 43% of
the national adult cattle
slaughter



195

MSA licenced beef brands



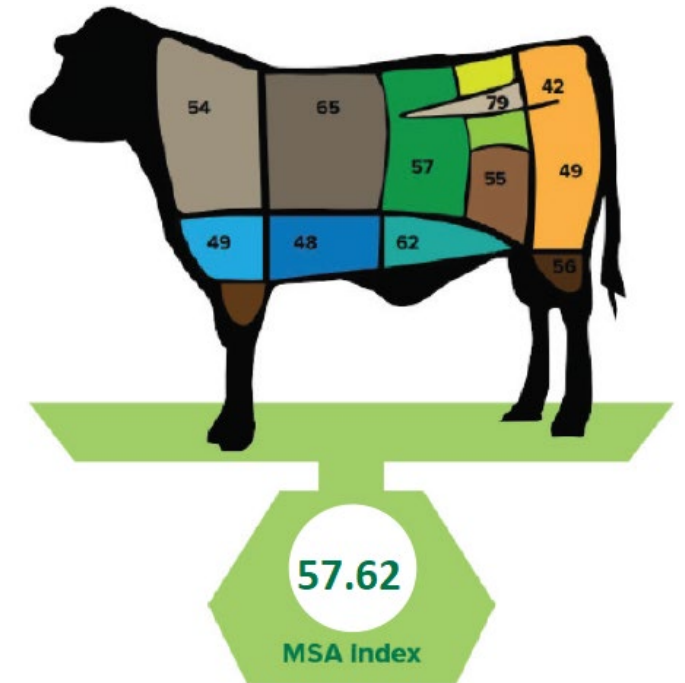
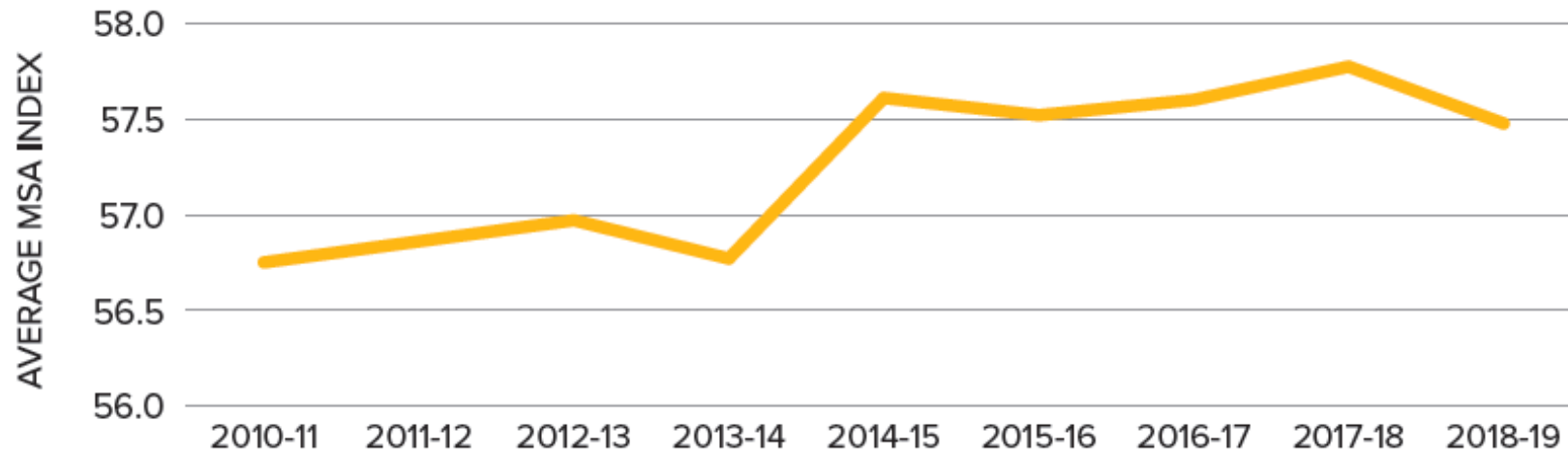
A tool to understand the eating quality performance of your cattle

Current Australian eating quality performance

- Average **MSA Index** = **57.62** (ranging from 31.5-73)
- Since 2010 Average Index has increased **0.73 Index points**

