Lardner Park

This is Gippsland

Lardner Park Steer Trial

Australia's Only Grass-Fed Steer Trial | Est. 1975

2021 LARDNER PARK STEER TRIAL RESULTS

/lardnerpark

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The Steer Trial would not be the success that it is without the generous support of our fabulous sponsors. We extend our thanks to the following businesses:

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LARDNER PARK 2021 STEER TRIAL

This year marked the 46th year of the Lardner Park steer trial - the only grass based steer trial in Australia.

With cattle managed under independently controlled grazing conditions during the period of the trial, this provides valuable information on the growth and carcase quality of the steers entered. It enables all those that interact with the trail to gain an improved understanding of live steer assessment, market requirements and the impact of feed quality on the growth and fattening ability of the stock. Steers entered in the trial must be compliant with the Coles QA grass-fed program.

To minimise the risk of steers finishing either below or above the target carcase weight, a recommended entry weight of 280 – 385 kg liveweight was set.

The Competition

Cattle were inducted onto the property on the 29th of June, and after a settling in period, the steer trial commenced on the 6th July. Cattle were weighed five times throughout the trial period and the weighing days allowed interested parties to note the progress of the stock.

Cattle were had their final weighing and were turned off on 29th November.

Cattle had to meet the following specifications for the **standard domestic trade** when they were turned off (*note carcase weight range has increased compared to the previous year of 220 – 310 kg*):

Hot standard carcase weight	220 – 330kg
Fat range (P8)	8-14mm

Penalty points were imposed if cattle fell outside specifications for carcase weight.

Each carcase falling outside the weight range of 220 – 330kg carcase weight was applied with penalty points of 2 points per kg over 330kg carcase weight or 2 points per kg under 220kg carcase weight.

No individual steer/carcase was disqualified from the 'Domestic Weight Gain & Carcase' category, or the 'Highest Carcase Score as a Pair' if animals failed to meet specifications as this was taken into account through the penalty point system.

However, to be in contention for the 'Highest Weight Gain Pair', both animals in the pair had to fall in the carcase weight specifications of 220 – 330 kg carcase weight. If one or both animals in the pair failed to meet the carcase weight specifications, the pair were not eligible for the award.

MSA grading

Carcases were graded at JBS Australia Pty Ltd's Brooklyn processing plant on behalf of Coles. The national Meat Standards Australia (MSA) grading system was used to assess carcases in the competition. The MSA measurements were then converted to carcase points using an Australian Beef Carcase Appraisal System (ABCAS).

Judging System details.

The MSA system utilises the judging criteria: P8 fat, fat colour, meat colour, rib fat, eye muscle area, ossification, marbling and muscle pH. These MSA measures were used to estimate eating quality. Muscle pH (acidity or alkalinity) is closely related to tenderness, shelf life and meat colour.

Carcases needed to be between pH 5.4 to 5.7 to grade MSA. For MSA, cattle needed to be below a notional 30 months of age (maturity) determined by an 'ossification' score below 200. The degree of ossification is determined by change of cartilage to bone in the sacral (rump), lumbar (loin) and thoracic (rib) vertebrae.

For MSA there is no minimum marbling requirement but is described as some markets require marbling. Marbling is related to 'juiciness' and can contribute to meat flavour.

Reasons cattle may have received low eating quality points under the MSA system are that rib fat is less than 3mm, or the pH is above 5.7, or the meat colour is 1a or greater than 3.

The 2021 Competition

The initial weight was taken on 6th July after a one week settling in period and the final weight on 29th November.

The herd was run in one mob on predominately ryegrass based pasture with supplements fed as deemed necessary depending on pasture growth. The tables over the page summarise the liveweight gain (empty weight) and carcase performance.

Lardner Park Events 2021 Steer Trial – Summary of Awards

STANDARD DOMESTIC TRADE

Standard Domestic Trade 220-330kg carcase weight
Fat range (P8) 8-14 mm

Combined Weight Gain & Carcase Awards

Sponsored by: ***ZOETIS, RADFORD'S, BRAMSTEDT TRANSPORT***

Breeder	*Breed*	*Points*
1st Prize		
Killandayle Tony & Marg Killalea – Wantagong NSW	Shorthorn Sprys N514 x AngxShort	226.6
2nd Prize		
Brejayanne Bret & Gaylene Garratt - Allambee	South Devon	223.2
3rd Prize		
Jones Farms Chase Jones - Moorooduc	SimAngus	222.4

Highest Weight Gain Pair

Sponsored by: ***BARENBRUG***

Breeder	*Breed*	*Pair Av Daily Gain*
Jones Farms Chase Jones - Moorooduc	SimAngus	1.40 kg/day

Highest Carcase Score As A Pair

Sponsored by: ***COLES***

Breeder	*Breed*	*Pair Av Carcase Score*
Lineham Farms Alex Lineham - Vervale	Angus	86.99

Highest Eating Quality (MSA Index) As A Pair

Sponsored by: ***GALLAGHER***

Breeder	*Breed*	*Pair Av MSA Index*
Glenfalloch Station Dane Martin - Licola	Angus	62.48

Cattle Performance Analysis – Liveweight Gain Performance

Average Liveweight Gain Performance

Standard Domestic Class												
	Average LW kg						Average LW Gain kg per day					
	2021	2019	2018	2017	2016	2015	**2021**	2019	2018	2017	2016	2015
Initial	**308**	329	322	306	295	279						
Turnoff	**486**	521	496	486	485	469						
Wt Gain	**171**	192	174	180	190	190	**1.17**	1.28	1.40	1.22	1.22	1.22

2021 saw the averaged weight gain performance come in at 1.17 kgLW/day

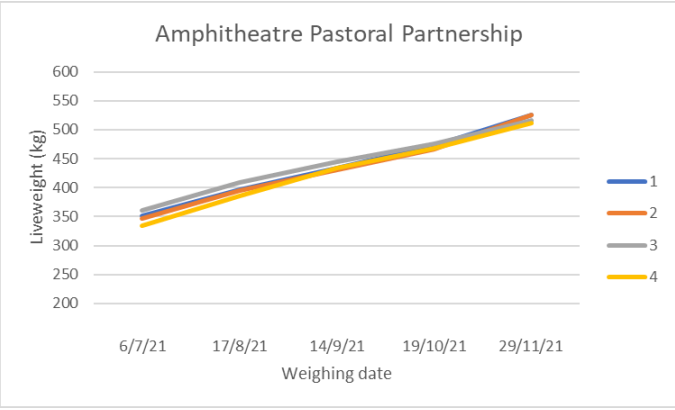
The top averaged weight gain for a pair of steers was 1.40 kgLW/day, a pair of SimAngus steers from Jones Farms at Moorooduc.

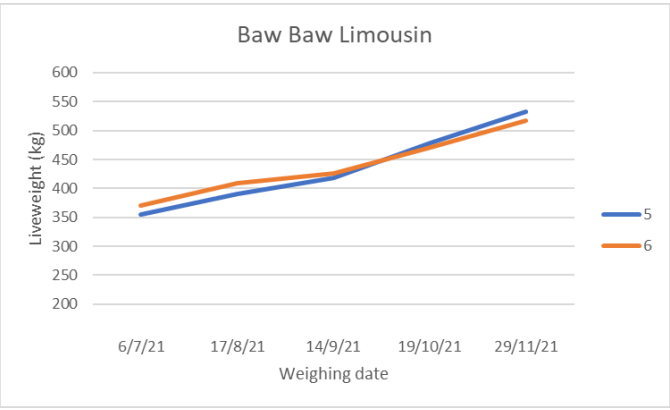
Individual steer weight gains averaged over the trial period ranged from 0.73 kgLW/day up to 1.58 kgLW/day.

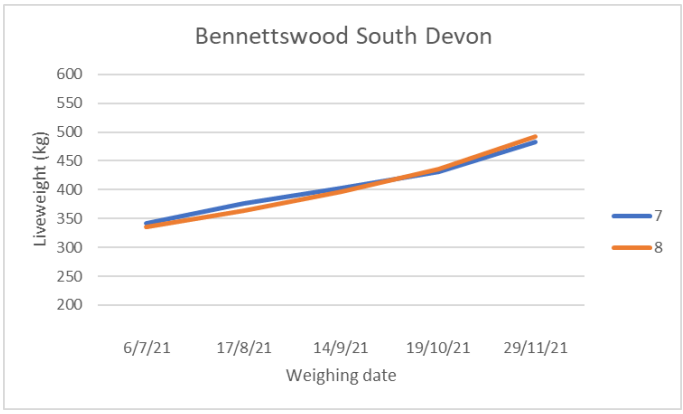
The weight gain of 1.58 kgLW/day was from a Shorthorn x AngusxShorthorn steer, with the other animal of the pair growing at 1.18 kgLW/day, resulting in a pair average daily gain of 1.38 kgLW/day.

The averaged weight gain of 0.73 kgLW/day was from an Angus, with the other animal of the pair growing at 1.33 kgLW/day.

The following graphs show the steer pairs liveweight gain performance across the weighing dates and their average daily gain (ADG) across the weighings.
Number next to coloured line is the Lardner Park ear tag number of the steer.






