

2022 LARDNER PARK STEER TRIAL RESULTS



LARDNER PARK 2022 STEER TRIAL

This year marked the 47th year of the Lardner Park steer trial. It is the only grass based steer trial in Australia.

Cattle are managed under independently controlled grazing conditions during the period of the trial, and this provides valuable information on the growth and carcase quality of the steers. Those that interact with the trial are able to gain an improved understanding of live steer assessment, market requirements and the impact of feed quality has 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, there is a recommended entry weight of 280 – 385 kg liveweight.

The Competition

Cattle were inducted onto the property on the 28th of June, and after a settling in period, the steer trial commenced on the 5th 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 had their final weighing and were turned off on 28th 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 had applied 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 carcasses in the competition. The MSA measurements were then converted to carcase points using an Australian Beef Carcase Appraisal Method (ABCAM).

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 lower 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 MSA Index is used to determine the Highest Eating Quality Award – all steers who meet MSA grading criteria (rib fat 3mm or greater, pH below 5.7 and meat colour between 1b – 3) receive a MSA Index score. Steers who fail MSA grading have been given an Opportunity Index score - what their MSA Index would have been if non-compliant carcasses had met the MSA minimum requirements.

The 2022 Competition

The initial weight was taken on the 5th July after a one week settling in period and the final weight on 28th 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 following in the document summarise the liveweight gain (empty weight) and carcase performance.

Lardner Park Events 2022 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: Gallagher / Bramstedt Livestock Transport / Radfords Warragul		
<i>Breeder</i>	<i>Breed</i>	<i>Points</i>
1st Prize		
Amphitheatre Pastoral Partnership Tim Wilson - Labertouche	Angus	229.85
2nd Prize		
Tarwin Poll Herefords David Meikle - Meeniyen	Poll Hereford	228.32
3rd Prize		
Karn Station Tim Stokes - Benalla	Red Angus	222.96

Highest Weight Gain Pair		
Sponsored by: Zoetis		
<i>Breeder</i>	<i>Breed</i>	<i>Pair Av Daily Gain</i>
Amphitheatre Pastoral Partnership Tim Wilson - Labertouche	Angus	1.55 kg/day

Highest Carcase Score As A Pair		
Sponsored by: Barenbrug		
<i>Breeder</i>	<i>Breed</i>	<i>Pair Av Carcase Score</i>
Charellen Poll Herefords Stan Walker - Pearsondale	Poll Hereford	90.66

Highest Eating Quality (MSA Index) As A Pair		
Sponsored by: Coles		
<i>Breeder</i>	<i>Breed</i>	<i>Pair Av MSA Index</i>
Tarcombe Herefords Tim Hayes - Seymour	Hereford	63.35

Cattle Performance Analysis – Liveweight Gain Performance

Average Liveweight Gain Performance

Standard Domestic Class												
	Average LW kg						Average LW Gain kg per day					
	2022	2021	2019	2018	2017	2016	2022	2021	2019	2018	2017	2016
Initial	321	308	329	322	306	295						
Turnoff	502	486	521	496	486	485						
Wt Gain	172	171	192	174	180	190	1.18	1.17	1.28	1.40	1.22	1.22

2022 saw the averaged weight gain performance come in at 1.18 kgLW/day

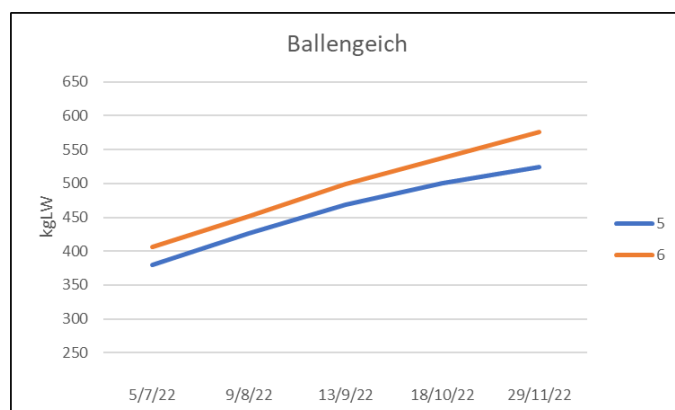
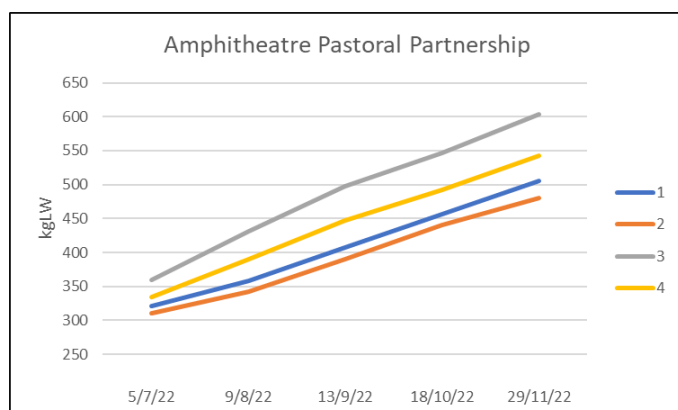
The top averaged weight gain for a pair of steers was 1.55 kgLW/day, a pair of Angus steers from Amphitheatre Pastoral at Labertouche.

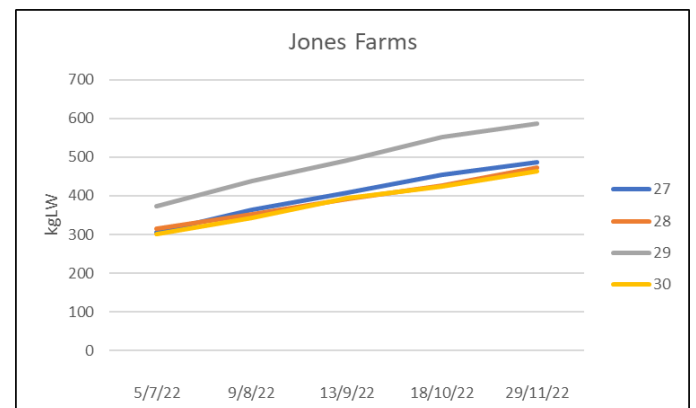
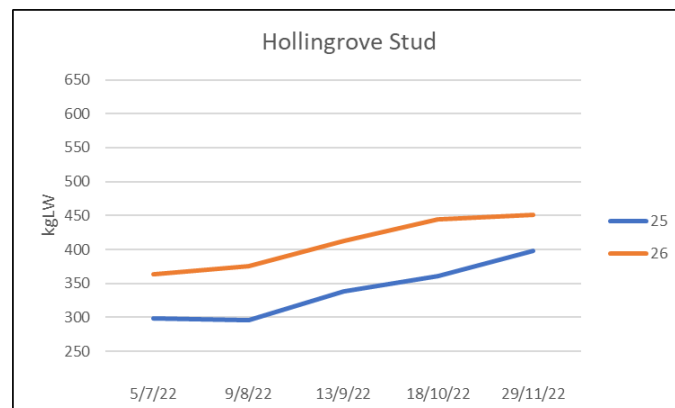
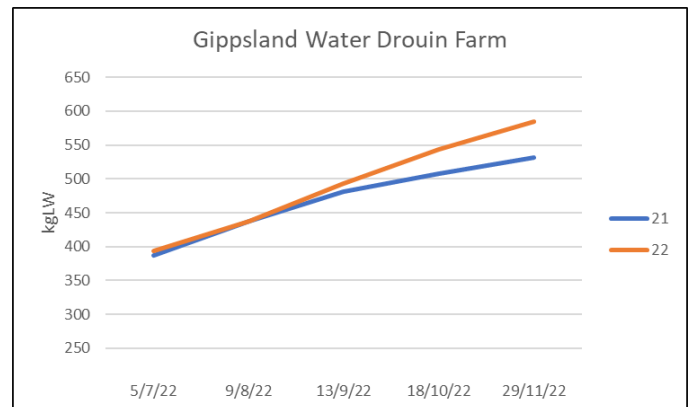
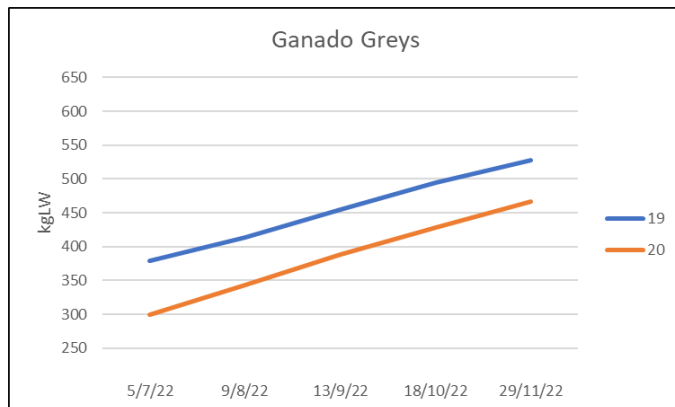
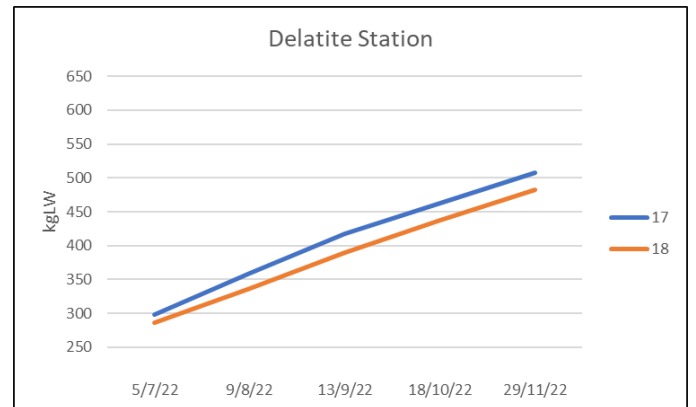
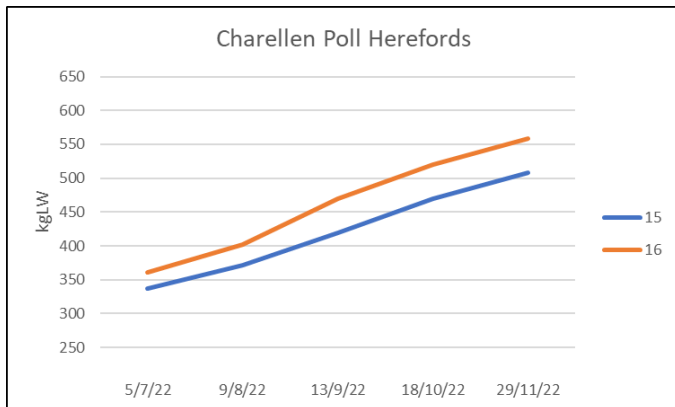
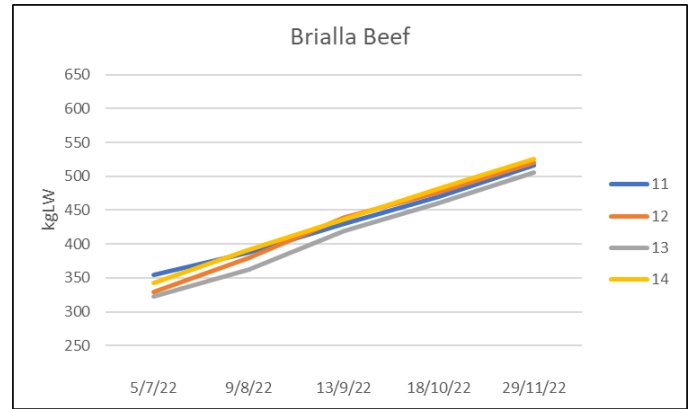
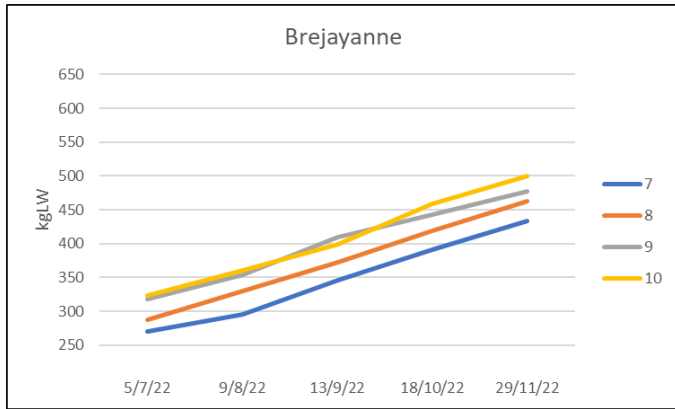
Individual steer weight gains averaged over the trial period ranged from 0.6 kgLW/day up to 1.67 kgLW/day.