Change in national MSA Index since 2010-11

Source: Meat & Livestock Australia



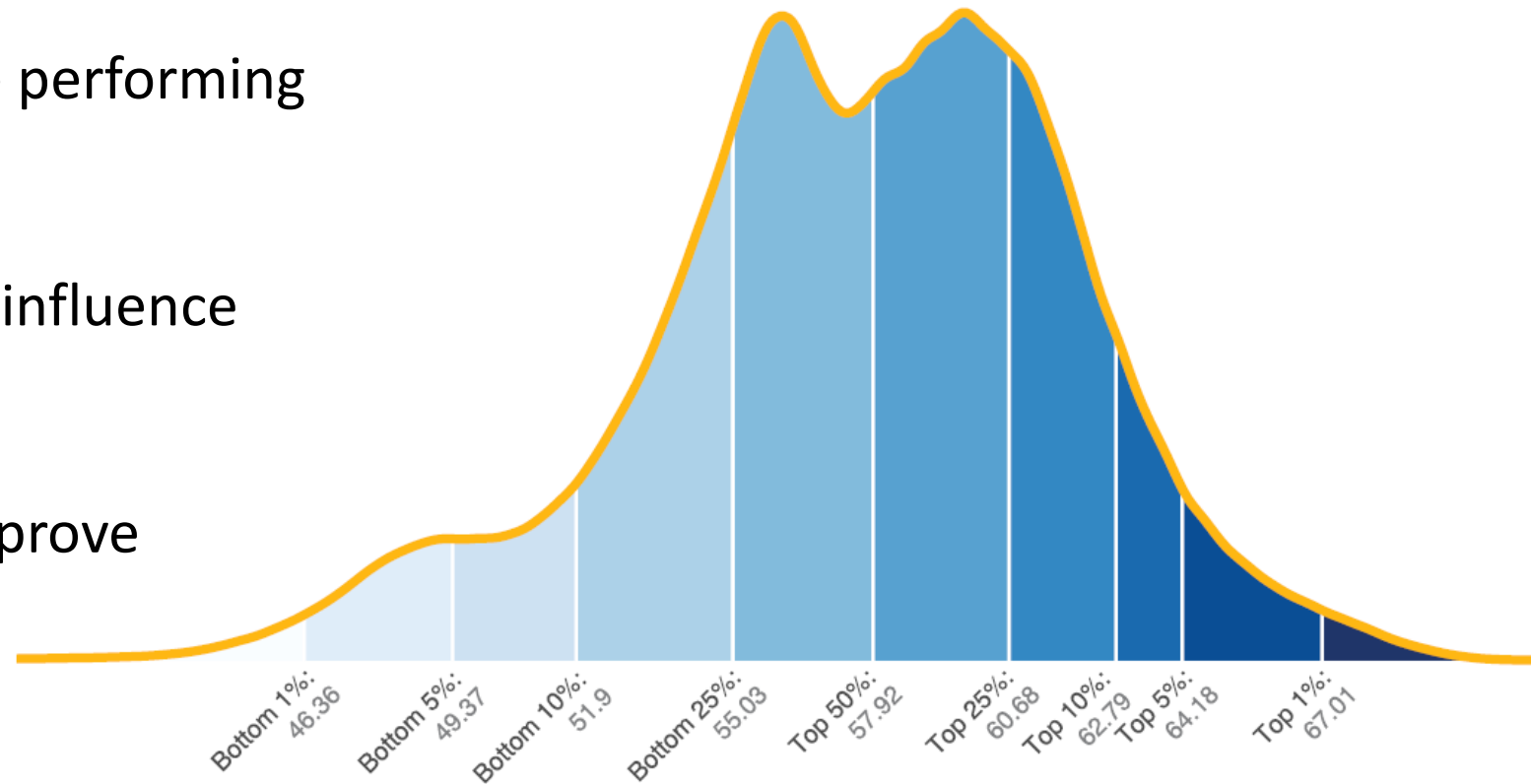
Setting eating quality benchmarks

Visualising MSA Index rankings (national)

Source: Meat & Livestock Australia

Performance bands:

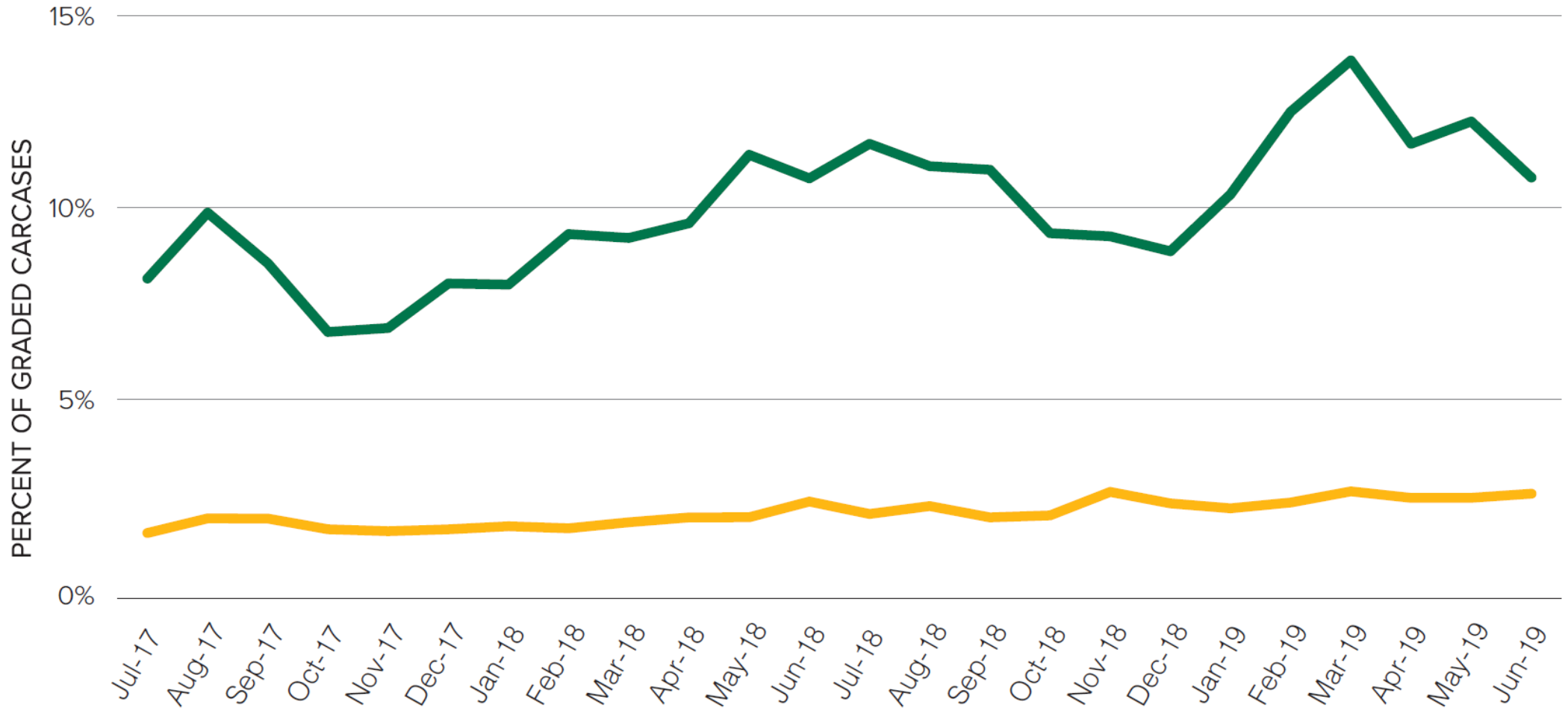
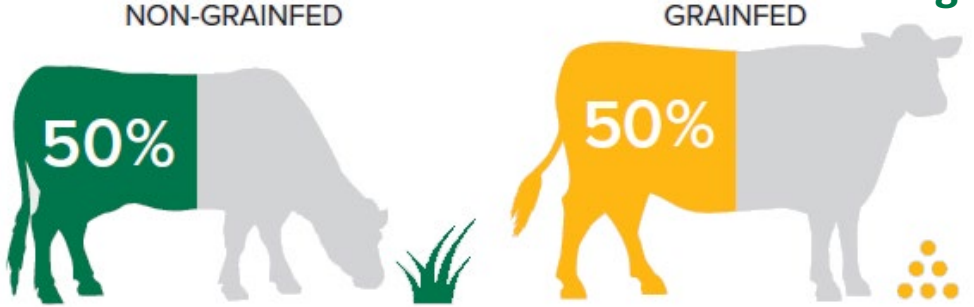
- Benchmark how your cattle are performing against others,
- Understand the attributes that influence your Index,
- Target production factors to improve performance.



How do you know where you are going, if you don't know where you are?

MSA compliance by feed type

- Grainfed non-compliance – 2.1%
- Non-grainfed non-compliance – 9.9%



2. Driving eating quality on-farm

- Impact of attributes on the MSA Index
- Quantifying on-farm changes
- Effect on carcass quality

Impact of attributes on 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 Index quantifies the impact of production decisions

Hot standard carcase weight: on-farm

Low
impact

Increasing average daily weight gain by 0.5kg/day

- Relative increase of 25kgHSCW

300kg carcase  325kg carcase
= 0.23 index units

Default MSA Index: 58.51

MSA index calculator
[more info...](#)

MSA Index: 58.74

CALCULATE

MFV	N ▼
Saleyard	N ▼
HGP	N ▼
Sex	M ▼
HSCW	325
TBC	0 ▼
Hump Height	55
Ossification	170 ▼
MSA Marble	300
Rib Fat	5 ▼