Bennettswood South Devon
Liveweight (kg)
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29/11/21
Weighing date
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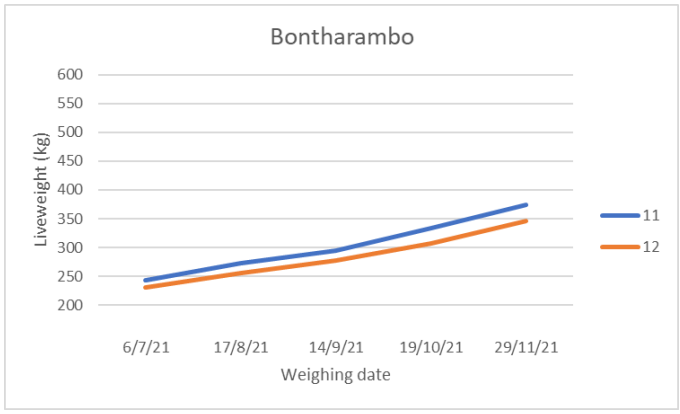
Bontharambo
Liveweight (kg)
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Weighing date
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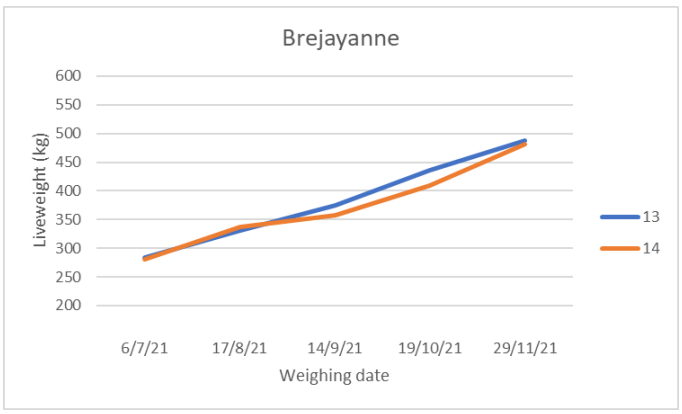
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Liveweight (kg)
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Weighing date
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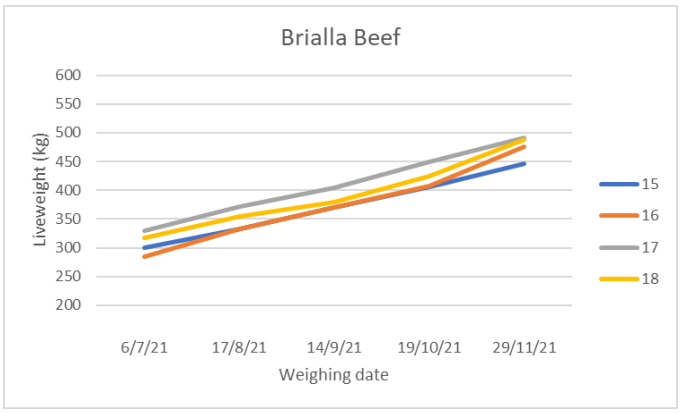
Brialla Beef
Liveweight (kg)
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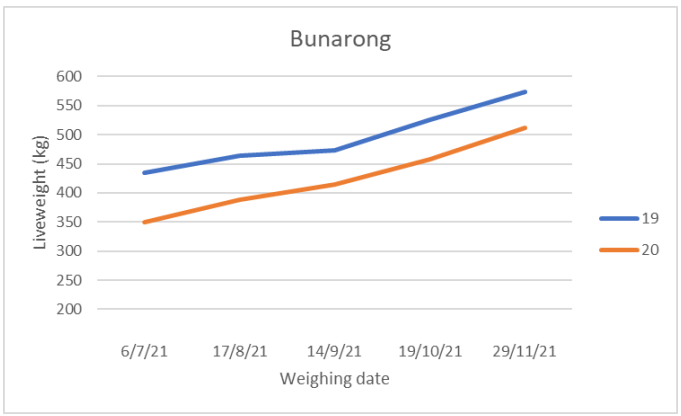
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Liveweight (kg)
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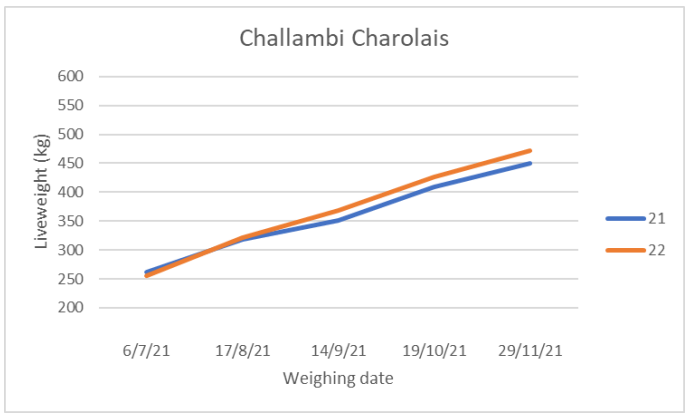
Challambi Charolais
Liveweight (kg)
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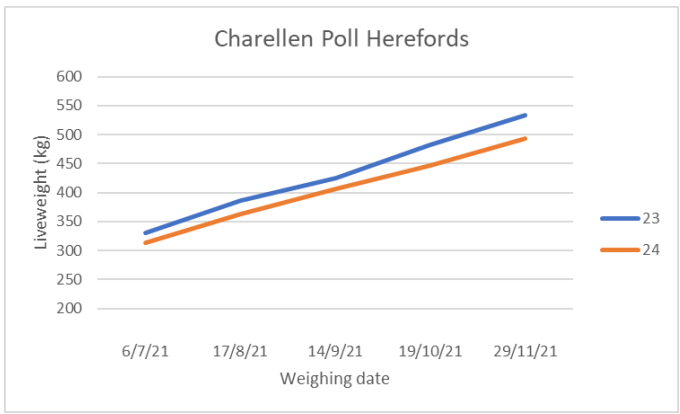
Charellen Poll Herefords
Liveweight (kg)
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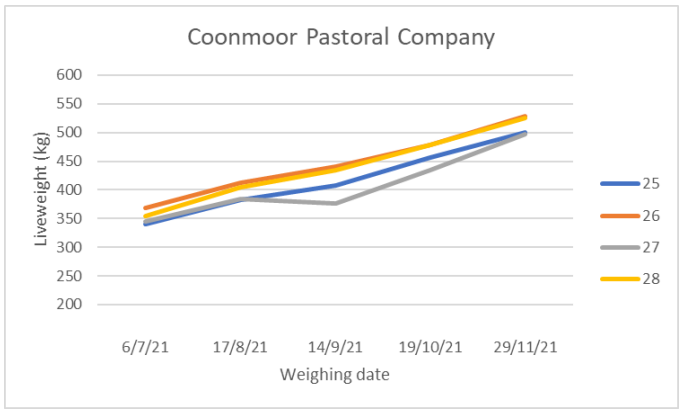
Coonmoor Pastoral Company
Liveweight (kg)
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Weighing date
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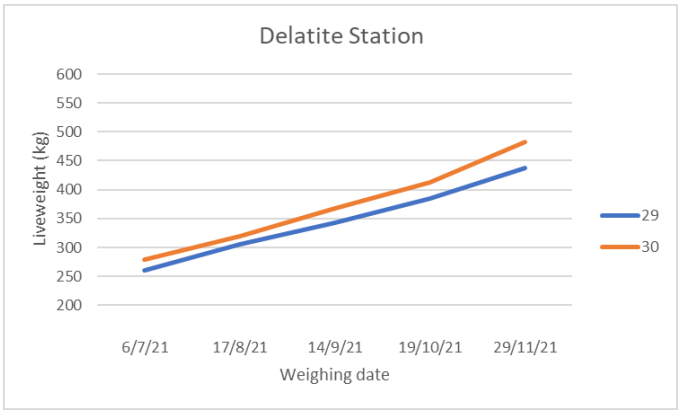
Delatite Station
Liveweight (kg)
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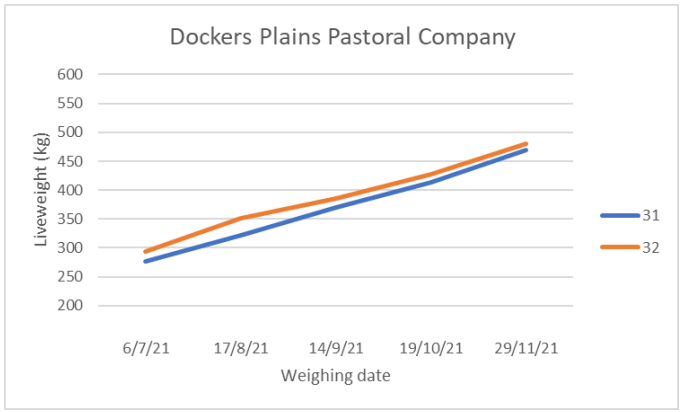
Dockers Plains Pastoral Company
Liveweight (kg)
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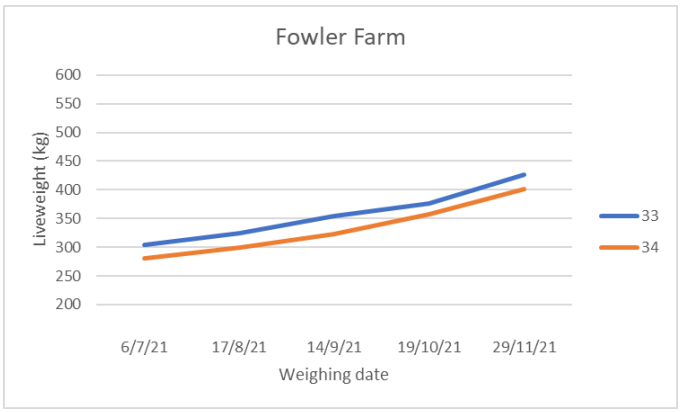
Fowler Farm
Liveweight (kg)
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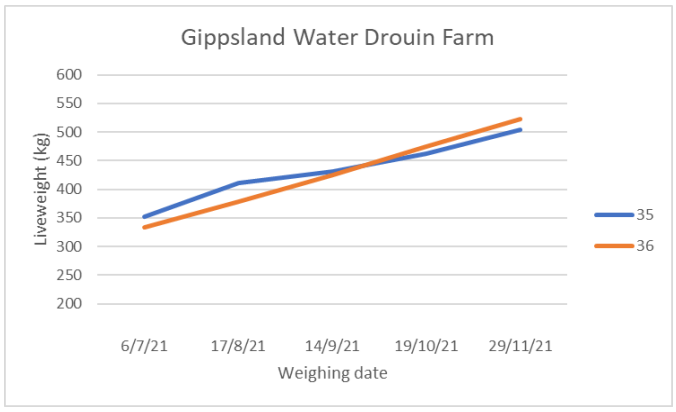
Gippsland Water Drouin Farm
Liveweight (kg)
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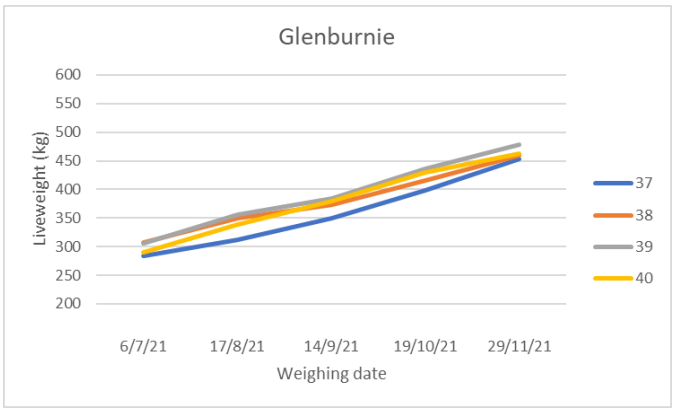
Glenburnie
Liveweight (kg)
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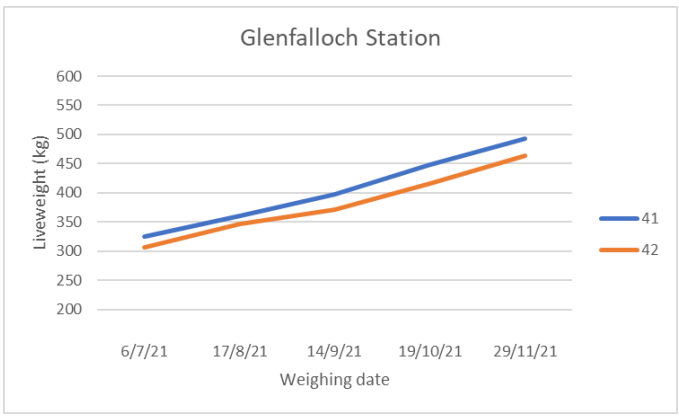
Glenfalloch Station
Liveweight (kg)
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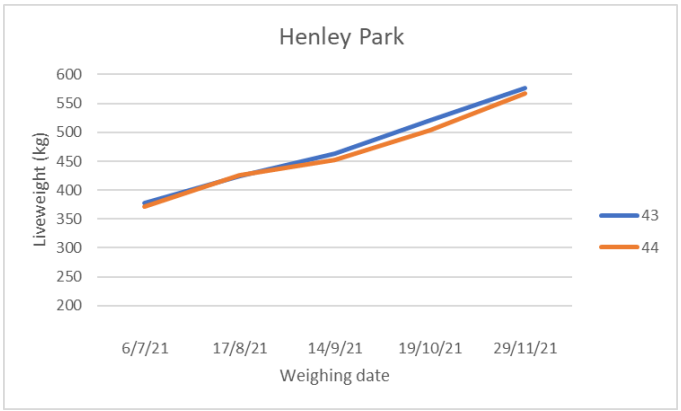
Henley Park
Liveweight (kg)