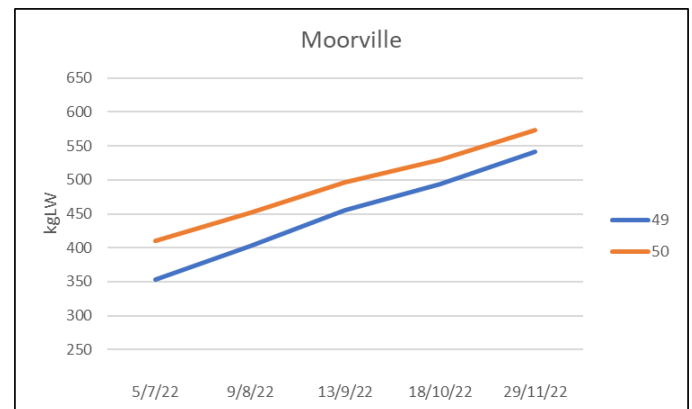
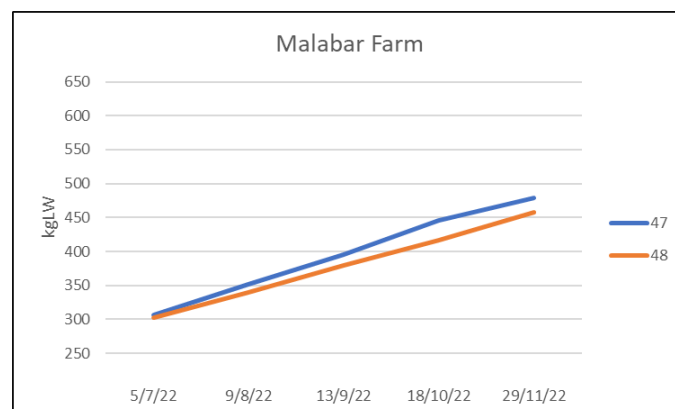
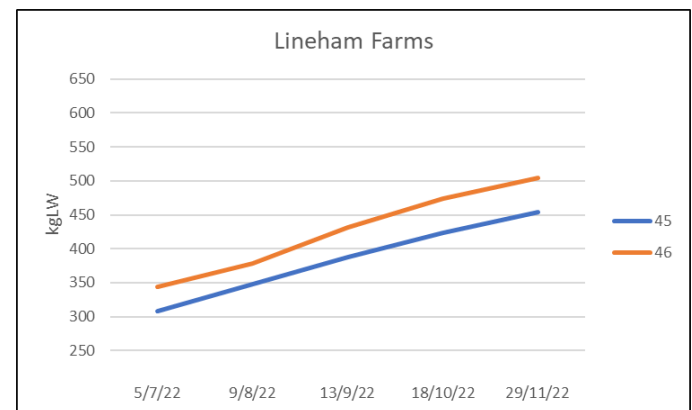
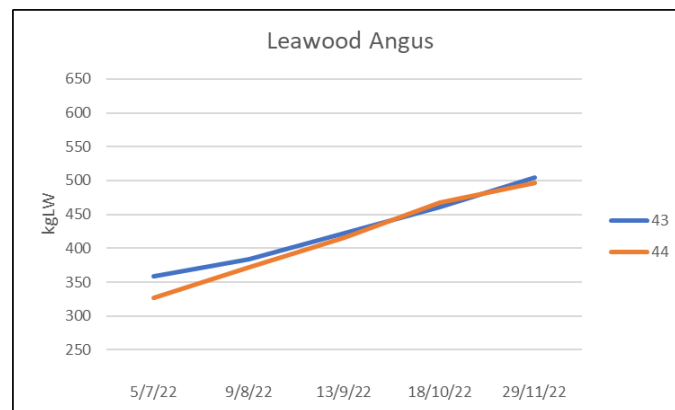
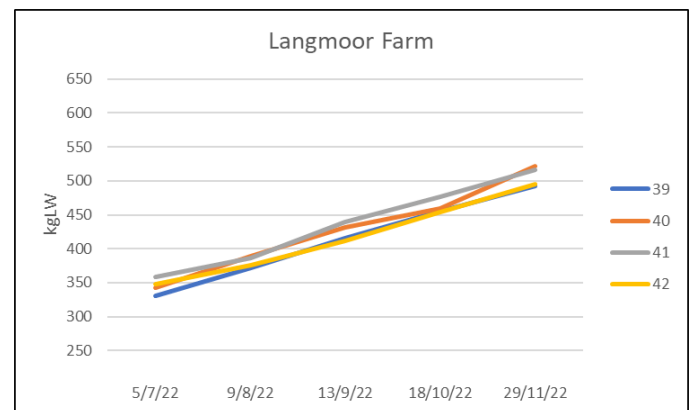
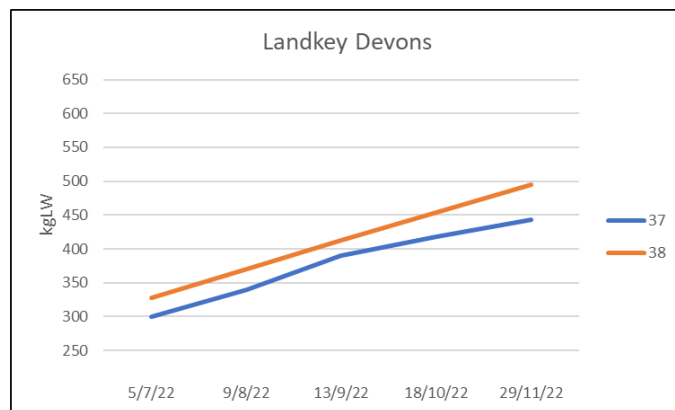
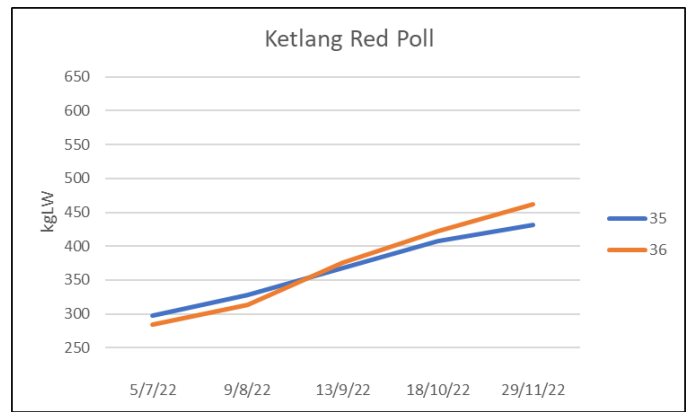
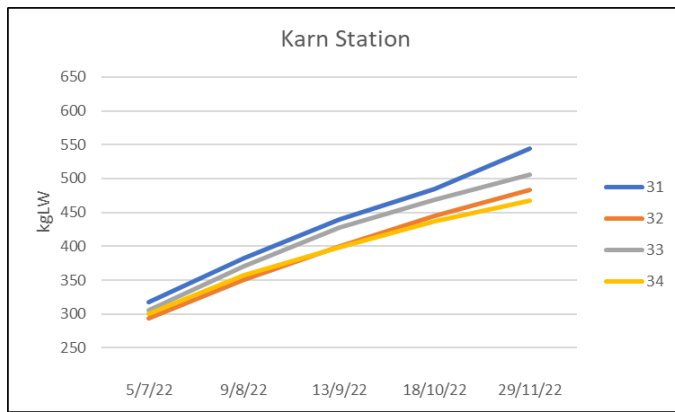
The weight gain of 1.67 kgLW/day was from an Angus steer, with the other animal of the pair growing at 1.42 kgLW/day, resulting in a pair average daily gain of 1.55 kgLW/day.

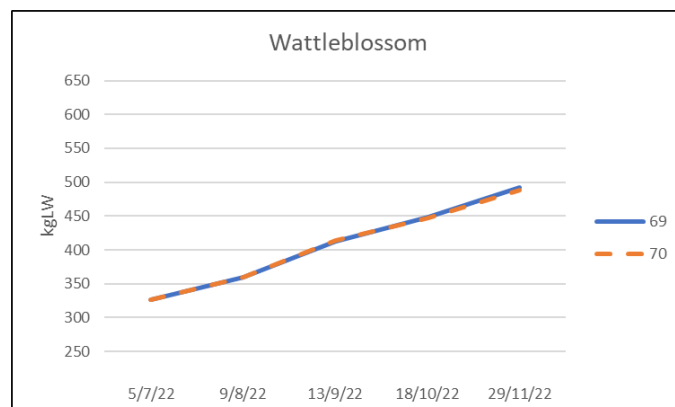
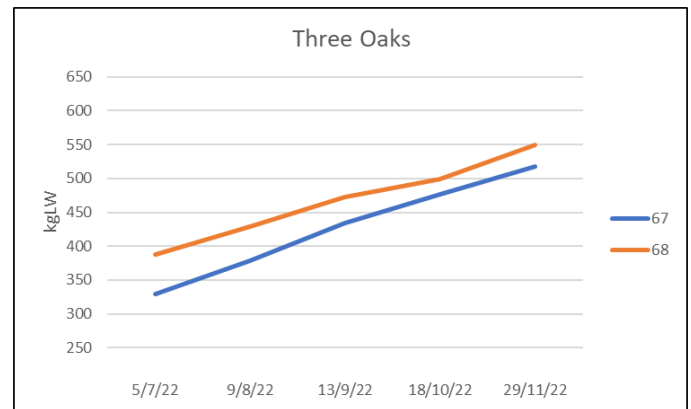
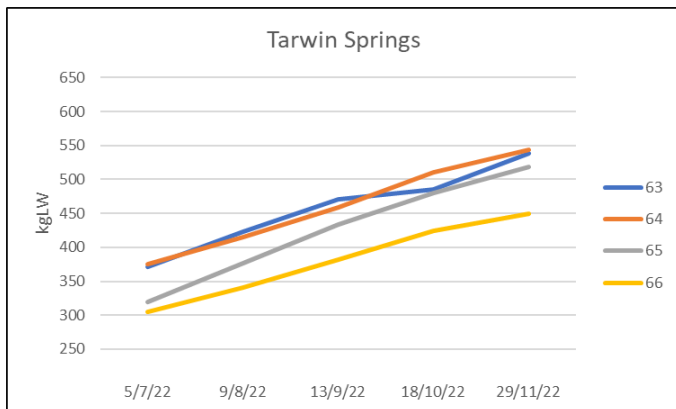
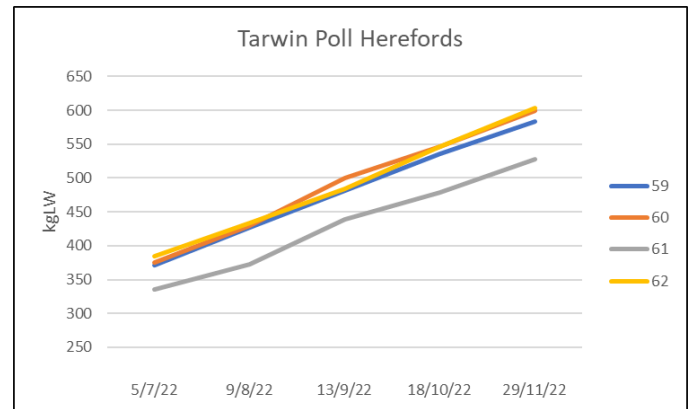
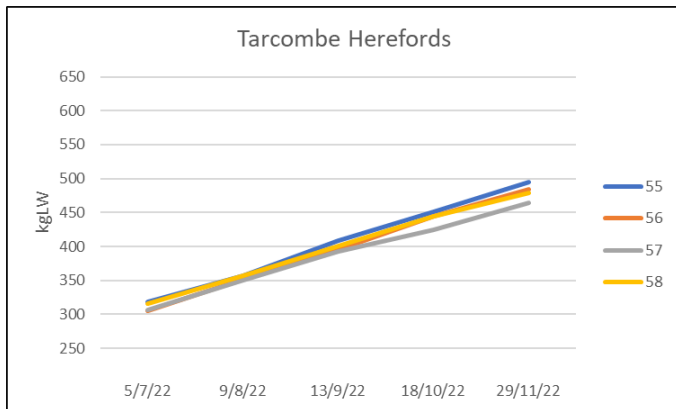
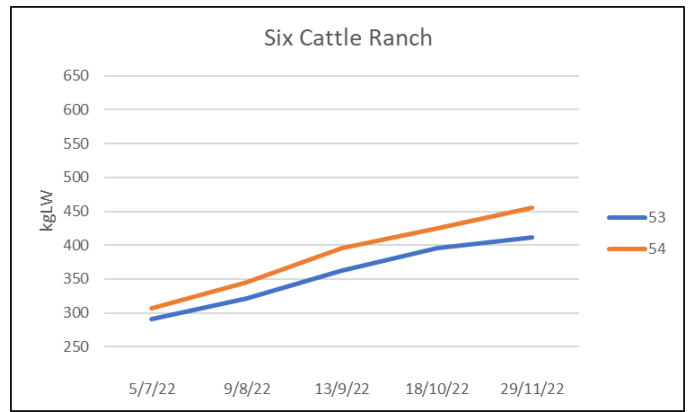
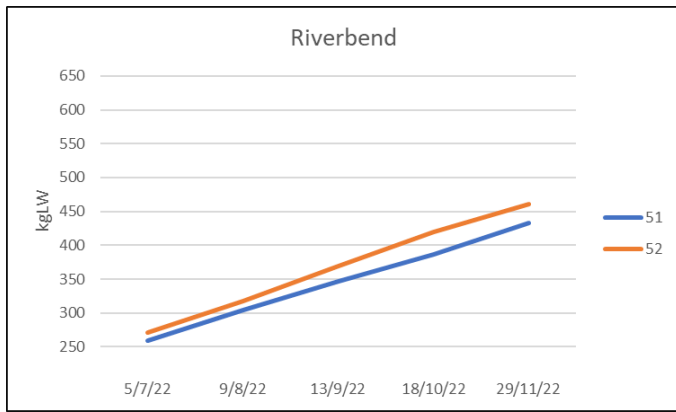
The averaged weight gain of 0.6 kgLW/day was from a Speckle Park x Angus, with the other animal of the pair growing at 0.68 kgLW/day.