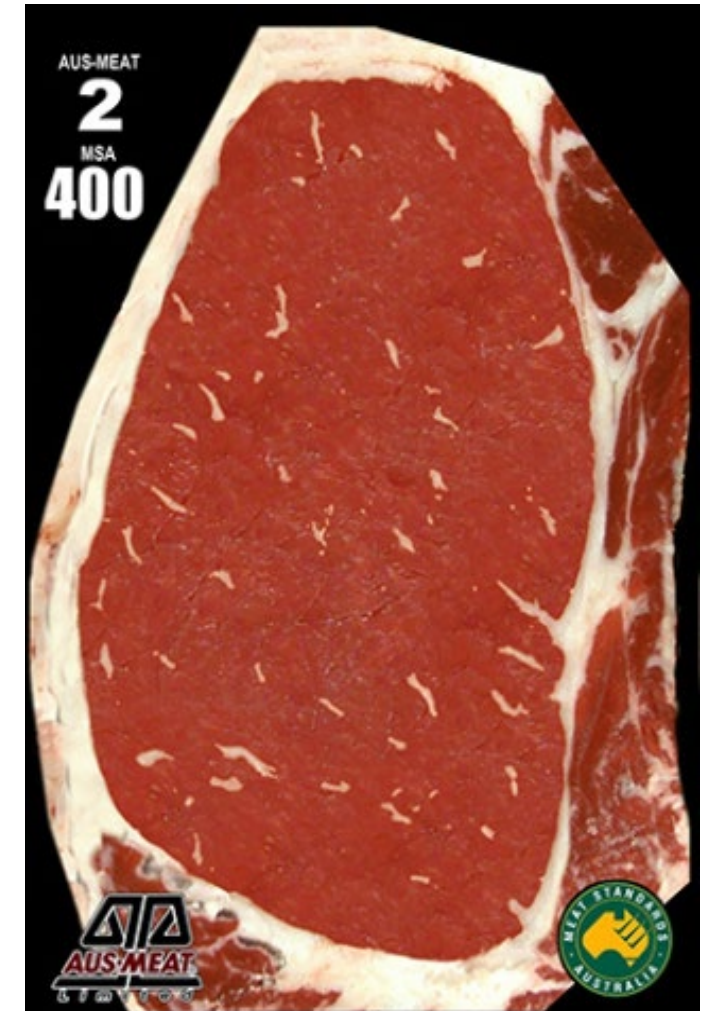
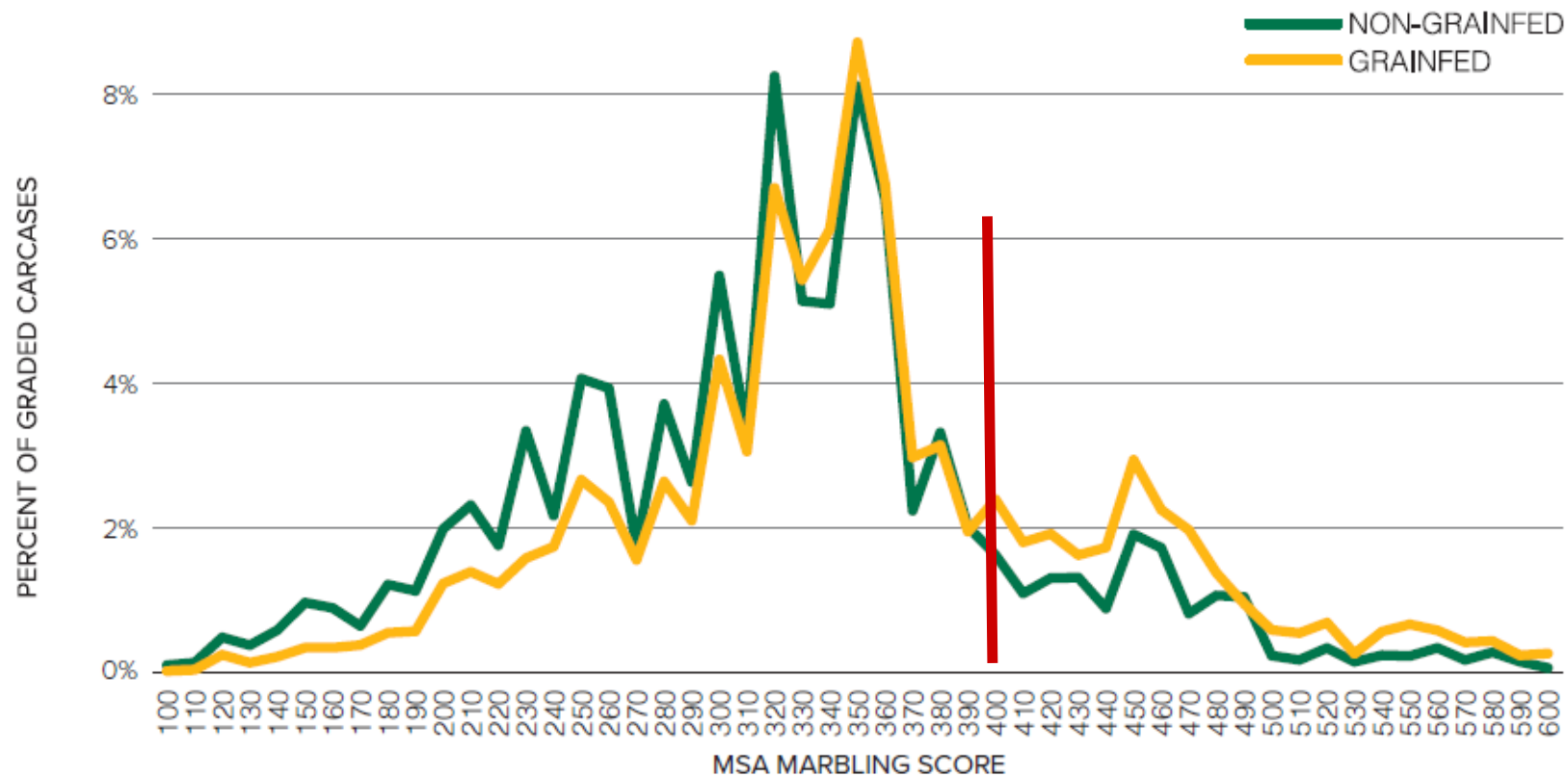
Gains of less than 0.8kg/day can lead to increased incidence of non-compliance to pH

MSA marbling

- 73% grainfed carcasses had an MSA Marbling Score ≤ 400
- 85% non-grainfed carcasses had an MSA Marbling Score ≤ 400

Marbling distribution by feed type 2017-19

Note: MSA Marbling extends to a score of 1190 and this graph represents 95% of MSA data



MSA marbling: on-farm using genetics

High
impact

1% increase in IMF EBV of sire
= **27 ± 5** MSA marble score increase in progeny.