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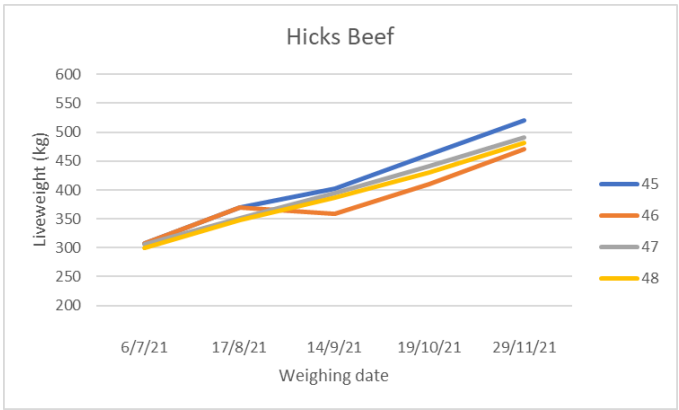
Hicks Beef
Liveweight (kg)
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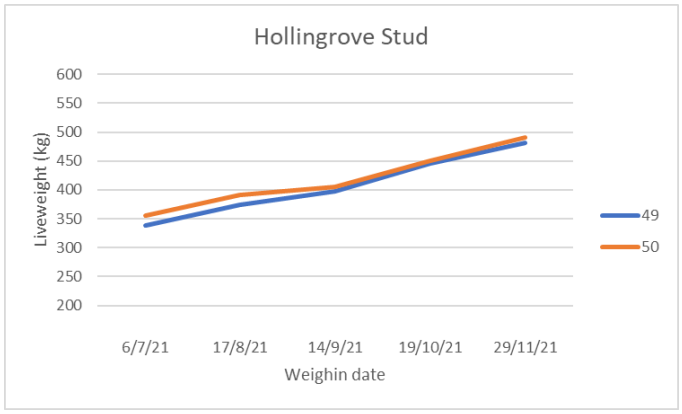
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Liveweight (kg)
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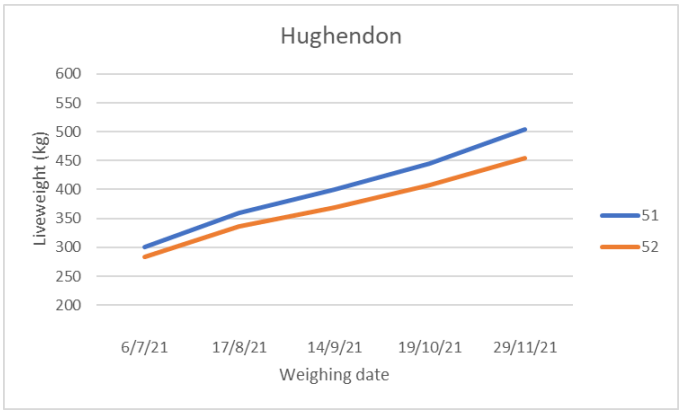
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Liveweight (kg)
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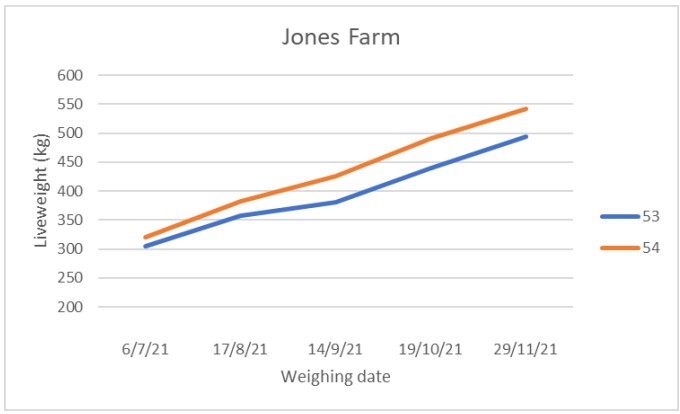
Jones Farm
Liveweight (kg)
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Weighing date
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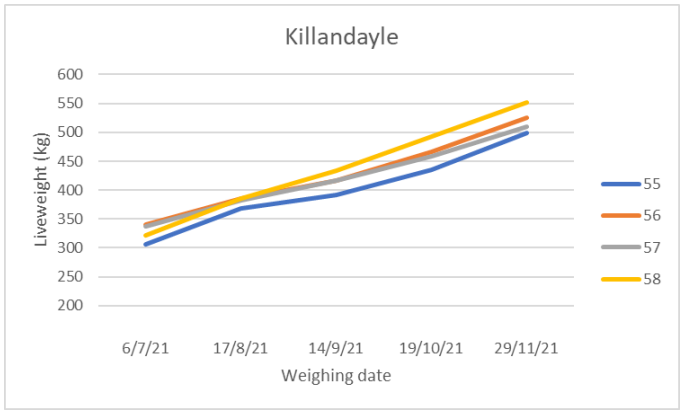
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Liveweight (kg)
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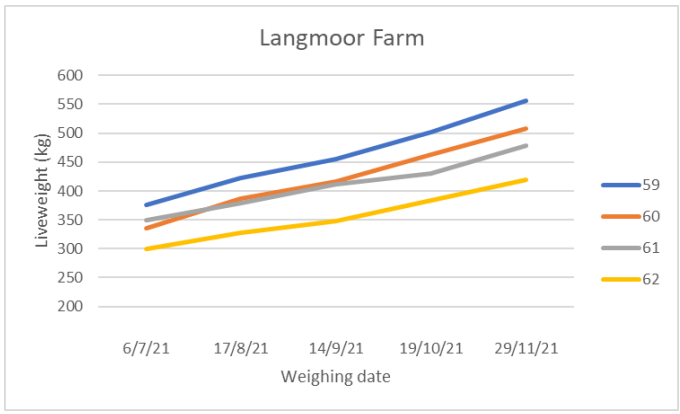
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Liveweight (kg)
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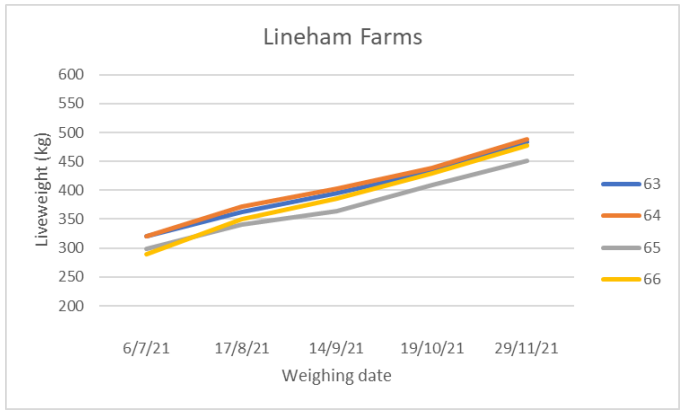
Lineham Farms
Liveweight (kg)
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Weighing date
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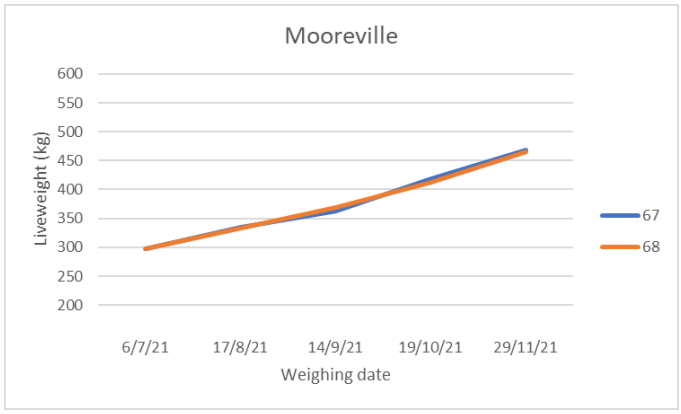
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Liveweight (kg)
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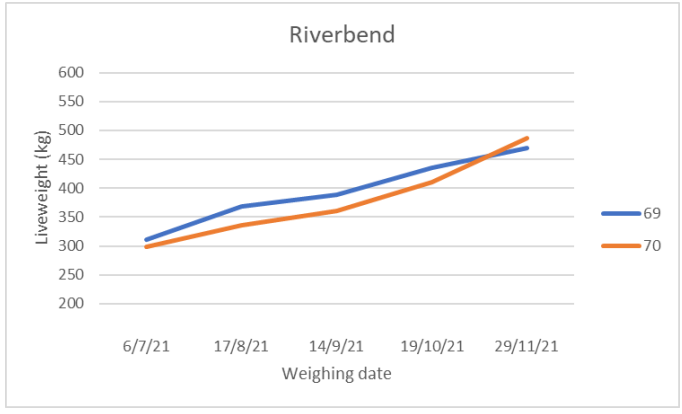
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Liveweight (kg)
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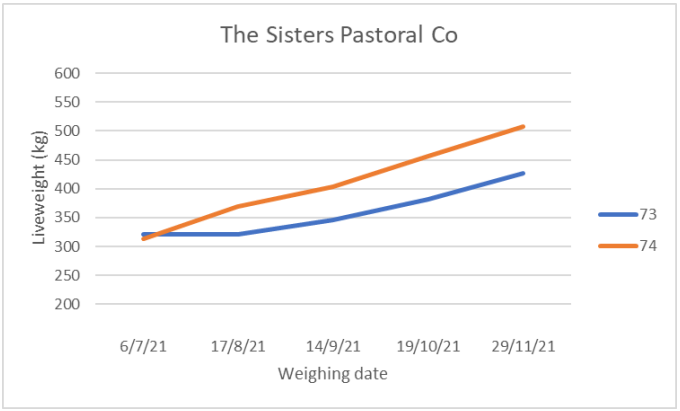
The Sisters Pastoral Co
Liveweight (kg)
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Weighing date
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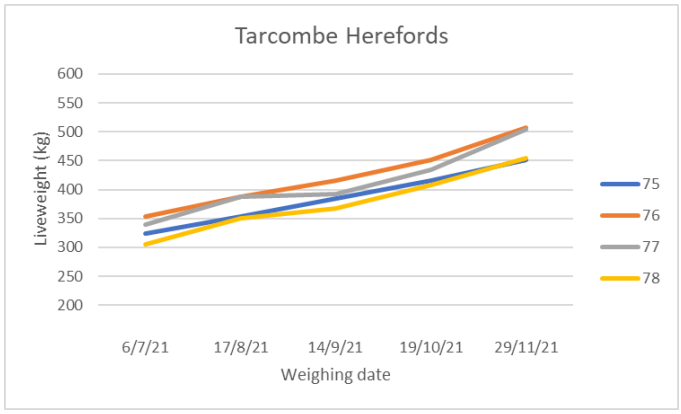
Tarcombe Herefords
Liveweight (kg)
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Weighing date
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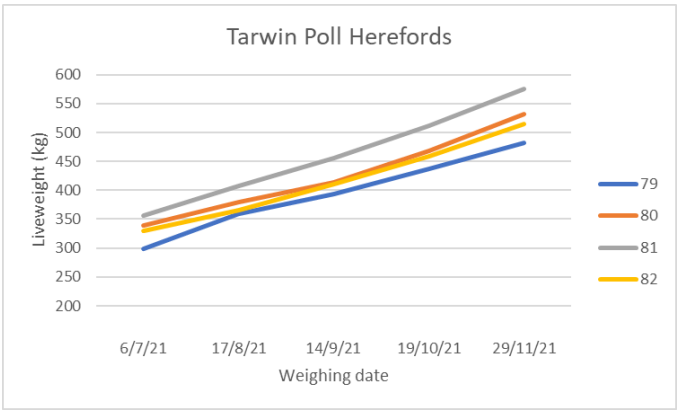
Tarwin Poll Herefords
Liveweight (kg)
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19/10/21
29/11/21
Weighing date
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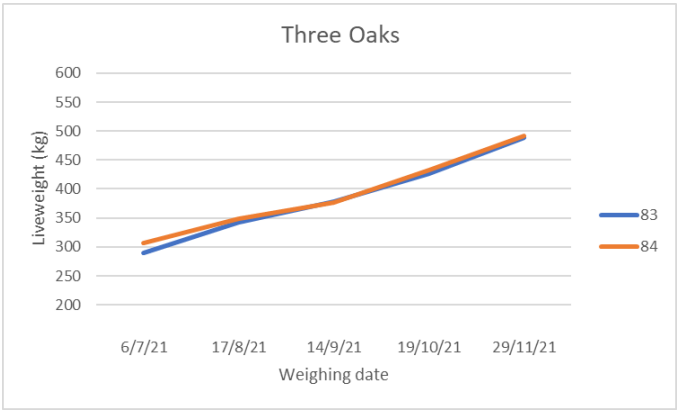
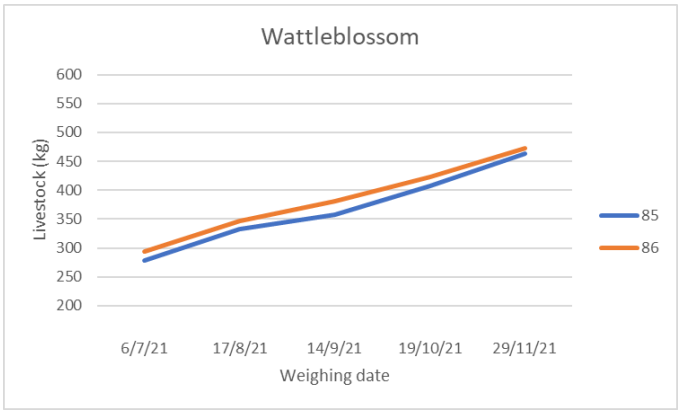
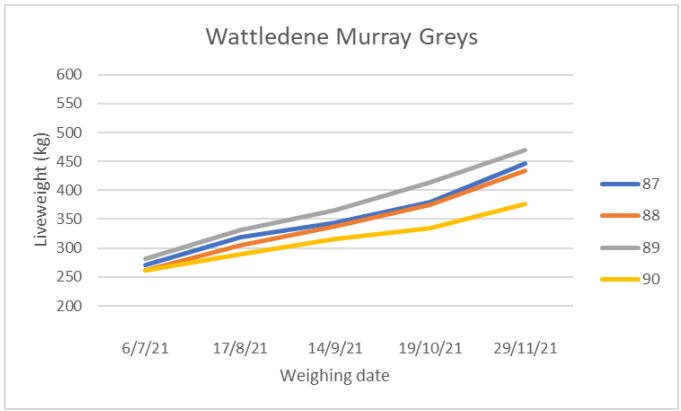
81
82