The following graphs show the steer pairs liveweight gain performance across the weighing dates. *The number next to coloured line is the Lardner Park ear tag number of the steer.*









Cattle Performance Analysis – Carcase Performance

69 steers competed in the steer trial in 2022.

One steer (or 1.5%) was outside specifications for carcase weight (and was awarded penalty points) – it was just under the 220 kg lower limit, weighing in at 219 kg.

Four steers received no points due to missing specifications required for MSA grading, in this case pH and associated meat colour. The steers had pH's of 5.83, 5.85, 5.93 and 6.39, resulting in meat colours of 4, 5, 5 and 6.

FYI – in the 2021 steer trial, of the 86 steers competing, 4 (or 4.6%) were outside specifications on carcase weight and 1 lost points for dark cutting, 1 for ribfat <3mm .

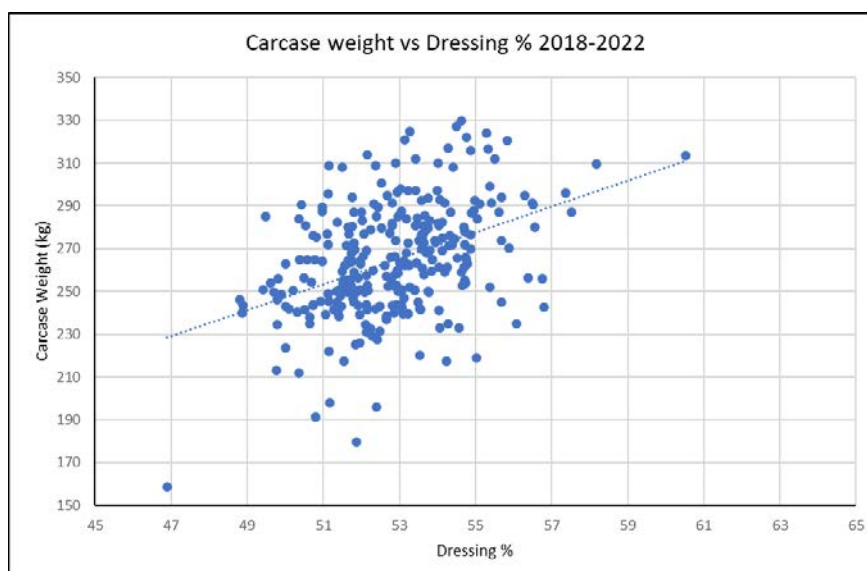
Steer Trial Carcase Performance across the years

Carcase details	2022	2021	2019	2018	2017	2016
Av Carcase Weight (kg)	269.2	257.6	275.9	256.5	252.8	254.5
Av Dressing %	53.6	53	53	51.7	52	52.5
Av P8 Fat Depth (mm)	7.3	6.4	7.3	6.4	7.4	6.2
Av rib fat (mm)	4.9	5.3	5.1	4.79	5.5	4.1
Av Eye Muscle Area (sq cm)	70.6	67.4	67.9	69.1	65.7	64.6
Av pH	5.59	5.52	5.51	5.5	5.6	5.59
Av Ossification Score	120.1	125	121.5	123.1	125	116

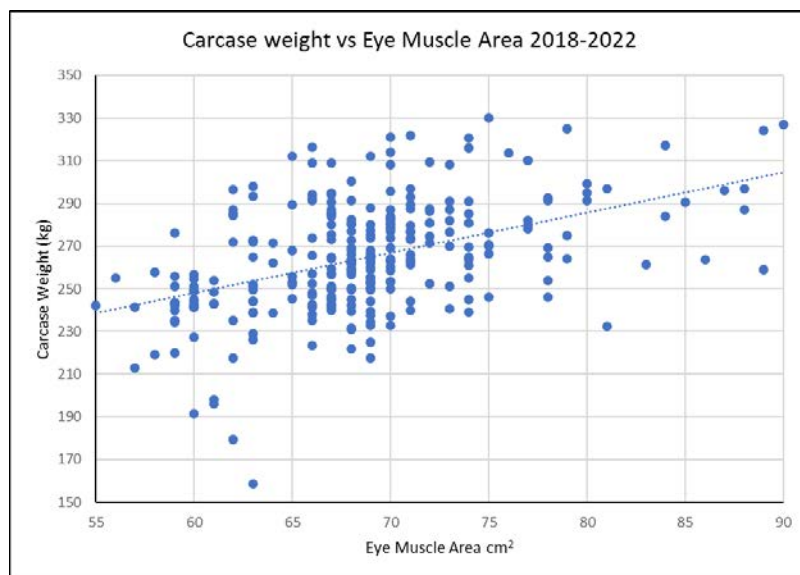
In 2022 the average Dressing % ranged from 50.7% up to 57.5%. The steer that dressed out at 50.7% was an Angus (the other steer of the pair dressed out at 53%). The steer that dressed out at 57.5% was a Limousin x Simmental x Hereford (the other steer of the pair had been withdrawn from the trial).

The average Eye Muscle Area ranged from 55 sq cm to 97 sq cm. The largest eye muscle came from a South Devon Black (the other steer of the pair had an eye muscle area of 74 sq cm). The second largest eye muscle at 90 sq cm was from a Poll Hereford and third largest eye muscle at 89 sq cm came from two SimAngus steers. Keep in mind though – how big is too big? What size cuts of meat are the abattoirs really wanting?

Is there are relationship between carcase weight and dressing %?



Is there a relationship between carcass weight and eye muscle area?



Remember the growth path of cattle – energy goes to laying down their skeleton first, then to muscle development and lastly to fat cover. If we breed large framed cattle, with large volumes of muscle, it may be difficult to get cattle to lay down adequate fat cover. Be aware of what abattoirs are looking for in terms of liveweight/carcass weight size and fat cover required for those animals. **BIGGER IS NOT ALWAYS BETTER.**

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 carcass. An even coverage of subcutaneous fat leads to even chilling throughout the underlying muscles. The greater the fat depth on a carcass, 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:

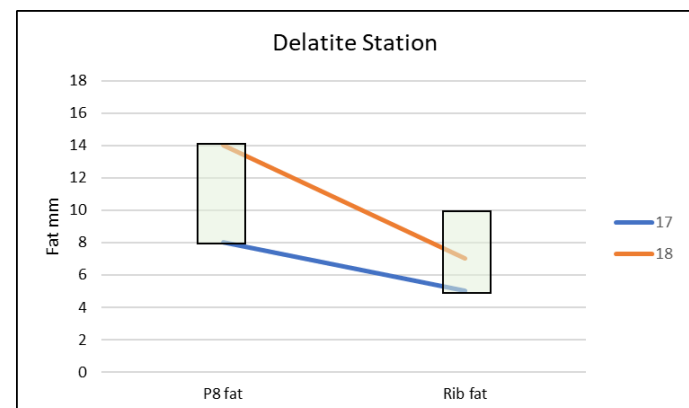
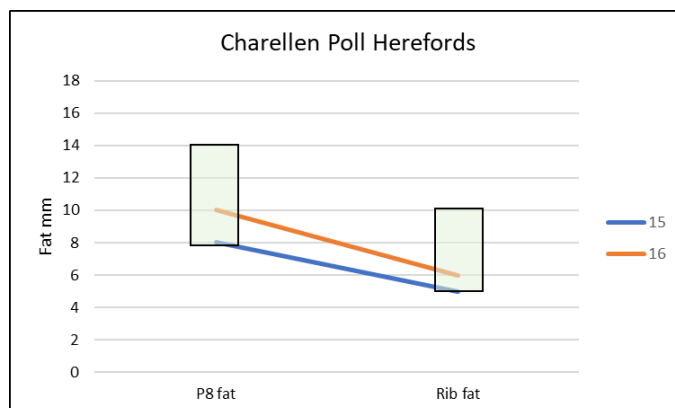
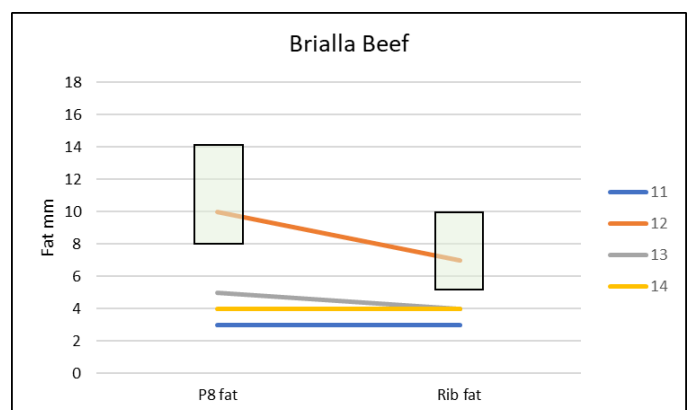
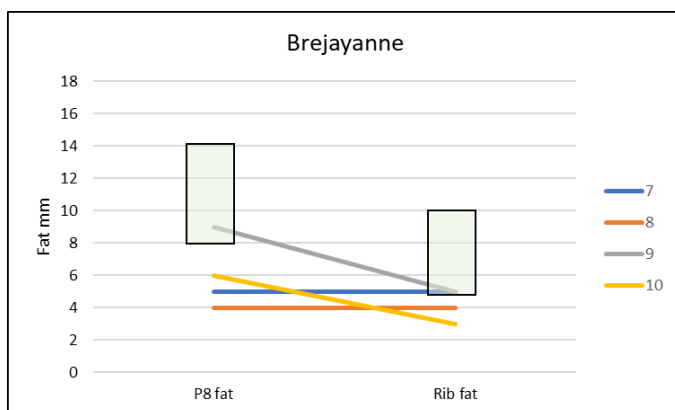
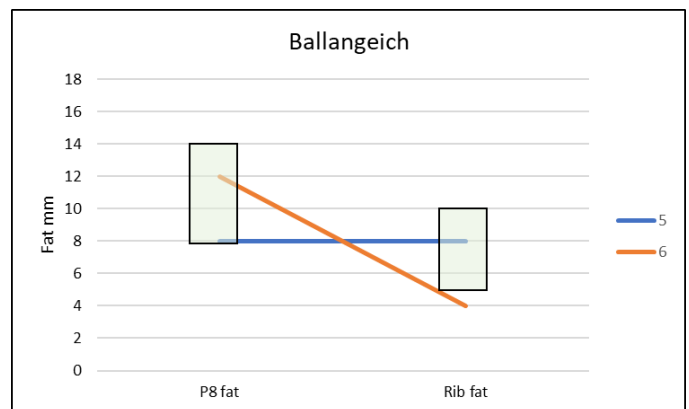
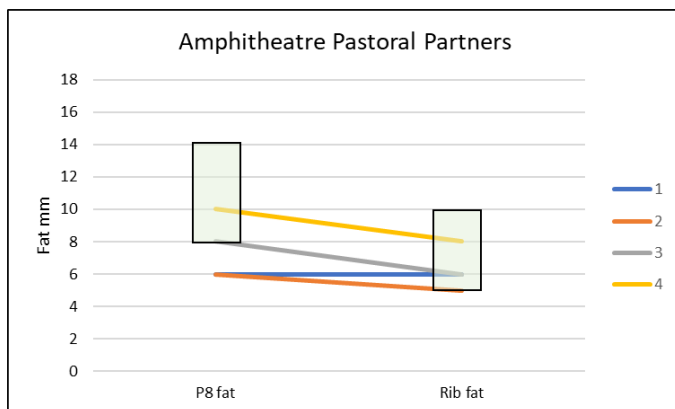
Rib fat mm	2	3	4	5-10	11-12	13	14	15	16
Points	0	8	12	15	11	10	9	8	0