If we went from using +1.0 IMF% Bulls to +3.0 IMF% Bulls
= could expect an increase of **~60 units of MSA marbling**
in progeny:

300 MSA Marble Score  360 MSA Marble Score
= 0.97 Index units

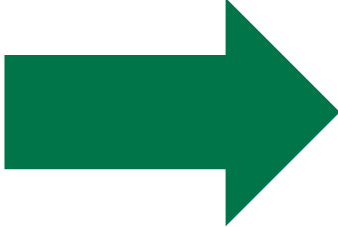
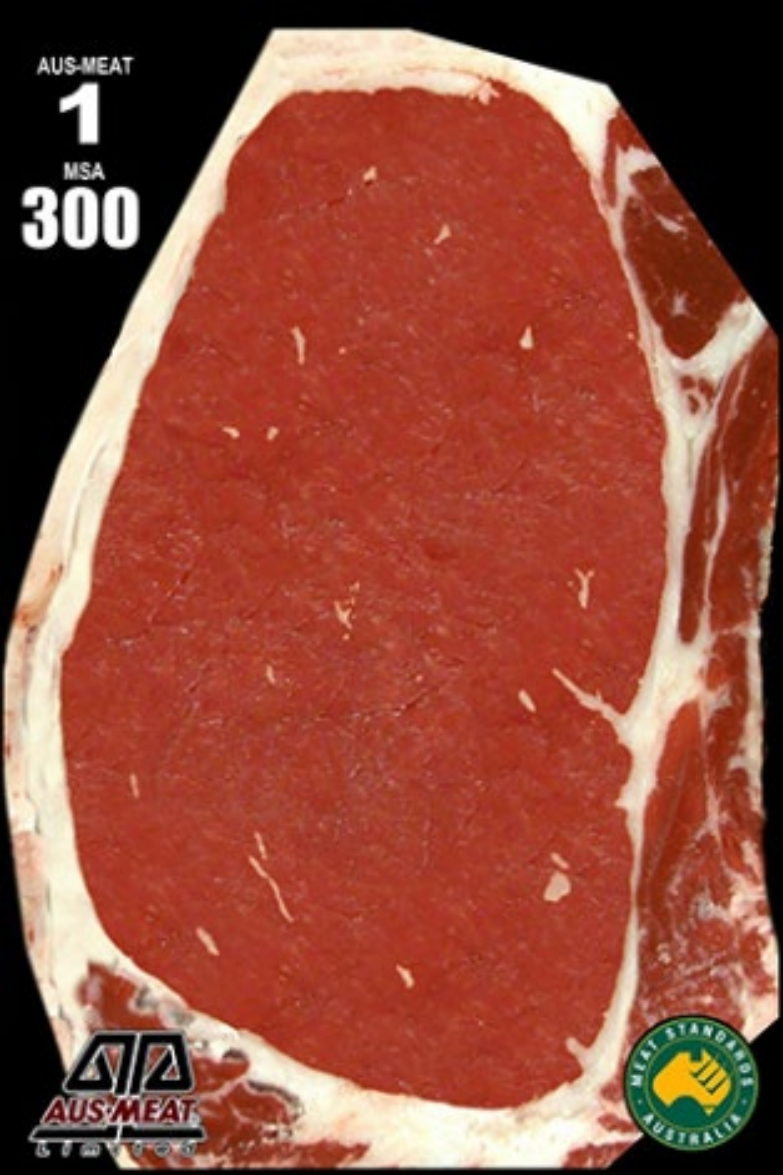
Default MSA Index: 58.51
MSA index calculator
[more info...](#)

MSA Index: 59.48	CALCULATE
MFV	N ▾
Saleyard	N ▾
HGP	N ▾
Sex	M ▾
HSCW	300
TBC	0 ▾
Hump Height	55
Ossification	170 ▾
MSA Marble	360
Rib Fat	5 ▾