Three Oaks
Liveweight (kg)
600
550
500
450
400
350
300
250
200
6/7/21
17/8/21
14/9/21
19/10/21
29/11/21
Weighing date
83
84


Wattleblossom
Livestock (kg)
600
550
500
450
400
350
300
250
200
6/7/21
17/8/21
14/9/21
19/10/21
29/11/21
Weighing date
85
86


Wattledene Murray Greys
Liveweight (kg)
600
550
500
450
400
350
300
250
200
6/7/21
17/8/21
14/9/21
19/10/21
29/11/21
Weighing date
87
88
89
90

Cattle Performance Analysis – Carcase Performance

86 steers competed in the steer trial in 2021.

Four steers (or 4.6%) were outside specifications for carcase weight (and were awarded penalty points) – all were under the 220 kg lower limit. The lightest steer was 40.5 kg undrweight at a carcase weight of 179.5 kg resulting in an 81 point penalty for that carcase.

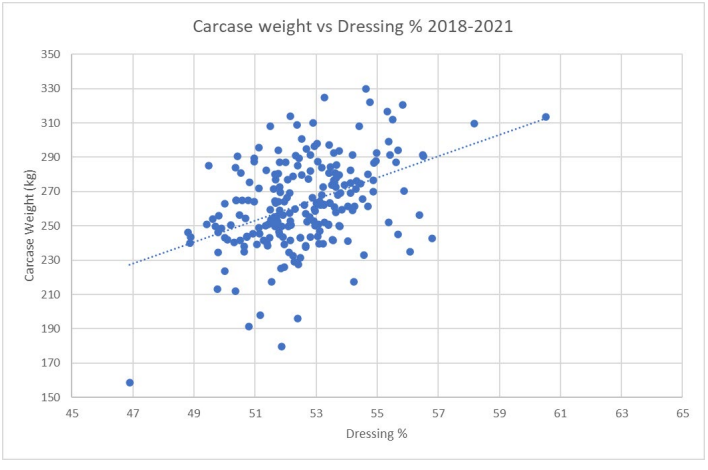
Six steers received no points for missing specifications required for MSA grading – pH and associated meat colour and rib fat. One steer had a pH above 5.7, resulting in a meat colour of 5 (dark cutter). One steer had rib fat < 3mm.

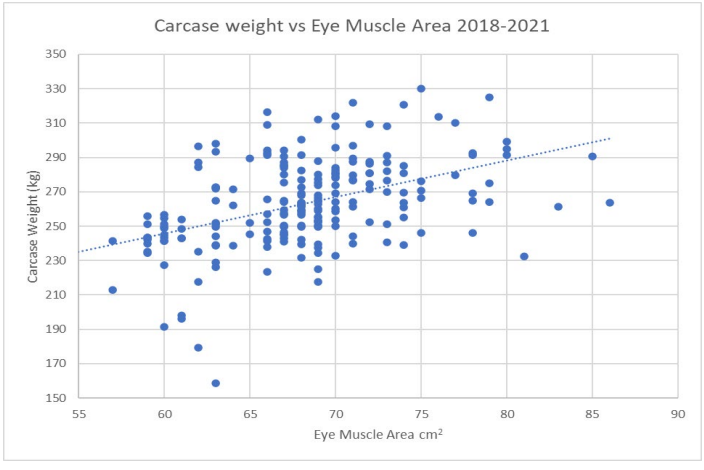
FYI – in the 2019 steer trial, of the 66 steers competing, 7 (or 10.6%) were outside specifications on carcase weight and 4 lost points for dark cutting, 2 for ribfat <3mm .

Steer Trial Carcase Performance across the years

Carcase details	2021	2019	2018	2017	2016	2015
Av Carcase Weight (kg)	257.6	275.9	256.5	252.8	254.5	246
Av Dressing %	53	53	51.7	52	52.5	52.4
Av P8 Fat Depth (mm)	6.4	7.3	6.4	7.4	6.2	6.2
Av rib fat (mm)	5.3	5.1	4.79	5.5	4.1	5.2
Av Eye Muscle Area (sq cm)	67.4	67.9	69.1	65.7	64.6	63
Av pH	5.52	5.51	5.5	5.6	5.59	5.56
Av Ossification Score	125	121.5	123.1	125	116	127

In 2021 the average Dressing % ranged from 49.5% up to 60.5%. The steer that dressed out at 49.5% was an Angus (the other steer of the pair dressed out at 51%). The steer that dressed out at 60.5% was a Limousin x Angus (the other steer of the pair dressed out at 58.2%).





The average Eye Muscle Area ranged from 59 sq cm to 76 sq cm. The largest eye muscle came from a Limousin x Angus (the other steer of the pair had an eye muscle area of 72 sq cm). The second largest eye muscle at 75 sq cm was from a Hereford and third largest eye muscle at 74 sq cm came from a two Angus, a Composite and a Shorthorn x Angus.

Fat distribution plays an important role at the abattoir and can impact on eating quality and on the marketability of the animal

Fat distribution is the coverage and distribution of subcutaneous (external) fat on a carcase. An even coverage of subcutaneous fat leads to even chilling throughout the underlying muscles. The greater the fat depth on a carcase, the slower and more uniform the muscle chilling rate will be. The coverage and distribution of subcutaneous fat over primals helps prevent dehydration and provides protection for the muscles from microbial contamination. Uneven fat coverage causes the muscles with inadequate coverage to chill at a faster rate, which can create cold shortening conditions near the surface and heat shortening in the deep core, affecting the eating quality of the meat. (source: MLA Tips and Tools – fat distribution and eating quality)

Points were awarded as follows for P8 fat:

P8 fat mm	3	4	5	6	7	8-14	15	16	17	18	19	20
Points	3	5	7	8	9	10	9	8	7	6	5	4

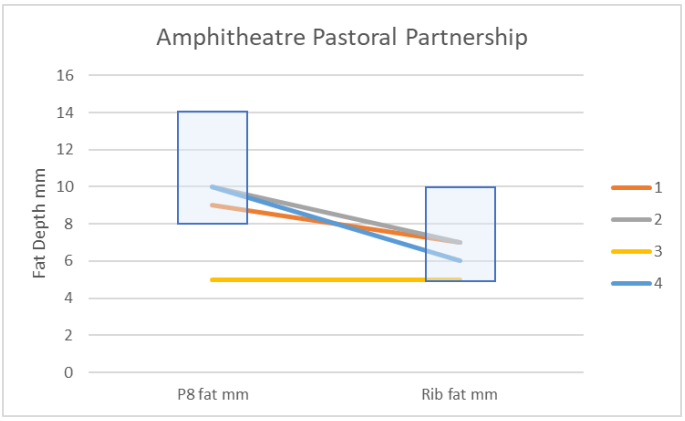
Points were awarded as follows for rib fat:

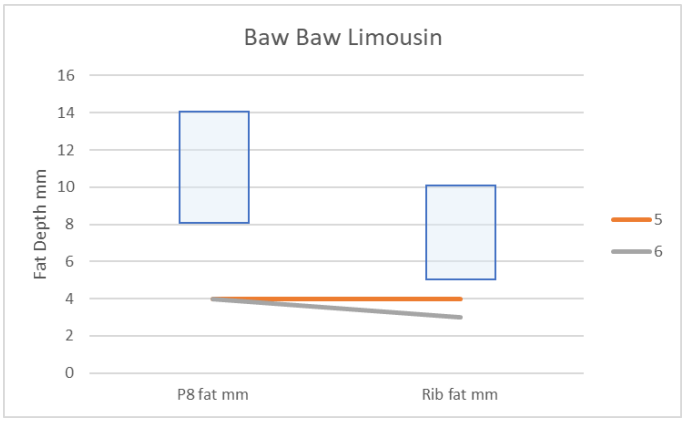
Rib fat mm	2	3	4	5-10	11-12	13	14	15	16
Points	0	8	12	15	11	10	9	8	0

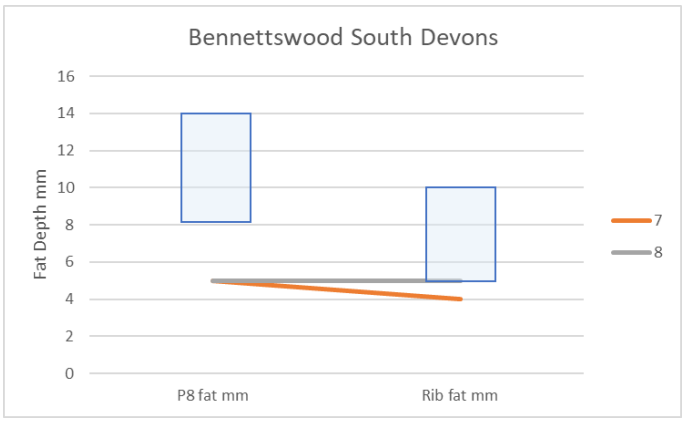
In a stud situation it may be acceptable to have uneven fat measurements on an animal if it is being marketed to the commercial producer as an animal that can be used to correct fat issues in the commercial herd. For example the commercial herd may have an issue of having not enough rib fat but adequate P8 fat. They may choose to use a bull with slightly higher than desired rib fat levels (but adequate P8 fat levels) to make a quick correction in their herd to better meet market specifications. However if retaining heifer calves as future breeders they may then need to revert to a bull that has a more even distribution to maintain an even distribution in their herd.