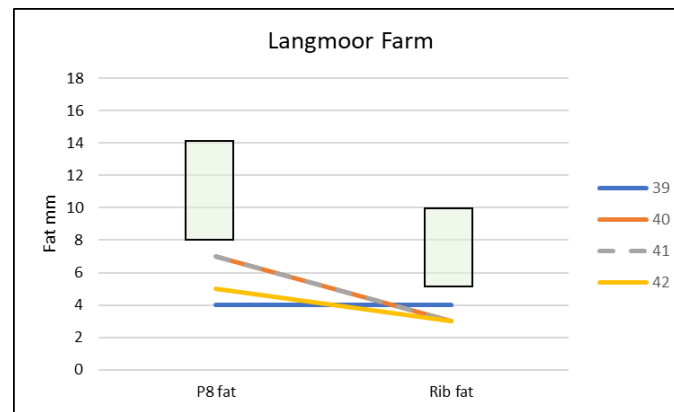
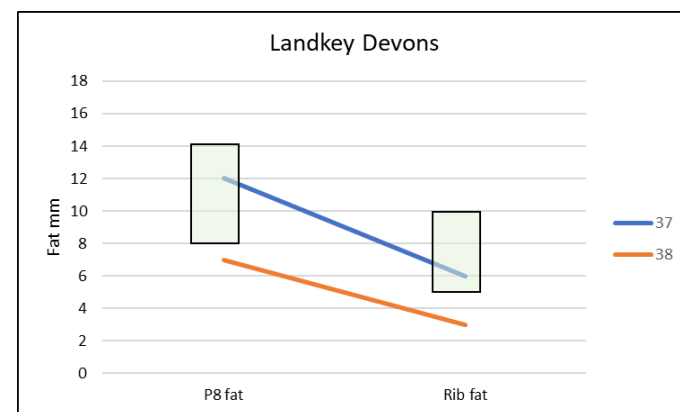
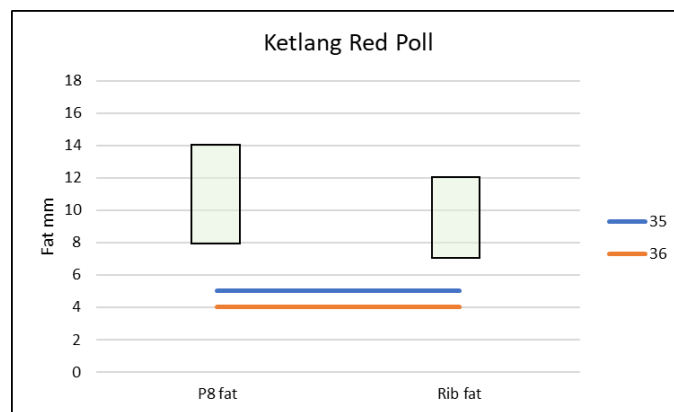
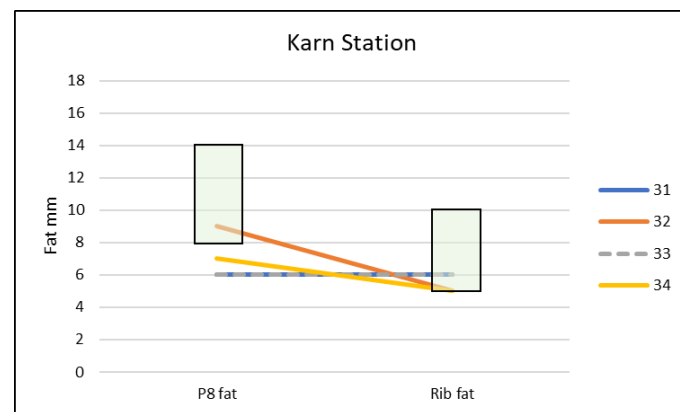
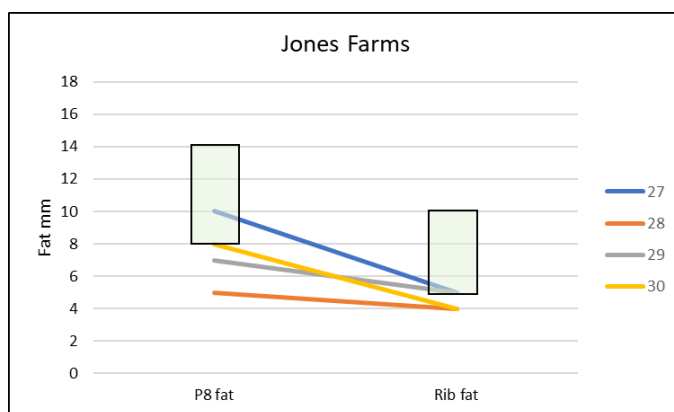
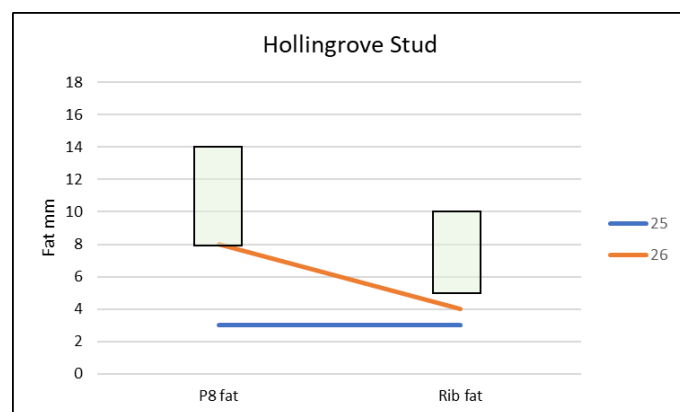
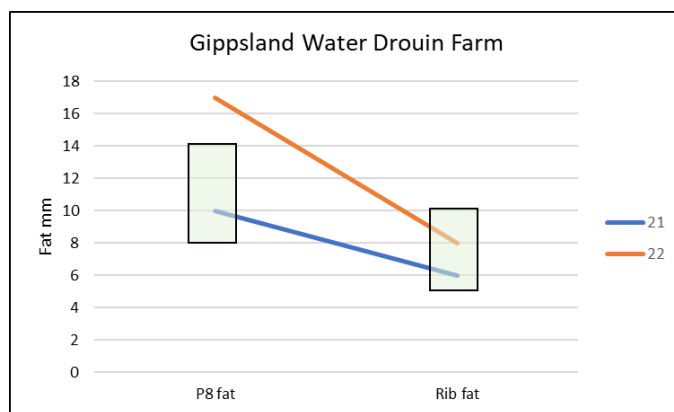
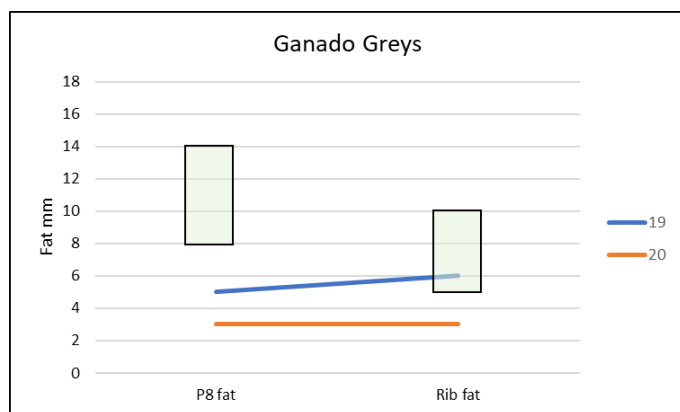
In a stud situation it may be acceptable to have uneven fat measurements on an animal if it is being marketed to the commercial producer as an animal that can be used to correct fat issues in the commercial herd.