Marbling is a highly heritable trait – have the genes for IMF and then feed them

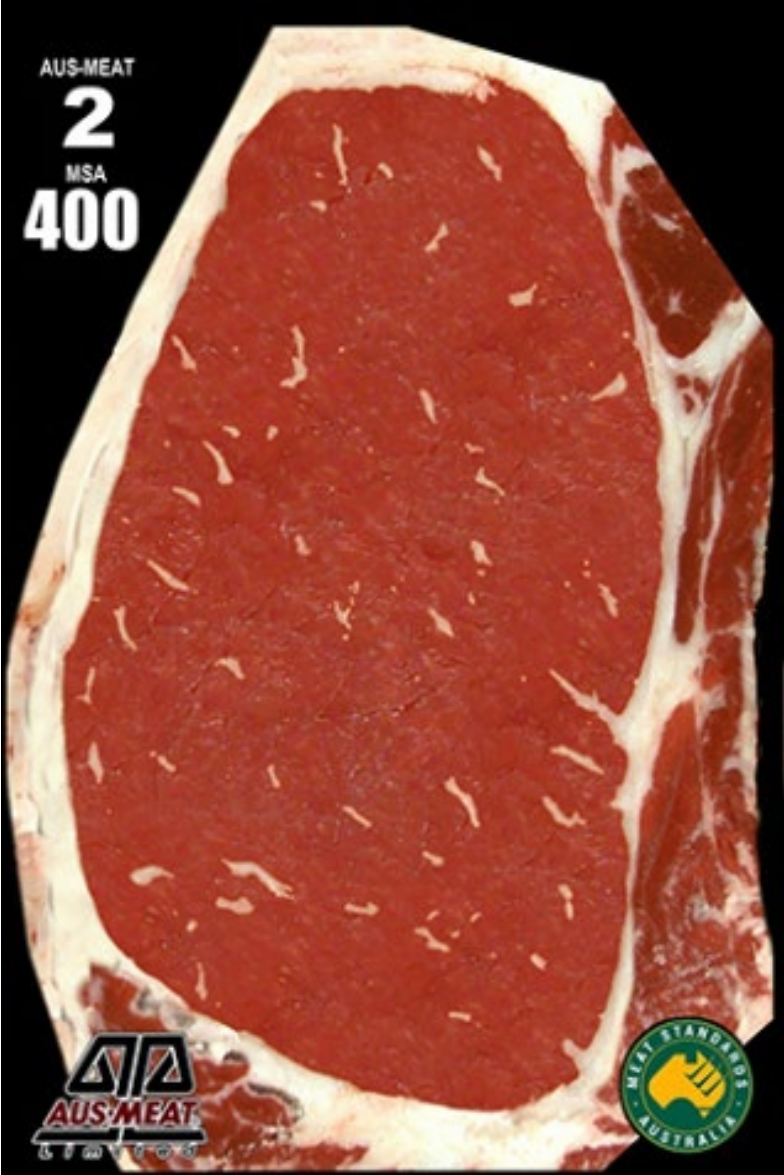
MSA marbling: on-farm



+100

=

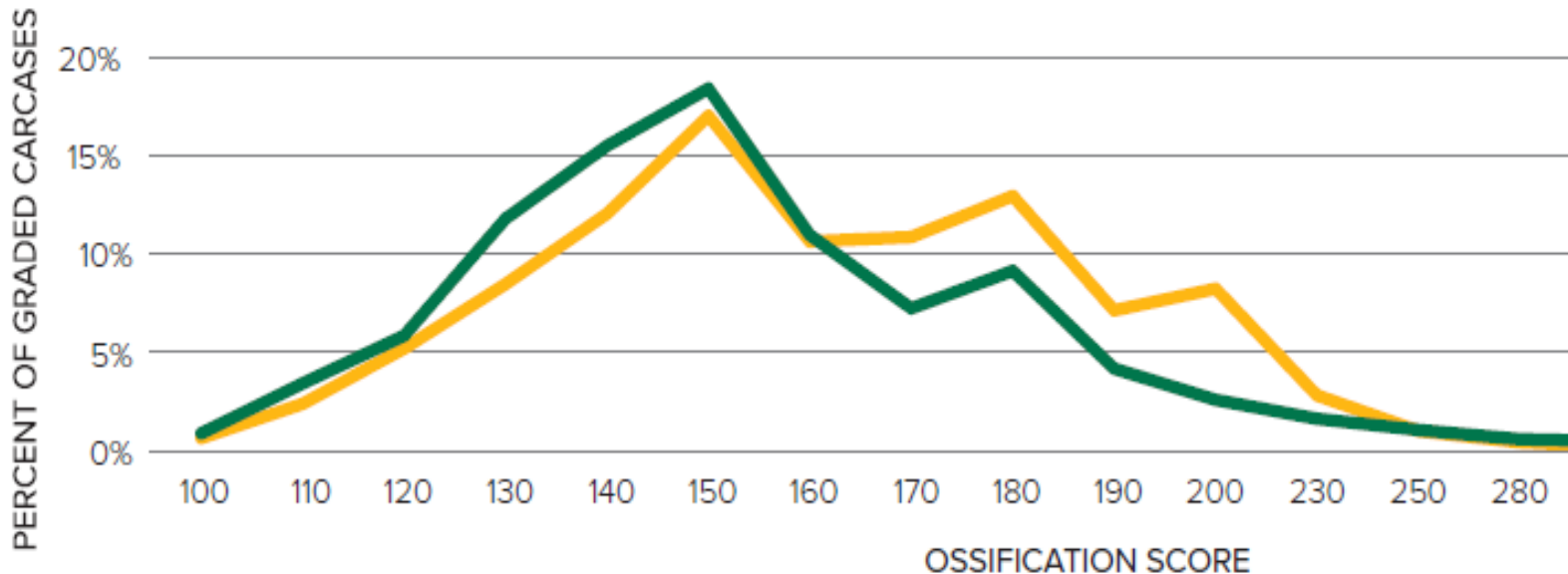
+1.62



Ossification

- 46% grainfed cattle had ossification scores ≤ 150
- 56% non-grainfed cattle had ossification scores ≤ 150

Ossification distribution by feed type 2017-19



Ossification: on-farm

- Whole of life nutrition
- 400 and 600-Day Weight EBV (kg)

170 Ossification Score  150 Ossification Score
= 1.03 Index units



Monitor variation of ossification over time to see changes across consignments and your herd.

High
impact

Default MSA Index: 58.51

MSA index calculator
[more info...](#)

MSA Index: 59.54	<input type="button" value="CALCULATE"/>
MFV	<input type="text" value="N"/>
Saleyard	<input type="text" value="N"/>
HGP	<input type="text" value="N"/>
Sex	<input type="text" value="M"/>
HSCW	<input type="text" value="300"/>
TBC	<input type="text" value="0"/>
Hump Height	<input type="text" value="55"/>
Ossification	<input type="text" value="150"/>
MSA Marble	<input type="text" value="300"/>
Rib Fat	<input type="text" value="5"/>

What do these changes mean?