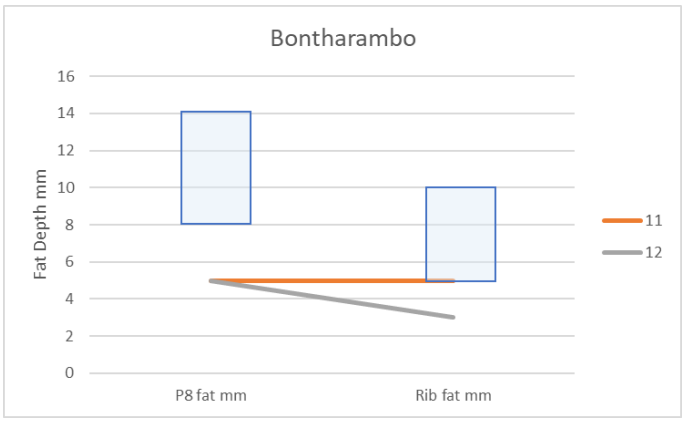
Following are the graphs of each entrants teams of steers showing the rib fat and P8 fat measurements.

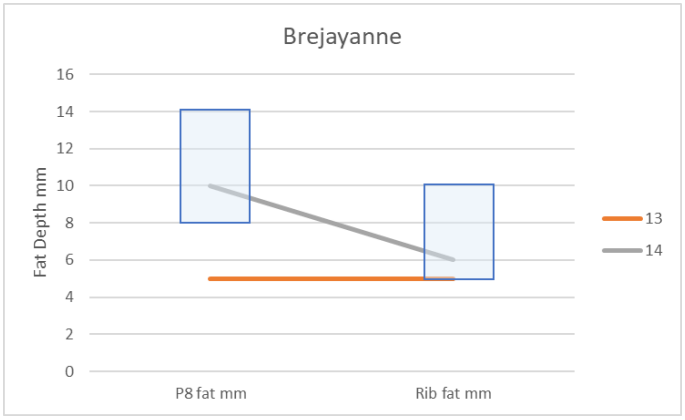
Note – the **blue rectangles** on the graph are the **preferred** fat ranges**.**

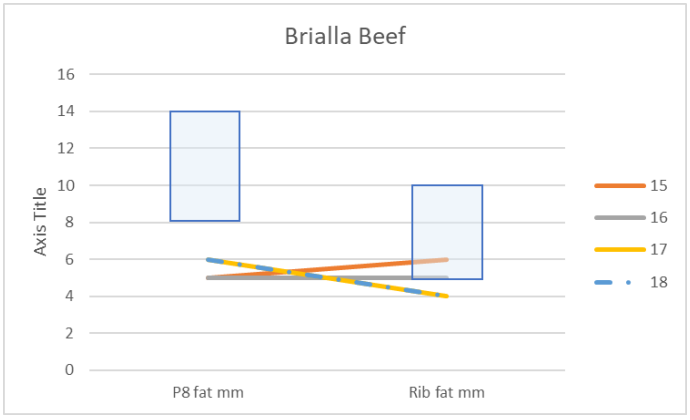


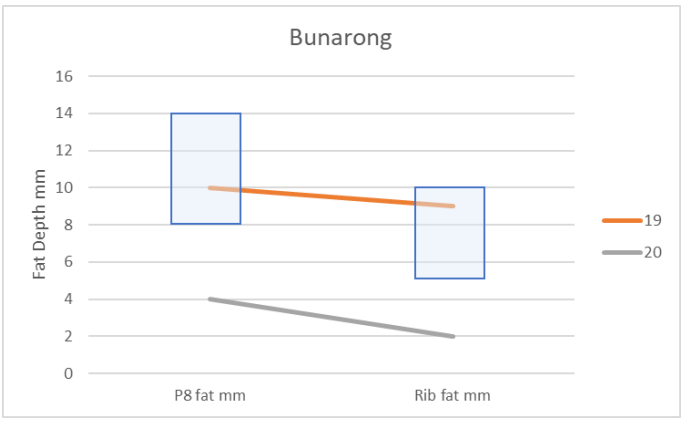


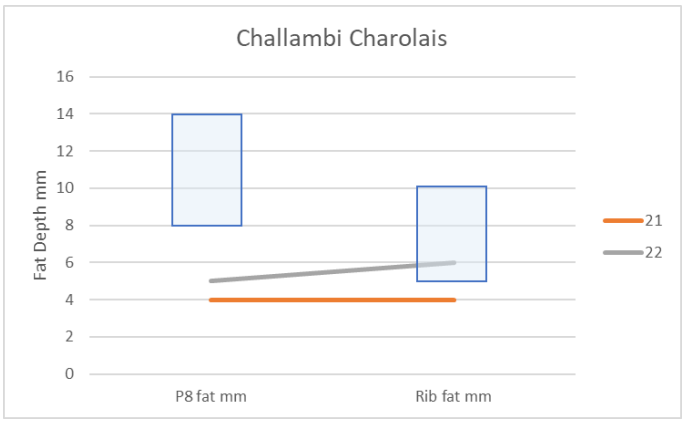

Bennettswood South Devons
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
7
8

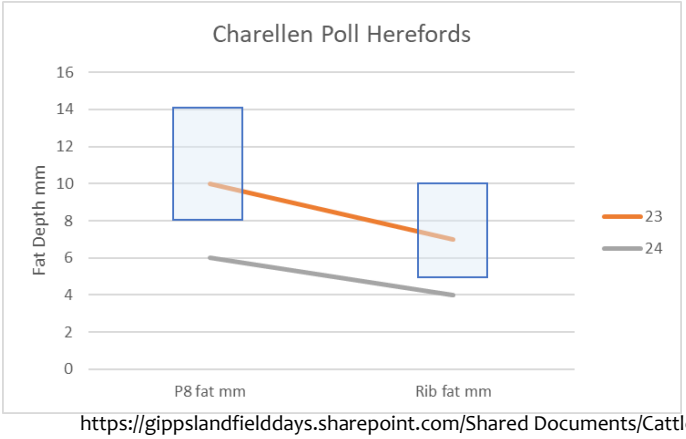

Bontharambo
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
11
12

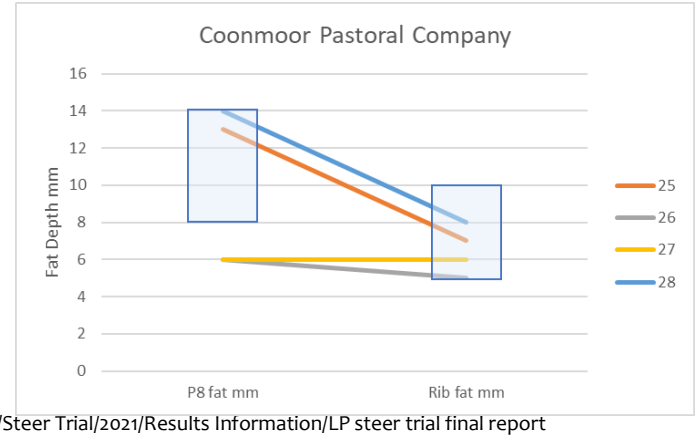

Brejayanne
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
13
14

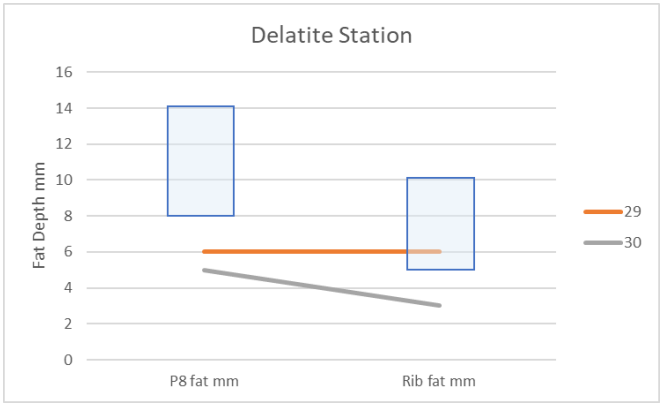

Brialla Beef
Axis Title
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
15
16
17
18

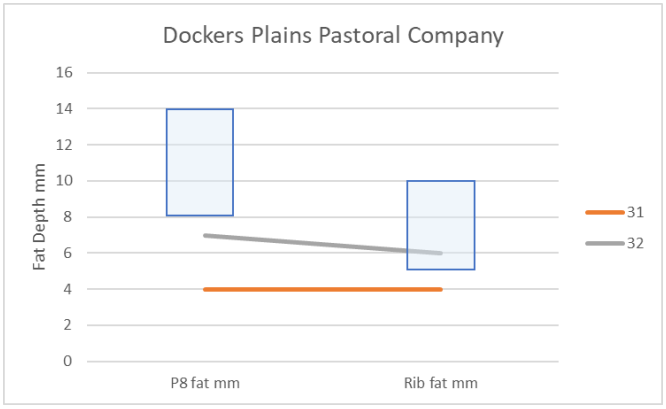

Bunarong
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
19
20

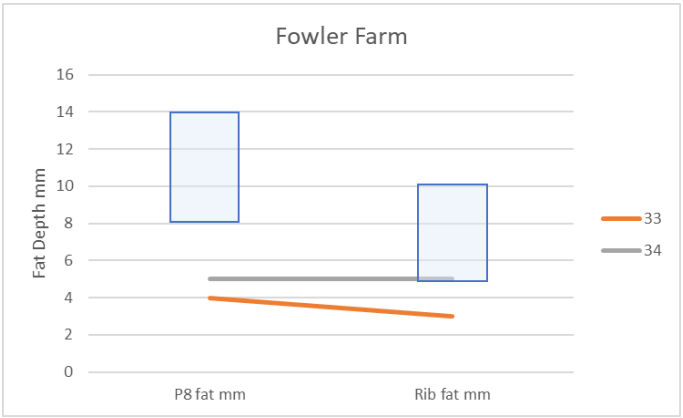

Challambi Charolais
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
21
22

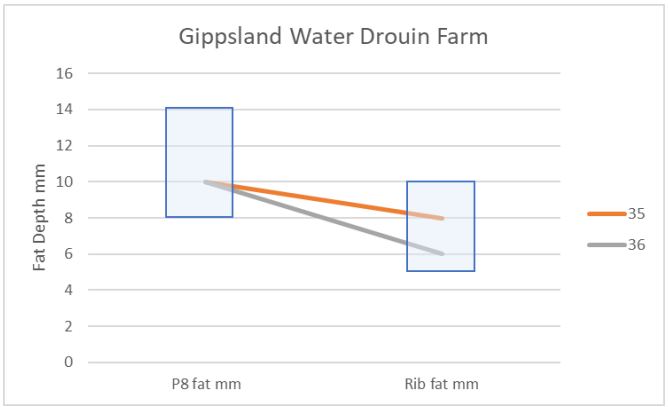

Charellen Poll Herefords
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
23
24