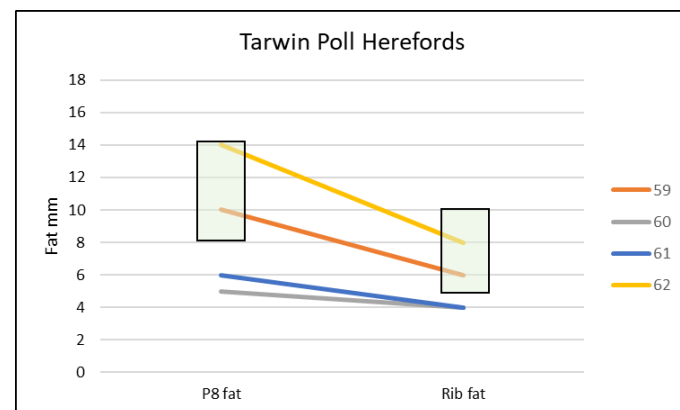
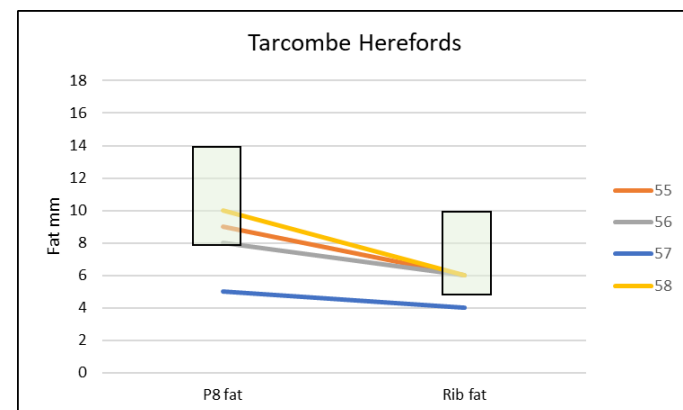
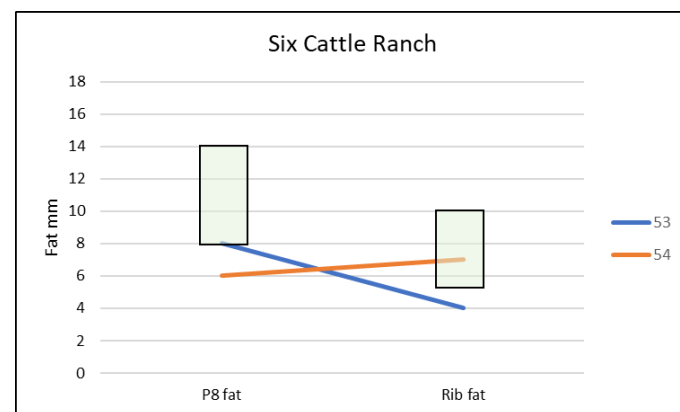
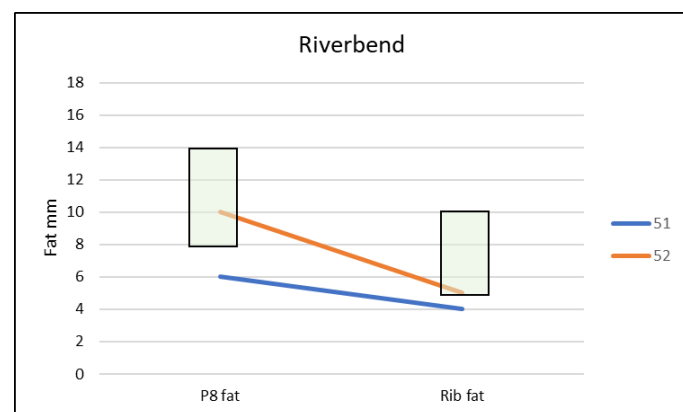
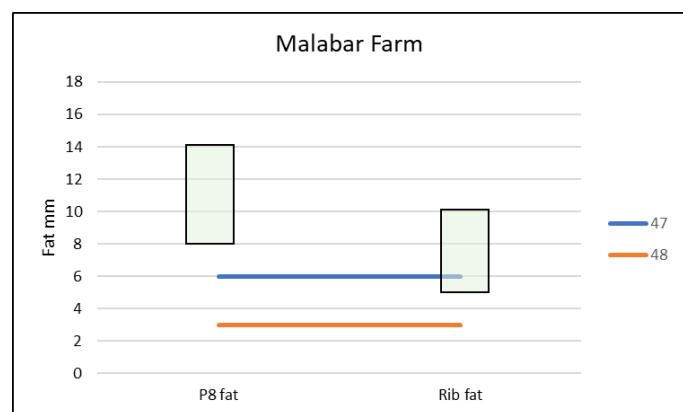
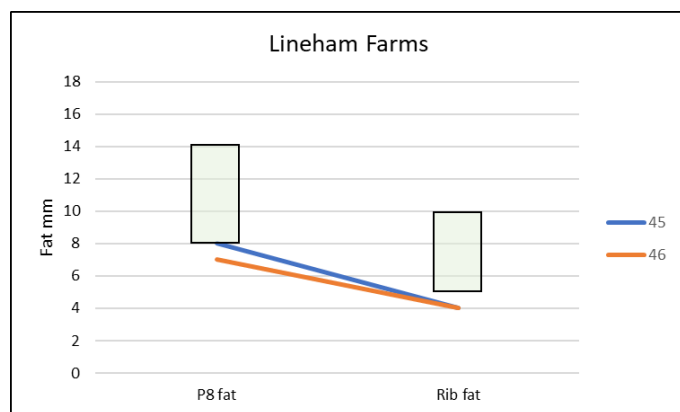
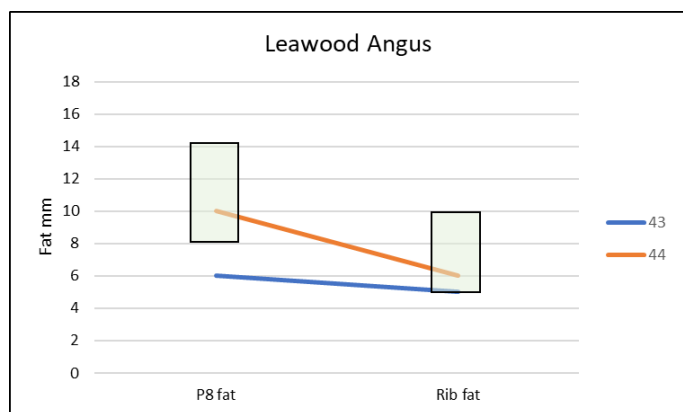
For example the commercial herd may have an issue of having not enough rib fat but adequate P8 fat. They may choose to use a bull with slightly higher than desired rib fat levels (but adequate P8 fat levels) to make a quick correction in their herd to better meet market specifications. However if retaining 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.

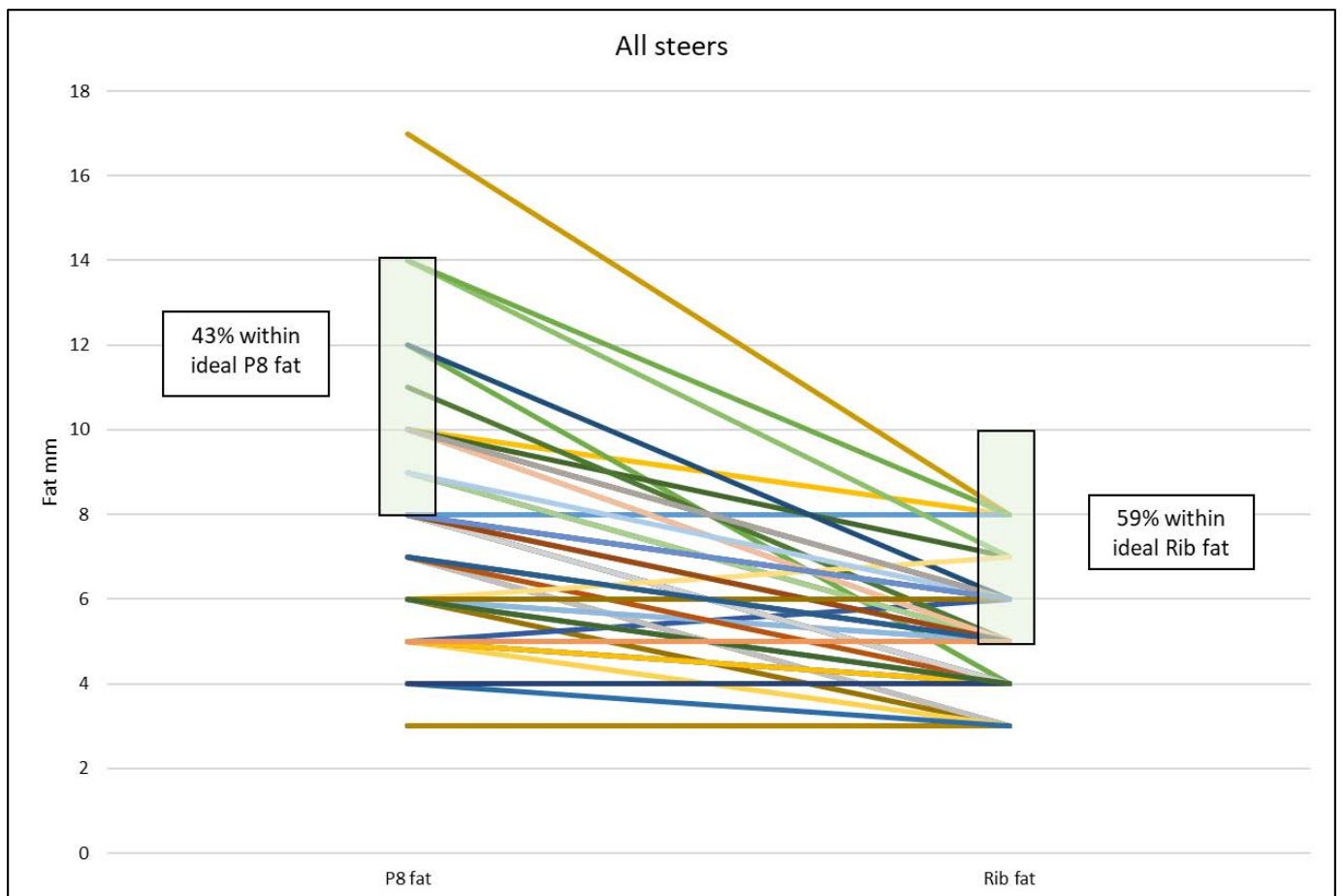
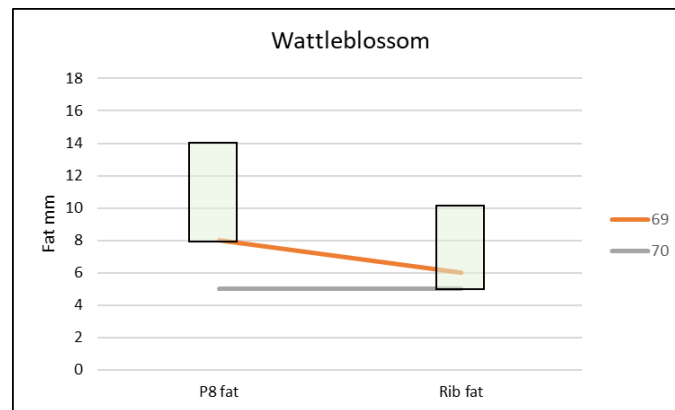
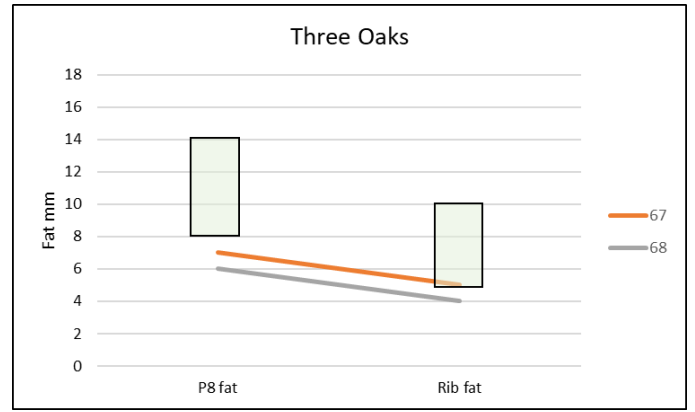
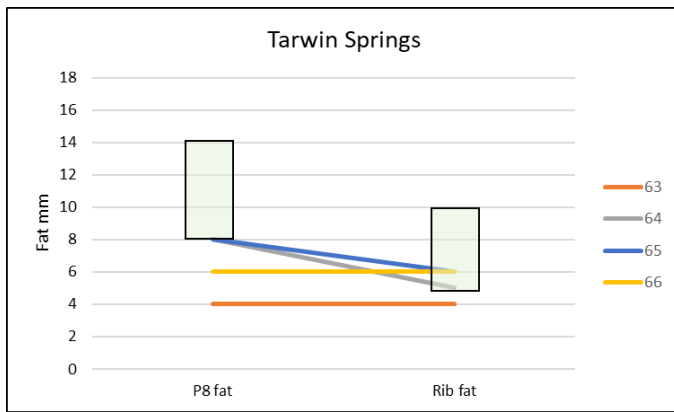
Following are the graphs of each entrants teams of steers showing the rib fat and P8 fat measurements.