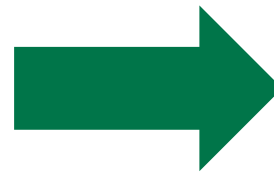
MSA index calculator
[more info...](#)

MSA Index: 58.51

MFV	N ▾
Saleyard	N ▾
HGP	N ▾
Sex	M ▾
HSCW	300
TBC	0 ▾
Hump Height	55
Ossification	170 ▾
MSA Marble	300
Rib Fat	5 ▾



+2.16



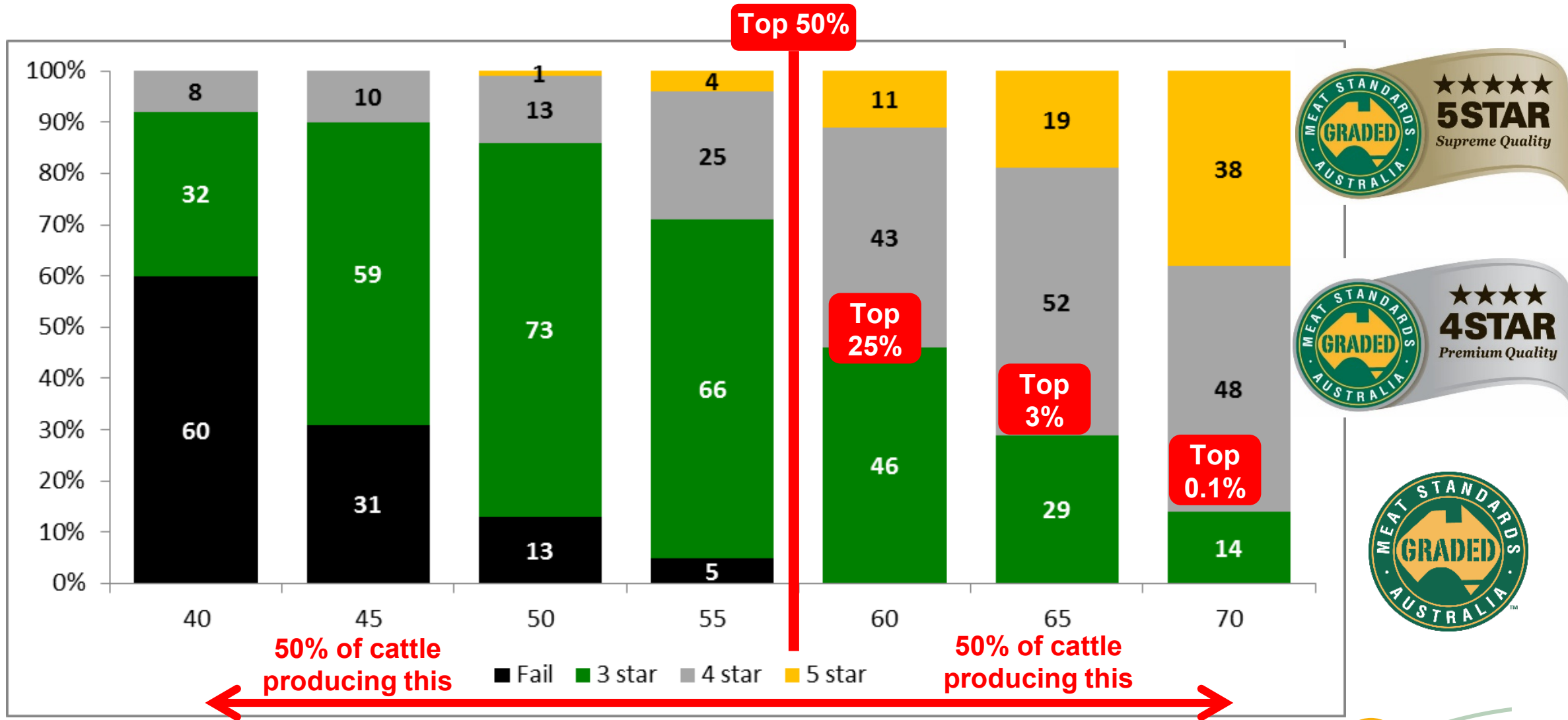
MSA index calculator
[more info...](#)

MSA Index: 60.67

MFV	N ▾
Saleyard	N ▾
HGP	N ▾
Sex	M ▾
HSCW	325
TBC	0 ▾
Hump Height	55
Ossification	150 ▾
MSA Marble	360
Rib Fat	5 ▾

	TOP 1%	TOP 5%	TOP 10%	TOP 25%	TOP 50%	BOTTOM 25%	BOTTOM 10%	BOTTOM 5%	BOTTOM 1%
SA	67.89	65.27	63.96	62.23	60.49	58.47	54.91	53.31	50.08
NATIONAL	67.01	64.18	62.79	60.68	57.92	55.03	51.90	49.37	46.36

MSA Index relative to 3-4-5 star cuts



Based on 39 key primals at optimal cook methods

3. Bringing it back to your business

- Identify your opportunities
- Set an eating quality goal
- Use the tools

How do you identify the opportunities?