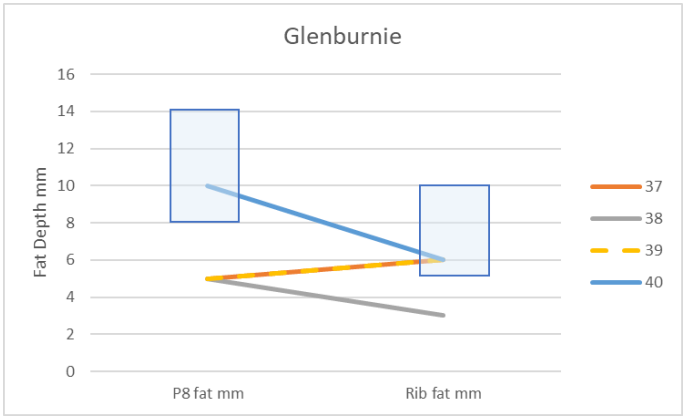

Coonmoor Pastoral Company
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
25
26
27
28

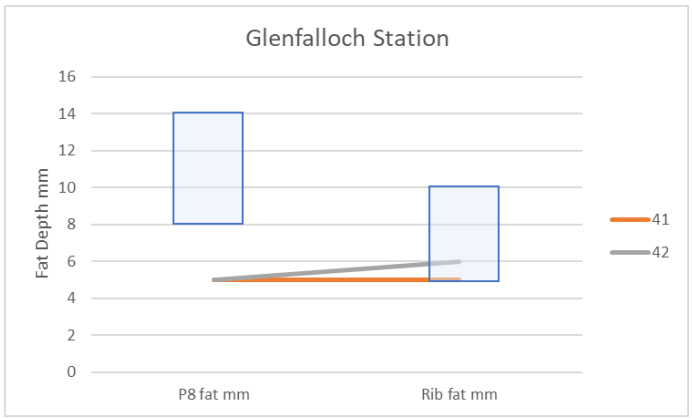

Delatite Station
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
29
30


Dockers Plains Pastoral Company
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
31
32

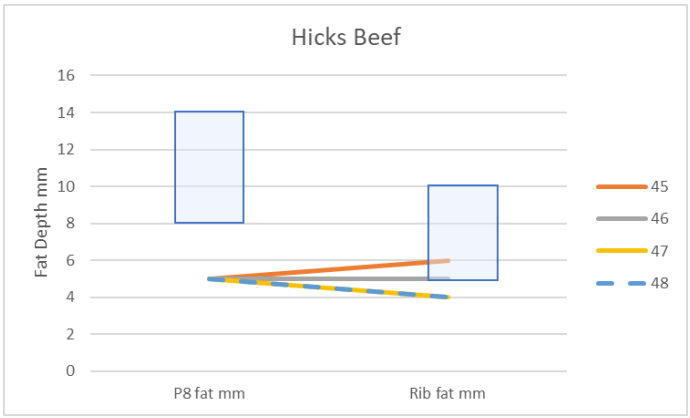

Fowler Farm
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
33
34

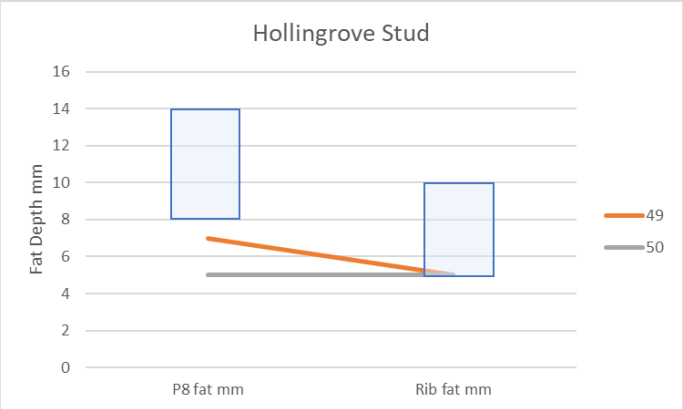

Gippsland Water Drouin Farm
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
35
36

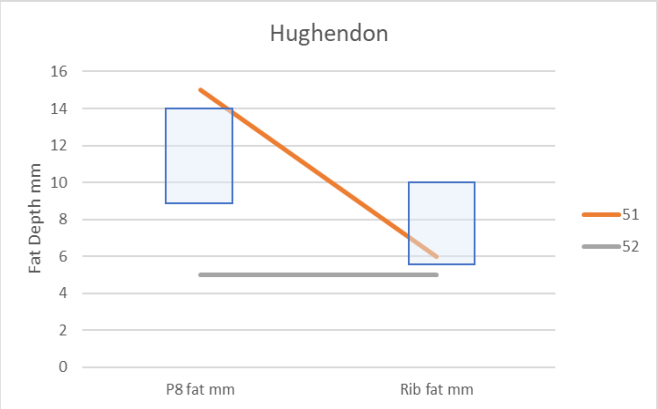

Glenburnie
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
37
38
39
40

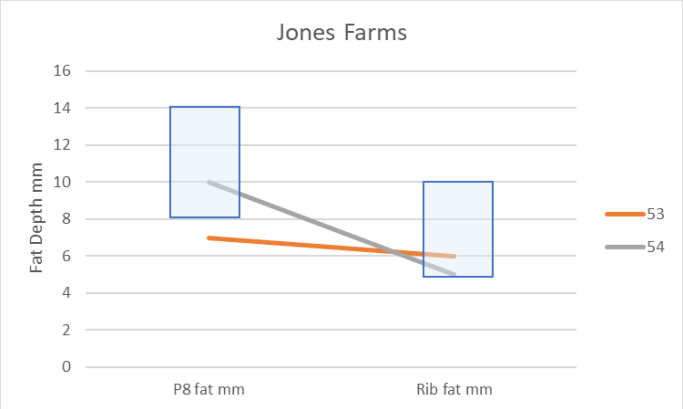

Glenfalloch Station
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
41
42

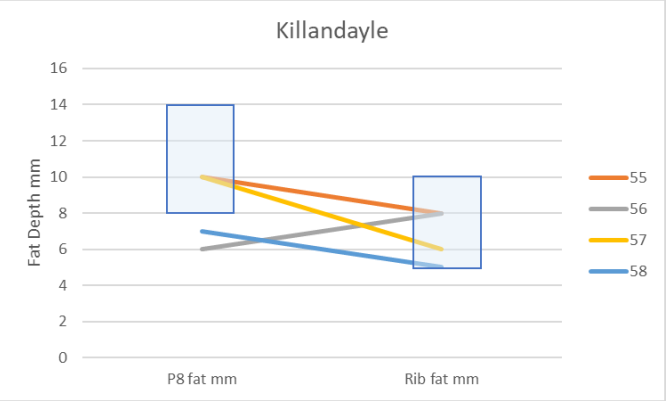

Henley Park
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
43
44


Hicks Beef
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
45
46
47
48

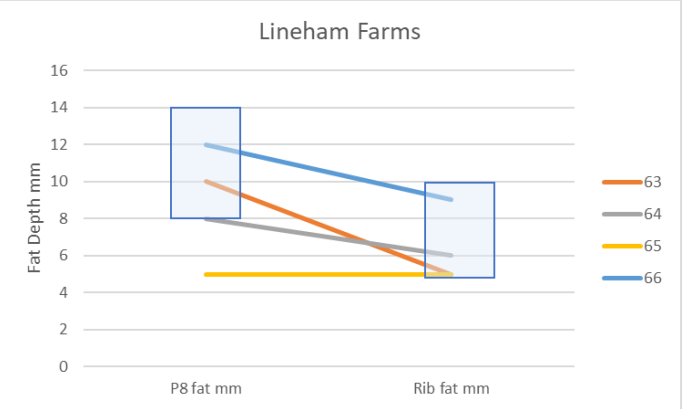

Hollingrove Stud
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
49
50


Hughendon
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
51
52

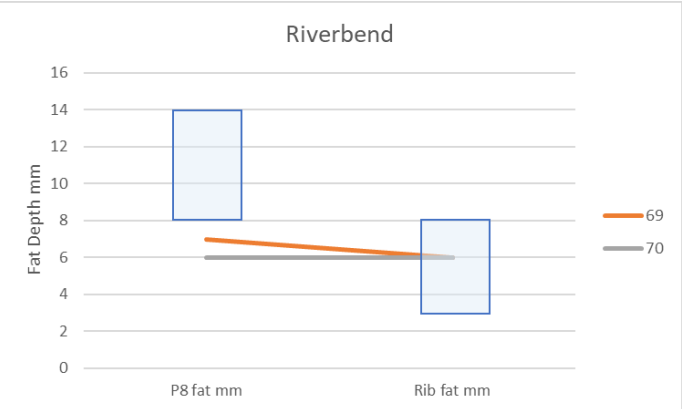

Jones Farms
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
53
54

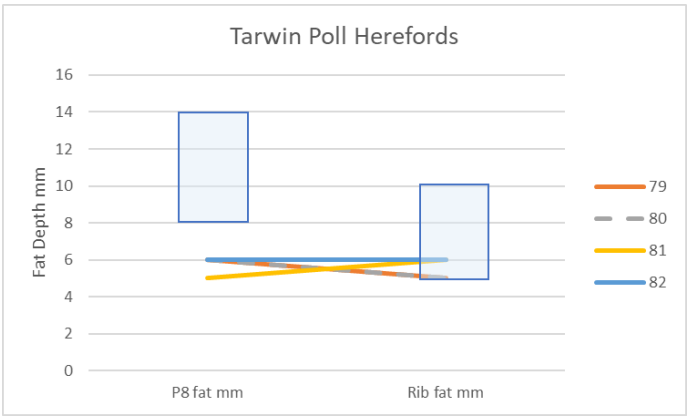

Killandayle
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
55
56
57
58

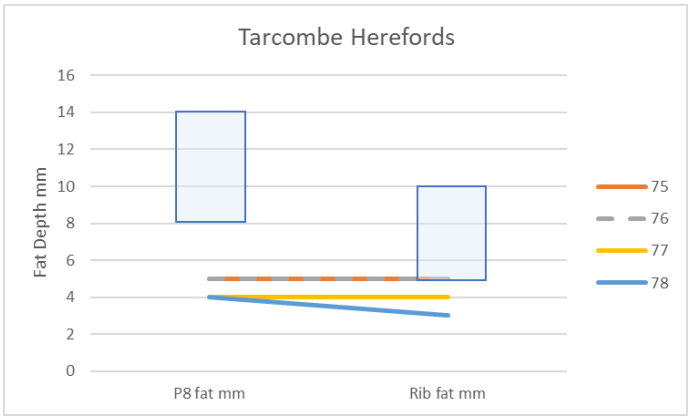

Langmoor Farm
Fat Dpeth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
59
60
61
62