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









MSA Index

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

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

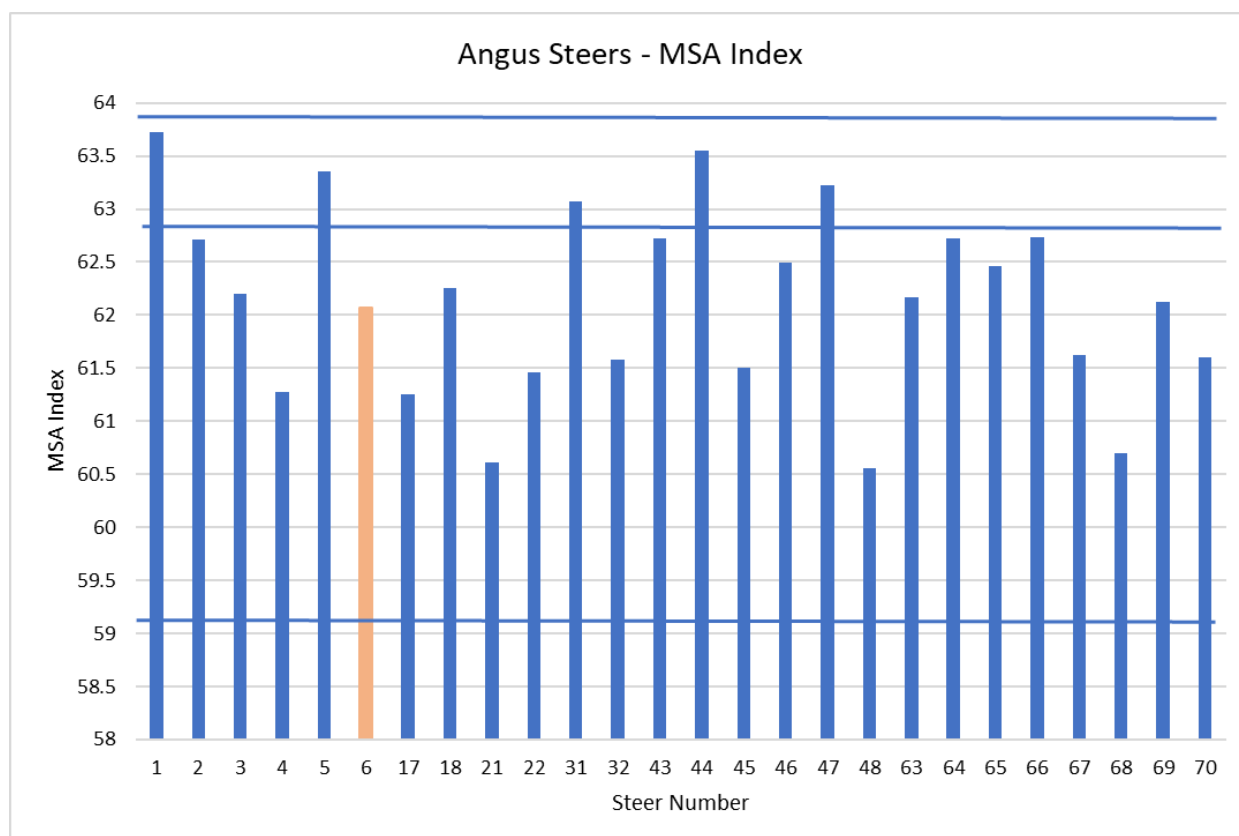
MSA eating quality scores are the combination of tenderness, juiciness, flavour and overall liking of beef. The MSA Index is a weighted average of these scores for the 39 MSA cuts for the most common corresponding cooking method.

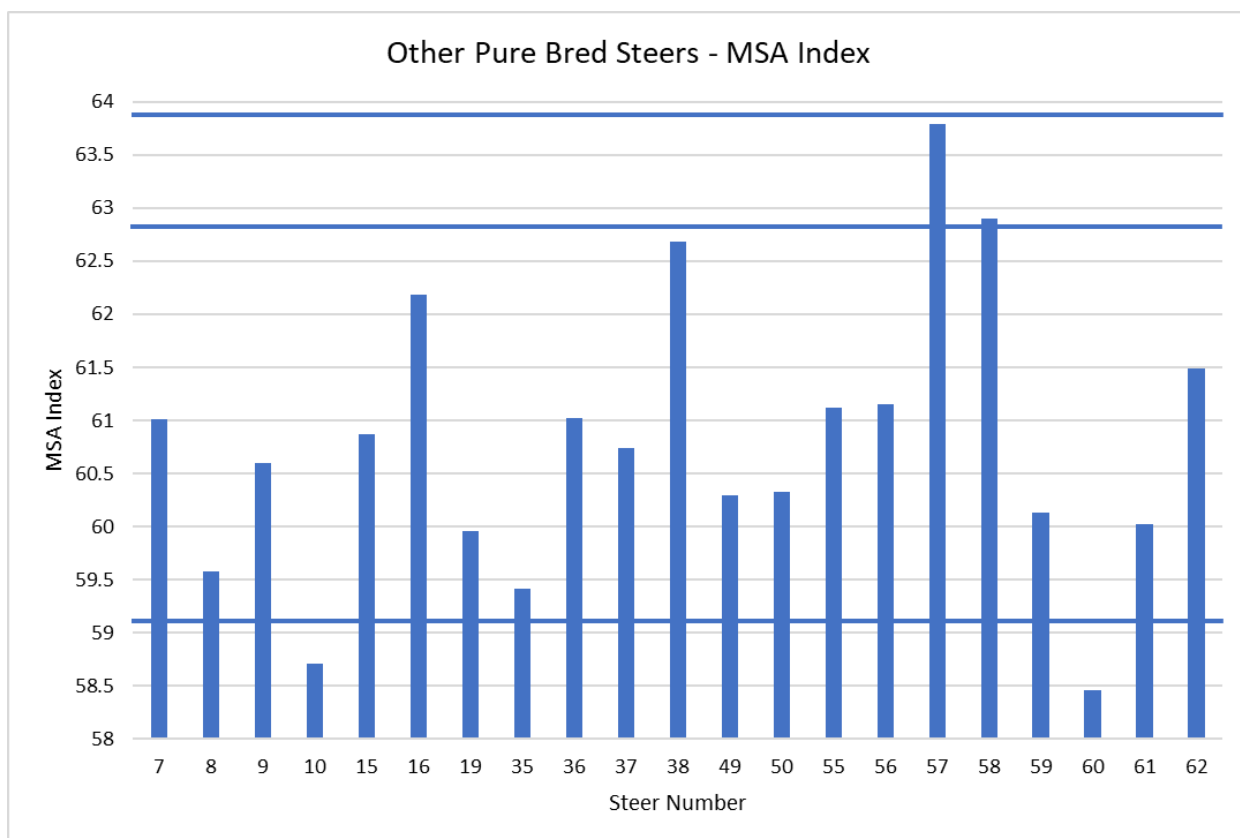
Note: steers that did not meet MSA grading criteria (the four steers who were classified as dark cutters due to high pH and meat colours) were given an Opportunity Index. This has recently been introduced by MSA to show producers what their Index would have been if non-compliant carcasses had met the MSA minimum requirements. More detail can be found here: <https://www.mla.com.au/globalassets/mla-corporate/marketing-beef-and-lamb/documents/meat-standards-australia/msa-changes-2019/opportunity-index-factsheet.pdf>

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 63.88), middle line indicates highest 10% (index score 62.8) and bottom line indicates the 50% (median, index score 59.1) of MSA Index scores for Non-Grainfed cattle in Australia (2021-22)

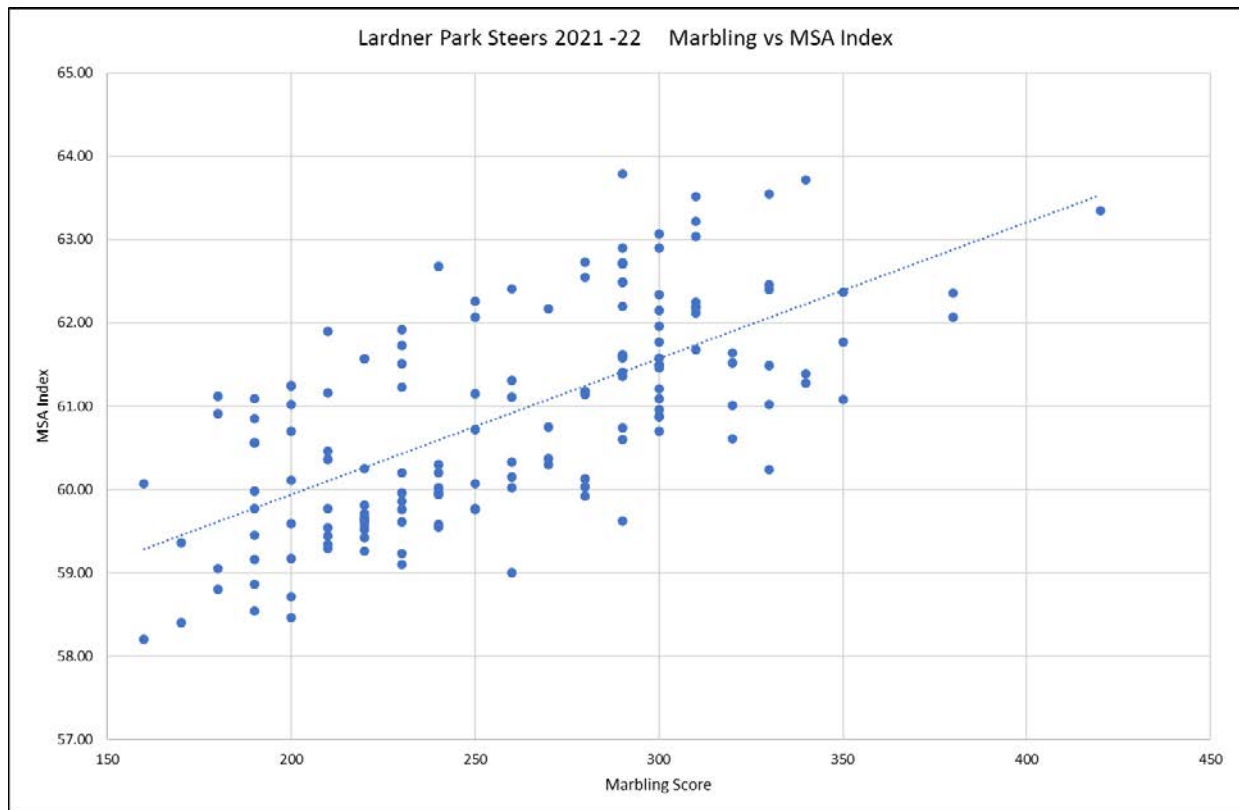
The orange bars are the steers that have an Opportunity Index rather than a MSA Index



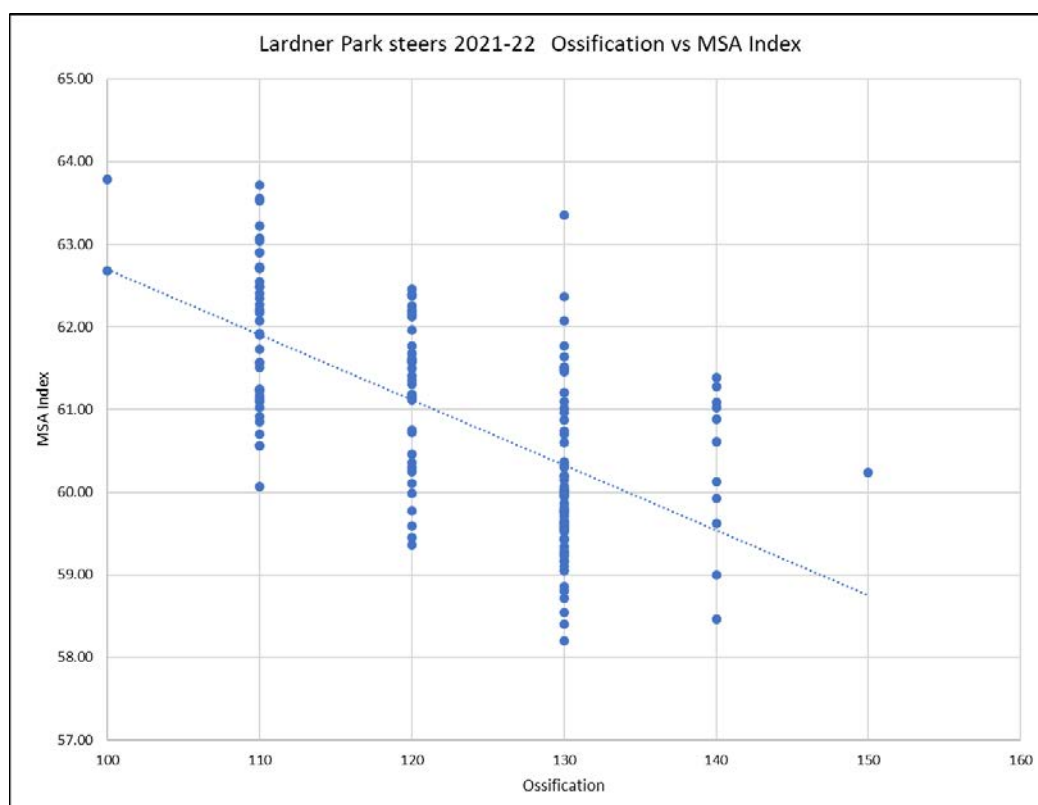


There is an opportunity to increase MSA Index values through genetic selection.