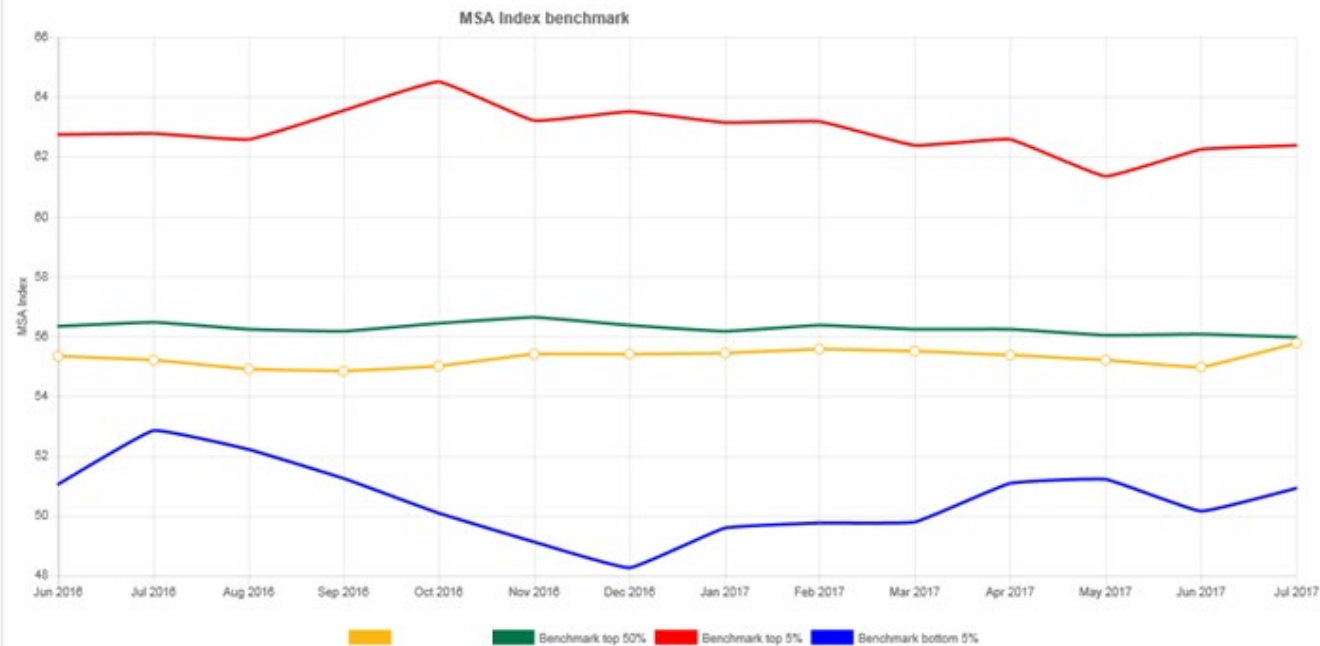
- Know where you are
- Where can your biggest gains be made?
- Don't just look at averages

MSA Index Benchmarking

IMPORTANT: prior to benchmarking, please select the attributes you would like to be benchmarked against.

Time period	HGP status	Feed type	Area
<input type="radio"/> Last kill	<input type="radio"/> HGP treated	<input checked="" type="radio"/> Grain Fed	<input type="radio"/> My region
<input checked="" type="radio"/> Last 12 months	<input type="radio"/> No HGP	<input type="radio"/> Grass Fed	<input checked="" type="radio"/> My state
<input type="radio"/> Last 3 years	<input checked="" type="radio"/> Both		<input type="radio"/> National

MSA Index Benchmark for Jindalee Feedlot
 State : NSW
 Time period : Last 12 months
 HGP status : Both
 Feed type : Grain Fed



Jindalee Feedlot MSA Index (Your Carcasses)	
Band	MSA Index
Top 1%	59.41
Top 5%	58.26
Top 10%	57.59
Top 25%	56.42
Top 50%	55.16
Bottom 25%	54.15
Bottom 10%	53.14
Bottom 5%	52.42
Bottom 1%	50.48

Set yourself an eating quality goal

- Know your target market
- Make it part of your objectives
- Align with your profit drivers
- Be realistic – changes take time

Example: Pasture-based finishing system turning off 250-280kgCW (domestic supermarket)

- Minimising non-compliance (<5%)
- AVG Index score currently 58.05 – aim to increase on average index to 59.00 over two years.



Use the tools

- Kill data and feedback sheets
- myMSA
 - Benchmarking Data (National, State and Region)
 - MSA Index, compliance, key carcass attributes
 - Reports over time
 - Customised data reports
 - Download data to import into farm software
 - MSA Index Calculator
- Australian Beef Eating Quality Insights



You can't manage what you don't measure



The screenshot shows the myMSA web application interface. At the top, there are logos for AUSMEAT and MLA (Meat & Livestock Australia). The main navigation bar includes: Benchmarking, Quick reports, Calculator and search, Training, My details, MSA Standards, System maintenance, Resources, and What's new. The 'Quick reports' section is expanded, showing a list of report types: Daily reports, Producer carcass feedback, Reports over time, Customise my data reports (beef only), and Grading Calendar. The 'Daily reports' section is selected, displaying a note about AUSMEAT meat colour specifications and a form for selecting a kill date (17 Jun 2016) and processor (Teys Australia Rockhampton Pty Ltd). Below the form, there are buttons for 'Carcass feedback', 'PBR Summary', 'MSA non-compliance', 'MSA graphs', 'Download data', and 'Company specification non-compliance'.

Take home messages

1. Attributes have a varying impact on the MSA Index, which can be improved through the combination of nutritional strategies and sire selection
2. Use the benchmarking tools available to understand how your cattle are performing
3. Log into myMSA and have a look at your data