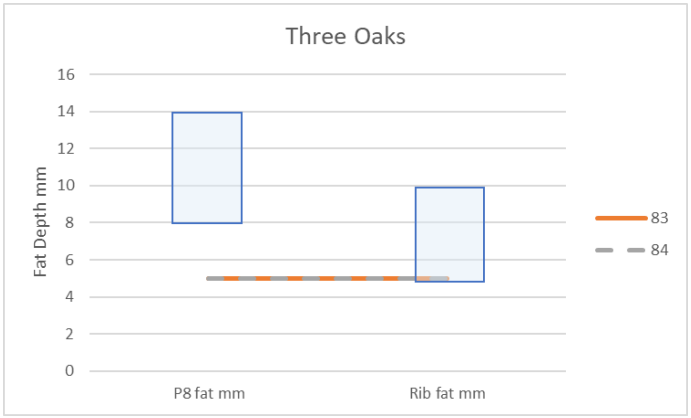

Lineham Farms
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
63
64
65
66

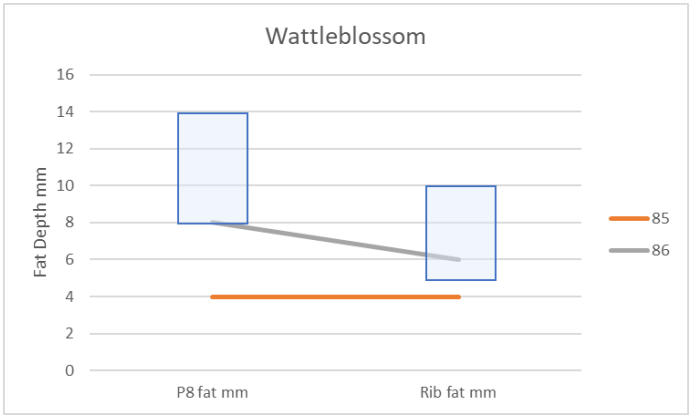

Moorville
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
67
68

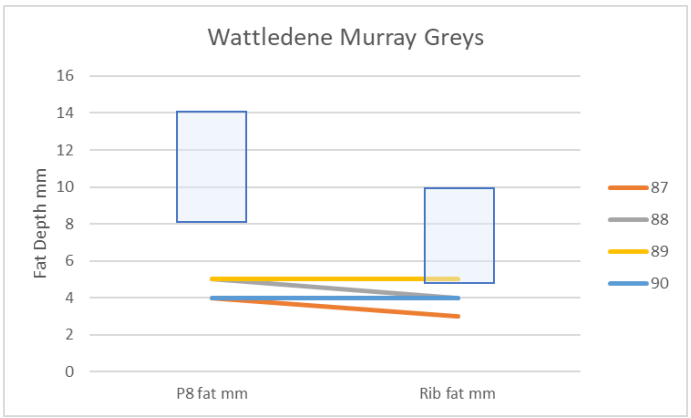

Riverbend
Fat Depth mm
16
14
12
10
8
6
4
2
0
P8 fat mm
Rib fat mm
69
70











MSA Index

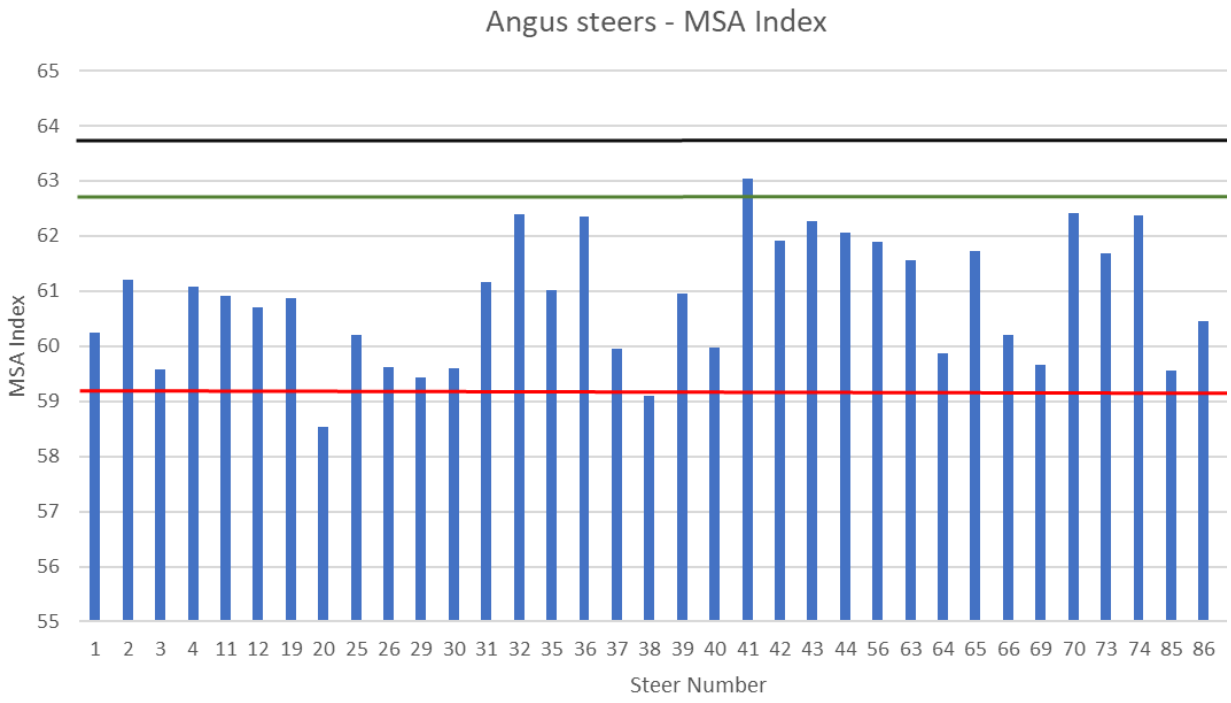
The MSA Index is a standard national measure of the predicted eating quality and potential merit of a carcase.

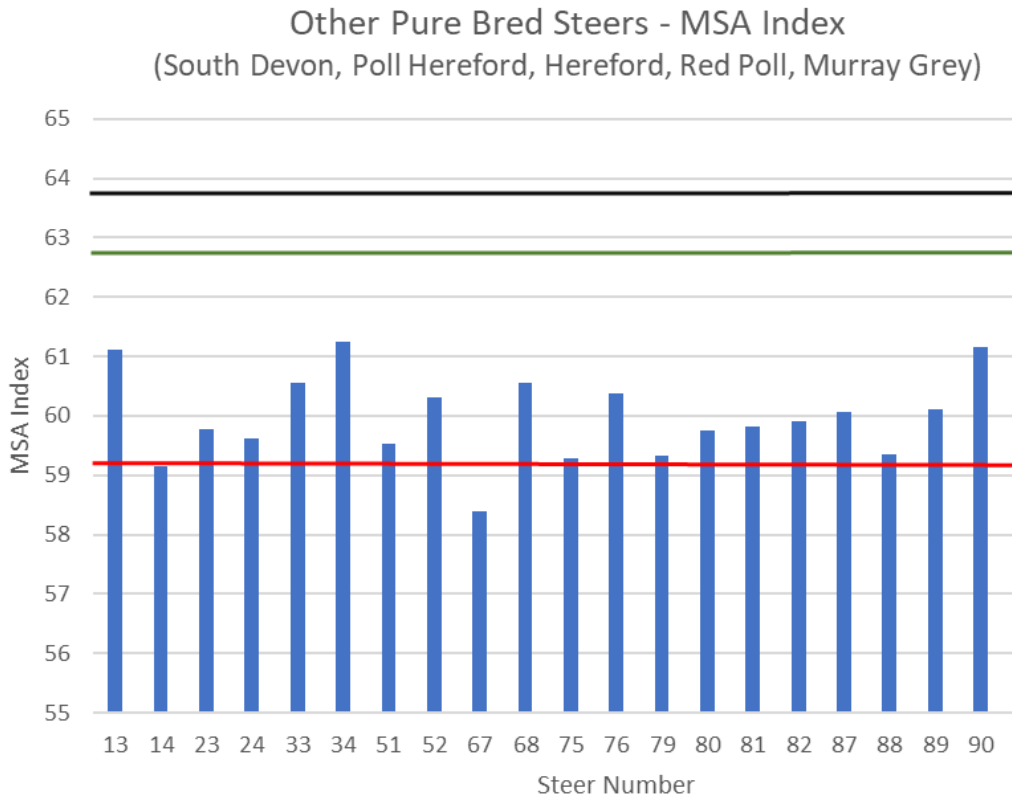
The MSA Index is a number between 30 to 80, representing the eating quality potential of the whole carcase.

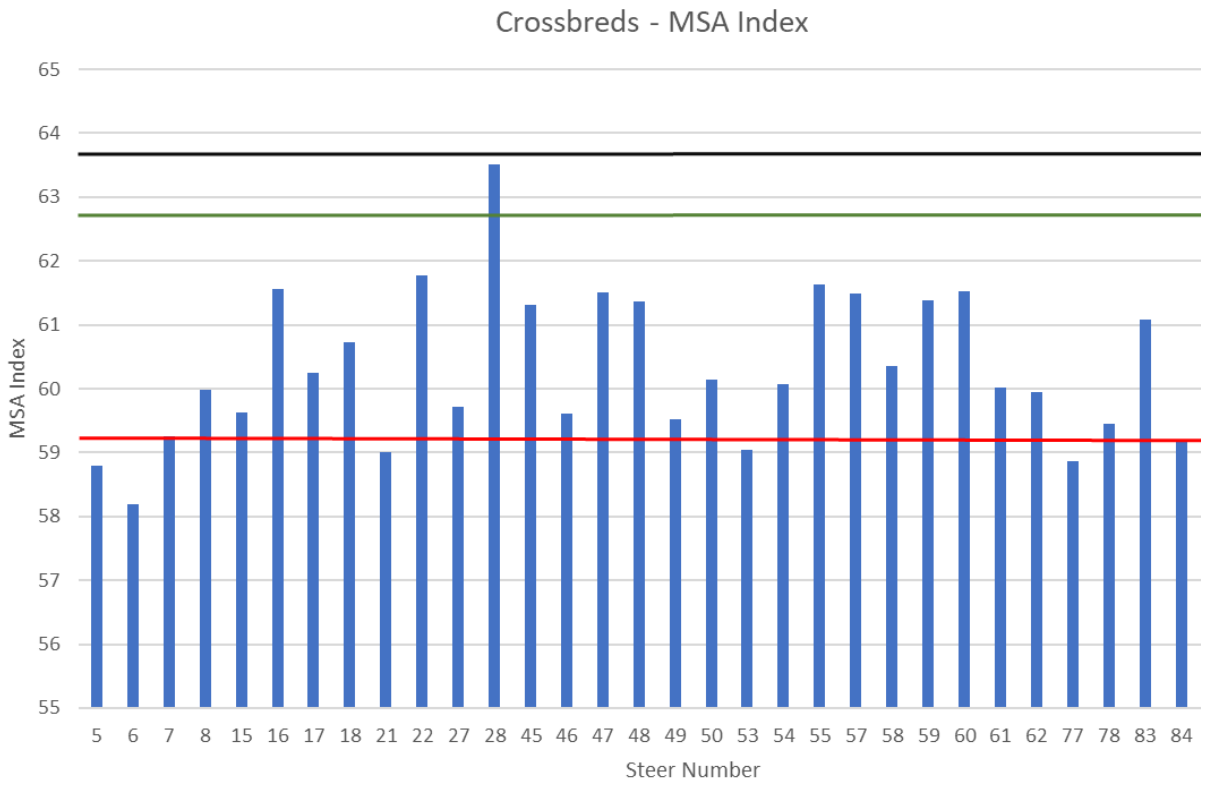
MSA eating quality scores are the combination of tenderness, juiciness, flavour and overall liking of beef. The MSA Index is a weighted average of these scores for the 39 MSA cuts for the most common corresponding cooking method.

The following graphs highlight how the steers in the Lardner Park steer trial scored for MSA Index.

Note: the top line indicates highest 5% (index score 63.71), middle line indicates highest 10% (index score 62.72) and bottom line indicates the 50% (median, index score 59.17) of MSA Index scores for Non-Grainfed cattle in Australia (2019-21)

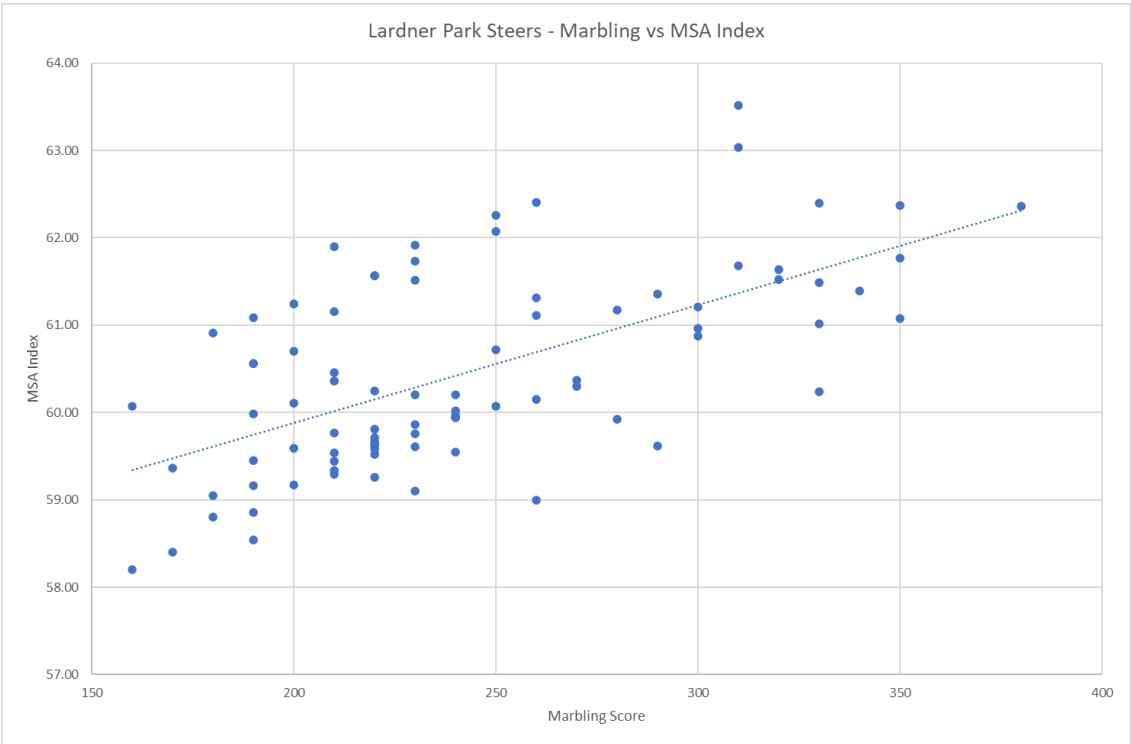




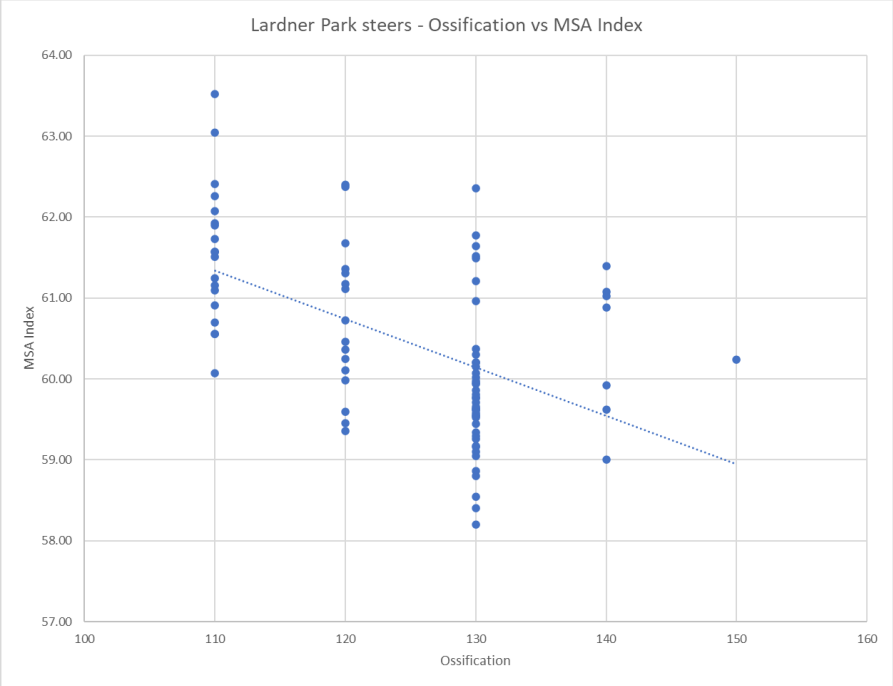


There is an opportunity to increase MSA Index values through genetic selection.

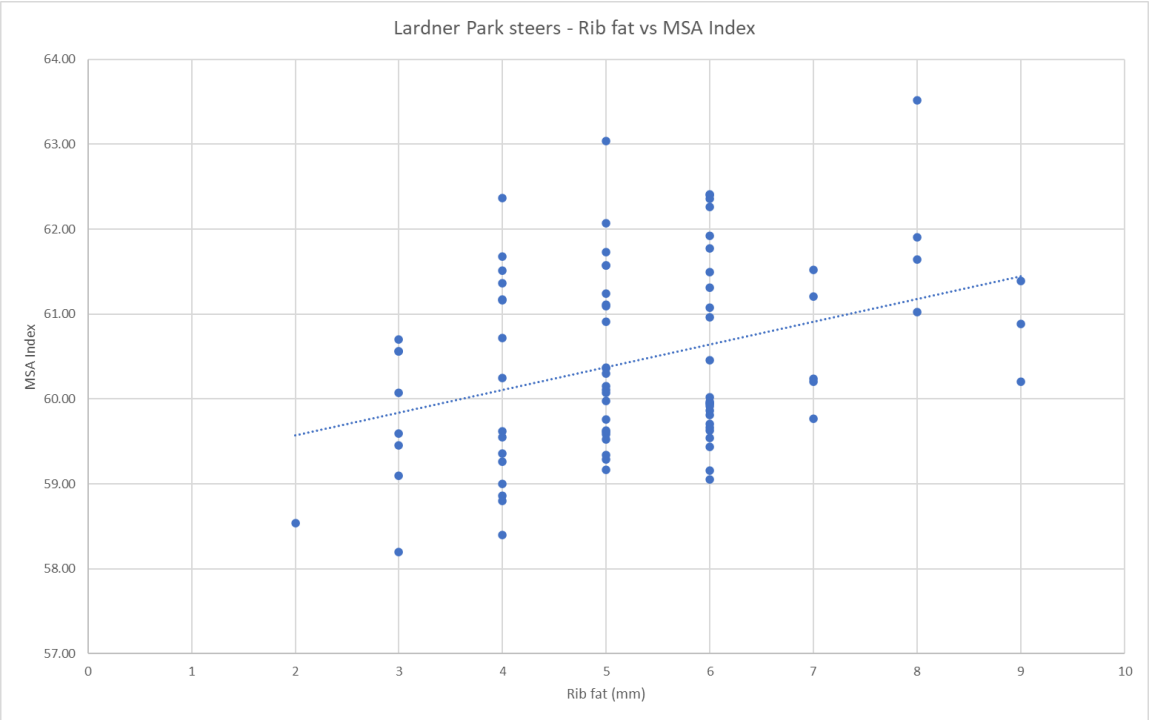
Marbling: an increase in the MSA marble score of 100, equates to a 1.5 unit increase in the MSA Index. MSA marbling in the steer trial ranged from 160 up to 380. Selection for improved MSA marble score can be achieved by selecting animals with higher Intramuscular Fat (IMF) EBVs



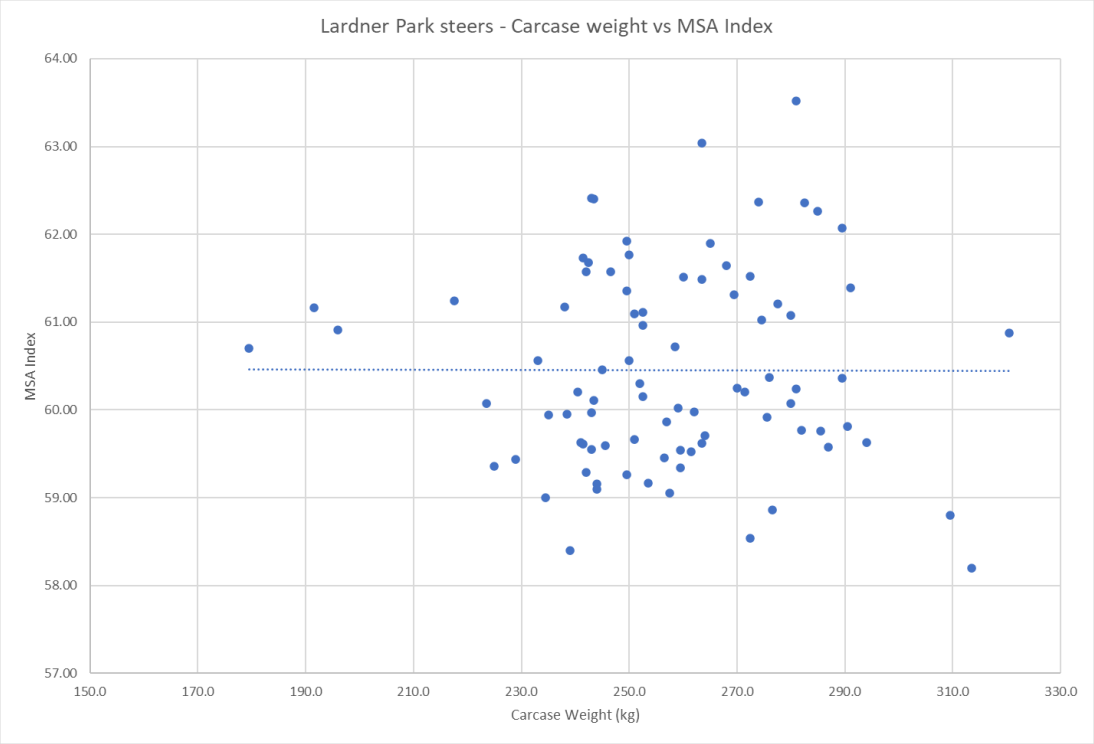
Ossification: The graph shows as ossification increases, the MSA Index decreases. As ossification scores decrease by 10, the MSA Index potentially increases by 0.6 index units. Ossification scores in the steer trial ranged from 110 -150. Selection for lower ossification scores can be achieved by selecting animals with higher 200 day growth, 400 and 600 day weight EBVs.



Rib fat: A 1mm increase in rib fat corresponds to a potential increase in the MSA Index of 0.1 index units. Rib fat in the steer trial ranged from 2 - 9mm.



Carcase weight: carcase weight only has a small impact on MSA Index, with MSA calculating that as HSCW increases by 1kg, the MSA Index will potentially increase by less than 0.01 index units. The data from this year's steer trial shows carcase weight had very little influence on the MSA index.



For further information please see the Tips and Tools at the following link:
https://www.mla.com.au/globalassets/mla-corporate/marketing-beef-and-lamb/documents/meat-standards-australia/msa-beef-tt_full-info-kit-lr_updated.pdf

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