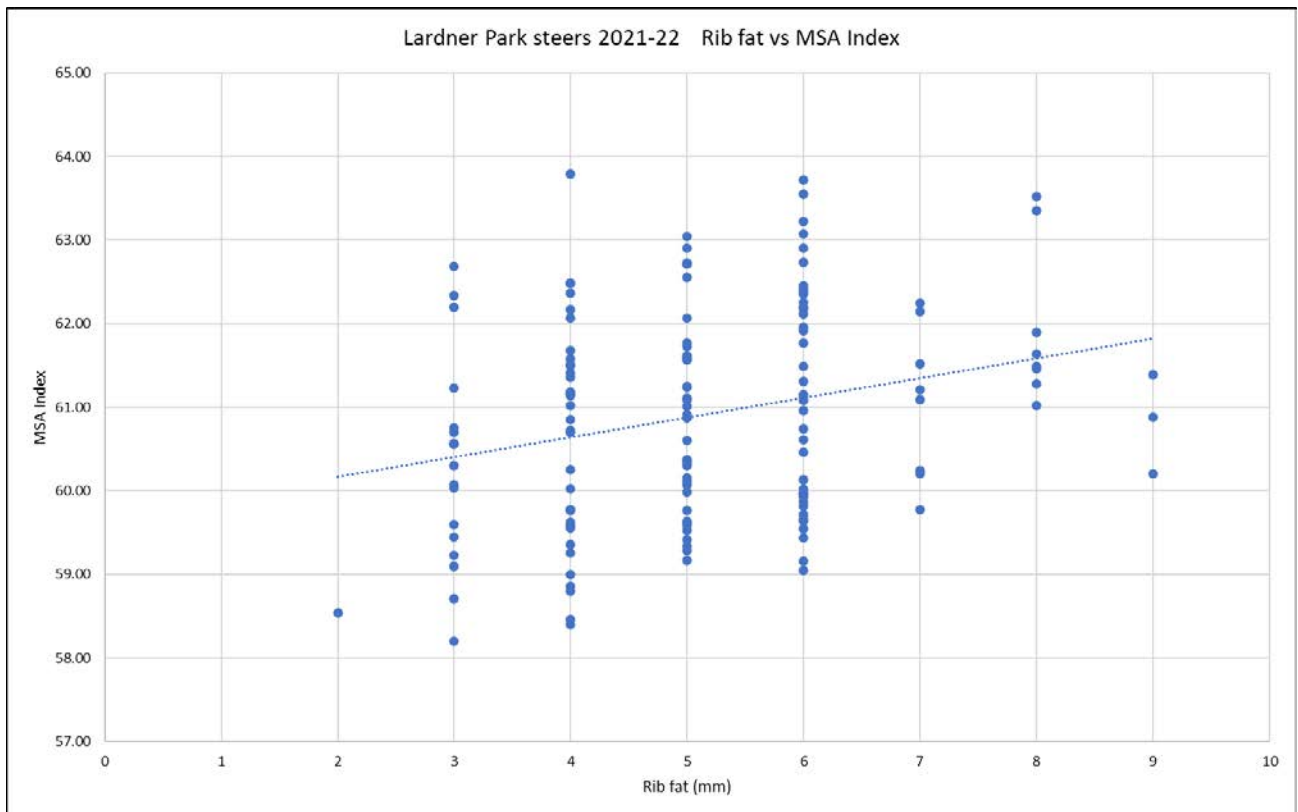
Marbling: an increase in the MSA marbling score of 100, equates to a 1.5 unit increase in the MSA Index. MSA marbling in the steer trial ranged from 160 up to 380. Selection for improved MSA marbling score can be achieved by selecting animals with higher Intramuscular Fat (IMF) EBVs



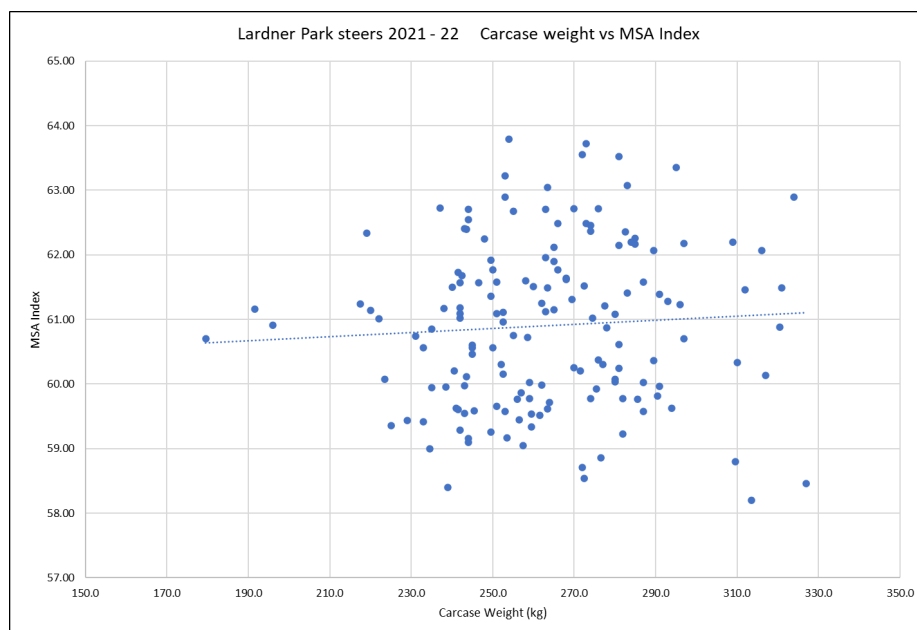
Ossification: The graph shows as ossification increases, the MSA Index decreases. As ossification scores decrease by 10, the MSA Index potentially increases by 0.6 index units. Ossification scores in the steer trial ranged from 110 -150. Selection for lower ossification scores can be achieved by selecting 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.



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 the last two years steer trials 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

See the following pages for the results of each participants cattle. The table includes where the cattle finished in relation to other entrants.

The various components that contribute to the final scores for the cattle are listed and where relevant, components have been traffic lighted to help give an indication of areas that stock are doing well in, or could be areas to look at to address if you wished to improve the performance of your cattle.

	Red colour indicates a much lower performance than other cattle in the trial
	Orange colour indicates generally in the mid range of performance compared to other cattle in the trial
	Green colour indicates that performance in this trait is good compared to other cattle in the trial

Below are the ranges used for colour allocation for the different attributes of performance that are used to score your cattle. Note: some of these ranges may change from year to year depending on how cattle perform in the trial each year. Where traffic lighting is purely based on points awarded in the carcass traits through MSA grading, the ranges are unlikely to change.

Weight Gain	< 146 kg (<1 kgLW/day gain)	146-190 kg (1-1.3 kgLw/day gain)	>190 kg (>1.3 kgLw/day gain)
Carcass Score	≤ 69.99	70 – 84.99	≥ 85
P8 fat mm (ideal 8-14 mm fat)	≤5 points (≤4 mm P8 fat)	6 - 9 points (5 – 7 mm P8 fat, 15mm P8 fat)	10 points (8 – 14 mm P8 fat)
Rib fat mm (ideal 5-10 mm fat)	0 or 8 points (<3 – 3 mm fat)	12 points (4 mm fat)	15 points (5-10 mm fat)
EMA cm² (Eye Muscle Area)	0 – 8.5 points	9 – 12.5 points	13+ points
MC (Meat Colour)	0 points (Meat colour 5)	1 point (Meat colour 3)	4 – 5 points (Meat colours 2 – 1C)
Oss (Ossification)	>200	150 - 190	100 - 140
MSA Marb (Meat Standards Australia Marbling)	<200	200 - 299	>300
MSA Index	Bottom 50% (a MSA Index less than 59.1) based on non grainfed cattle in Australia 2021-22	50 to 11 % (a MSA Index of 59.1 – 62.79) based on non grainfed cattle in Australia 2021-22	Top 10% (a MSA Index of 62.8 and above) based on non grainfed cattle in Australia 2021-22

Note: the scoring systems for the MSA graded attributes of the carcass is done automatically through a program designed for use in carcass competitions – ABCAM (Australian Beef Carcass Appraisal Method). Most of the point allocations are straight forward, however you may note that points allocation for the EMA (eye muscle area) are not. With the version of ABCAM that has been used for the steer trial, the points are determined by the computer program from a look up chart that is based around the eye muscle area as a proportion of carcass weight, and this gives an estimate of the saleable meat yield from that carcass.

The MSA Index is calculated based on the effect HGP (hormone growth promotant) status, sex, HSCW (hot standard carcass weight), TBC (tropical breed content), hump height, Oss (ossification), MSA MB (MSA marbling), RF (rib fat), MFV (whether it is a milk fed vealer) and S/yard (whether it was sold through the saleyard rather than direct to abattoir) all have on the eating quality. MLA (Meat and Livestock Australia) have an online calculator where you can enter your own numbers and if you change some of the numbers, such as rib fat, you can see the impact it might have on the MSA index of your steers. It can be accessed from the MLA website here:

<https://www.nextgen.mymlsa.com.au/beef/calculator>

For further information on the impacts of the different carcass attributes – particularly if your cattle are ranked lower for some of these attributes and you are wishing to address them - can have on eating quality, see https://www.mla.com.au/globalassets/mla-corporate/marketing-beef-and-lamb/msa_tt_beefinfokit_jul13_lr.pdf

The points awarded for EQ (eating quality) on the MSA grading sheet, are a proportion of the MSA index (in this case 77.5% of the MSA index)

If you add together the EQ points + MC (meat colour) points + rib fat points + EMA (eye muscle area) points + P8 fat points = Carcass Score (that you can see in the 5th column on the following sheets)

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									Carcase Score Information – from MSA Grading sheet																	
Steer Tag no.	Farm Name	Weight gain	Weight gain pts	Carcase Score (from grading sheet)	Carcase pts	Total pts	Pair Total pts	Place	LW kg	CW kg	DP %	P8 fat mm	P8 fat pts Max 10	Rib fat mm	Rib fat pts Max 15	EMA cm²	EMA pts Max 20	pH	MC	MC pts Max 5	Oss	Hump	MSA Marb	MSA index	EQ pts	
1	Ampitheatre	185	48.34	86.36	57.39	105.73	207.09	11	506	273	54	6	8	6	15	71	10	5.55	2	4	110	50	340	63.72	49.4	
2	Pastoral	169	44.16	86.07	57.20	101.36			480	263	55	6	8	5	15	71	10.5	5.55	2	4	110	55	290	62.71	48.6	
3	Partnership	244	63.76	83.18	55.28	119.03	229.85		1	604	309	51	8	10	6	15	67	6	5.56	2	4	120	55	310	62.2	48.2
4		208	54.35	84.97	56.47	110.82				542	293	54	10	10	8	15	71	8.5	5.55	2	4	140	50	340	61.28	47.5
5	Ballengeich	144	37.63	82.07	54.54	92.17	188.81	28		524	295	56	8	10	8	15	67	7	5.57	3	1	130	50	420	63.35	49.1
6	170	44.42	78.58	52.22	96.64	576				316	55	12	10	4	12	74	8.5	5.83	4		130	50	380	62.07	48.1	
7	Brejayanne	164	42.85	85.26	56.66	99.51	197.50		19	434	222	51	5	7	5	15	68	12	5.54	2	4	130	40	320	61.01	47.3
8		175	45.73	78.65	52.27	97.99				463	253	55	4	5	4	12	69	10.5	5.60	1c	5	130	55	240	59.58	46.2
9		159	41.55	88.94	59.10	100.65	204.11	12		477	245	51	9	10	5	15	74	13	5.60	2	4	130	40	290	60.6	46.9
10		176	45.99	86.48	57.47	103.46				500	272	54	6	8	3	8	97	20	5.59	1c	5	130	50	200	58.71	45.5
11	Brialla Beef	161	42.07	78.18	51.95	94.02	202.17		16	516	284	55	3		3	8	84	15	5.57	2	4	110	65	290	62.2	48.2
12		191	49.91	87.64	58.24	108.15				520	281	54	10	10	7	15	74	10.5	5.61	2	4	120	60	300	62.15	48.1
13		183	47.82	75.90	50.44	98.26	197.29	20		506	273	54	5	7	4	12	67	8.5	6.39	6	0	110	50	290	62.49	48.4
14		183	47.82	77.07	51.22	99.03				526	283	54	4	5	4	12	70	8.5	5.54	2	4	120	45	290	61.41	47.6
15	Charellen Poll Herefords	171	44.68	88.15	58.58	103.26	216.65		5	508	278	55	8	10	5	15	77	12	5.56	2	4	130	60	300	60.87	47.1
16		197	51.47	93.16	61.91	113.38				558	297	53	10	10	6	15	88	16	5.51	2	4	120	50	310	62.18	48.2
17	Delatite Station	210	54.87	86.94	57.78	112.65	222.15	4		508	262	52	8	10	5	15	69	9.5	5.57	1c	5	110	50	200	61.25	47.4
18		196	51.21	87.72	58.29	109.51				482	248	51	14	10	7	15	66	9.5	5.51	1c	5	120	45	310	62.25	48.2
19	Ganado Greys	149	38.93	83.44	55.45	94.38	185.91		31	528	291	55	5	7	6	15	74	10	5.52	1c	5	130	50	230	59.96	46.4
20		167	43.64	72.06	47.89	91.52				466	255	55	3		3	8	69	10	5.56	2	4	120	45	270	60.75	47.1
21	Gippsland Water Drouin	145	37.89	80.95	53.80	91.68	193.50	23		532	281	53	10	10	6	15	68	8	5.59	3	1	140	50	320	60.61	46.9
22		191	49.91	78.11	51.91	101.81				584	312	53	17		8	15	65	4.5	5.52	2	4	130	55	300	61.46	47.6
23	Hillridge Farm	173		85.20						499	287	57	4	5	4	12	88	16.5	5.55	2	4	120	60	300	61.58	47.7
24		This steer withdrawn from competition																								
25	Hollingrove Stud	99	25.87	71.29	47.38	73.24	147.27	34		398	219	55	3		3	8	58	8	5.55	2	4	110	35	300	62.34	48.3
26		88	22.99	76.79	51.03	74.02				451	256	57	8	10	4	12	65	8.5	5.85	5	0	130	50	250	59.76	46.3
27	Jones Farms	180	47.03	87.35	58.05	105.08	202.72		14	486	266	55	10	10	5	15	71	10.5	5.56	2	4	120	50	300	61.77	47.8
28		158	41.28	84.80	56.35	97.64				474	259	55	5	7	4	12	89	19.5	5.93	5	0	130	45	250	59.77	46.3
29		214	55.92	90.72	60.29	116.20	214.81	6		586	324	55	7	9	5	15	89	14	5.52	2	4	110	55	300	62.9	48.7
30		164	42.85	83.89	55.75	98.60				464	242	52	8	10	4	12	67	10.5	5.59	2	4	120	45	280	61.18	47.4
31	Karn Station	227	59.31	85.35	56.72	116.03	222.96		3	544	283	52	6	8	6	15	70	8.5	5.50	1b	5	110	50	300	63.07	48.9
32		190	49.65	86.20	57.28	106.93				483	251	52	9	10	5	15	67	9.5	5.59	2	4	120	45	290	61.58	47.7
33		201	52.52	84.99	56.48	109.00	207.44	10		506	263	52	6	8	6	15	70	10	5.63	2	4	120	55	300	61.96	48.0
34		168	43.90	82.07	54.54	98.44				468	244	52	7	9	5	15	63	8.5	5.57	3	1	110	40	290	62.71	48.6

									Carcase Score Information – from MSA Grading sheet																	
Steer Tag no.	Farm Name	Weight gain	Weight gain pts	Carcase Score (from grading sheet)	Carcase pts	Total pts	Pair Total pts	Place	LW kg	CW Kg	DP %	P8 fat mm	P8 fat pts Max 10	Rib fat mm	Rib fat pts Max 15	EMA cm²	EMA pts Max 20	pH	MC	MC pts Max 5	Oss	Hump	MSA Marb	MSA index	EQ pts	
35	Ketlang Red Poll	133	34.75	83.53	55.51	90.26	187.79	30	431	233	54	5	7	5	15	69	11.5	5.51	2	4	130	50	220	59.42	46.0	
36		178	46.51	76.77	51.02	97.53			462	242	52	4	5	4	12	60	7.5	5.55	1c	5	110	45	200	61.02	47.3	
37	Landkey Devons	143	37.36	87.55	58.18	95.55	188.39	29	443	231	52	12	10	6	15	68	11.5	5.56	2	4	130	40	290	60.74	47.0	
38		167	43.64	74.05	49.21	92.85			495	255	52	7	9	3	8	56	4.5	5.60	2	4	100	45	240	62.68	48.6	
39	Langmoor Farm	161	42.07	73.80	49.04	91.11	189.97	26	492	274	56	4	5	4	12	71	9.5	5.58	3	1	120	60	190	59.77	46.3	
40		179	46.77	78.38	52.09	98.86			522	282	54	7	9	3	8	77	11.5	5.62	2	4	130	45	230	59.23	45.9	
41			157	41.02	84.93	56.44	97.46	184.72	32	516	296	57	7	9	3	8	87	15.5	5.56	1c	5	110	50	230	61.23	47.4
42			147	38.41	73.50	48.84	87.25			495	280	57	5	7	3	8	68	8	5.55	2	4	130	45	280	60.03	46.5
43	Leawood Angus	145	37.89	88.08	58.53	96.42	197.15	21	504	270	54	6	8	5	15	75	11.5	5.59	1c	5	110	55	290	62.72	48.6	
44		170	44.42	84.73	56.31	100.73			497	272	55	10	10	6	15	62	6.5	5.59	2	4	110	45	330	63.55	49.2	
45	Lineham Farms	146	38.15	84.14	55.92	94.06	190.63	25	454	240	53	8	10	4	12	67	10.5	5.53	2	4	120	45	300	61.5	47.6	
46		160	41.81	82.40	54.76	96.57			504	266	53	7	9	4	12	68	9	5.55	2	4	110	60	290	62.49	48.4	
47	Malabar Farm	173	45.20	86.97	57.80	103.00	192.55	24	479	253	53	6	8	6	15	70	11	5.60	2	4	110	50	310	63.22	49.0	
48		156	40.76	73.41	48.78	89.55			458	245	53	3		3	8	68	10.5	5.52	1c	5	110	50	190	60.56	46.9	
49	Moorville	189	49.38	73.71	48.98	98.37	198.86	18	542	277	51	4	5	3	8	70	9	5.55	1c	5	120	55	240	60.3	46.7	
50		164	42.85	86.73	57.64	100.49			574	310	54	11	10	5	15	77	10	5.55	1c	5	130	45	260	60.33	46.7	
51	Riverbend	174	45.46	82.63	54.91	100.38	208.80	9	433	235	54	6	8	4	12	66	10.5	5.56	1c	5	110	45	190	60.85	47.1	
52		190	49.65	88.45	58.78	108.42			461	244	53	10	10	5	15	69	11	5.55	2	4	110	45	280	62.55	48.5	
53	Six Cattle Ranch	120	31.36	81.86	54.40	85.76	177.73	33	411	220	54	8	10	4	12	59	8.5	5.57	2	4	120	40	280	61.14	47.4	
54		149	38.93	79.82	53.04	91.98			456	242	53	6	8	7	15	55	5.5	5.54	2	4	130	40	300	61.09	47.3	
55	Tarcombe Herefords	177	46.25	86.34	57.38	103.63	209.46	8	495	263	53	9	10	6	15	70	10	5.53	2	4	110	55	180	61.12	47.3	
56		179	46.77	88.87	59.06	105.83			484	265	55	8	10	6	15	74	11.5	5.52	1c	5	120	50	250	61.15	47.4	
57			158	41.28	86.91	57.76	99.04	198.93	17	464	254	55	5	7	4	12	78	14.5	5.51	2	4	100	45	290	63.79	49.4
58			163	42.59	86.22	57.30	99.89			479	253	53	10	10	6	15	65	8.5	5.55	2	4	110	45	290	62.9	48.7
59	Tarwin Poll Herefords	213	55.66	87.58	58.20	113.86	228.32	2	584	317	54	10	10	6	15	84	12	5.58	2	4	140	55	280	60.13	46.6	
60		225	58.79	83.78	55.68	114.47			600	327	54	5	7	4	12	90	14.5	5.55	1c	5	140	55	200	58.46	45.3	
61			192	50.17	75.99	50.50	100.67	213.80	7	528	287	54	6	8	4	12	70	8.5	5.64	3	1	130	55	260	60.02	46.5
62			219	57.22	84.13	55.91	113.13			604	321	53	14	10	8	15	70	6.5	5.59	1c	5	130	55	300	61.49	47.6
63	Tarwin Springs	167	43.64	71.66	47.62	91.26	189.96	27	538	285	53	4	5	4	12	62	5.5	5.54	3	1	110	50	270	62.17	48.2	
64		169	44.16	82.08	54.55	98.70			544	276	51	8	10	5	15	59	4.5	5.55	2	4	110	55	290	62.72	48.6	
65			198	51.74	84.88	56.41	108.14	203.91	13	518	274	53	8	10	6	15	66	7.5	5.57	2	4	120	50	330	62.46	48.4
66			145	37.89	87.09	57.88	95.76			450	237	53	6	8	6	15	70	11.5	5.56	2	4	110	50	280	62.73	48.6
67	Three Oaks	188	49.12	83.23	55.31	104.43	202.27	15	518	268	52	7	9	5	15	65	7.5	5.51	2	4	120	55	290	61.62	47.7	
68		162	42.33	83.52	55.50	97.83			550	297	54	6	8	4	12	81	12.5	5.63	2	4	130	50	300	60.7	47.0	
69	Wattleblossom	166	43.37	87.62	58.23	101.60	196.57	22	492	265	54	8	10	6	15	69	9.5	5.62	1c	5	120	50	310	62.12	48.1	
70		162	42.33	79.21	52.64	94.97			488	258	53	5	7	5	15	58	5.5	5.59	2	4	120	50	290	61.6	47.7	

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:

