

## The Innovation Issue

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Focus | Integrity | Performance | Profit | Commitment | Innovation

### **PURPOSE & PASSION**

We have been visiting, looking and listening since the Autumn bull sale.

In April, Bryan and Peter went to Launceston for 2 days for an ABS tour. They visited Landfall and Cluden Newry and enjoyed the opportunity to see lovely country, progeny groups and discuss the various sires with other breeders. They greatly enjoyed the hospitality.

In May Bryan went to New Zealand to the Beef and Lamb NZ Beef Genetics conference in Fielding. It was a good chance to catch up with friends at the functions and visit the Cameron family at Ngaputahi Station closeby.

Manager of Mount Linton Station, Ceri Lewis gave an interesting presentation on the recent success with Value Based Marketing through Silver Fern Farms, achieved by Mount Linton Station. Mount Linton has been using Rennylea genetics for the best part of a decade, and the compliance rates off grass are impressive. See later for a synopsis of Ceri's presentation.

We have for many years raised the issue of increasing mature cow size and the associated increasing cost of production. In the last 3 months we have seen further evidence that confirms our assumptions. In the MLA More Beef From Pastures webinar series John Webb Ware recent presented on increasing cow size and it's effect on stocking rate. See the link

http://www.beefcentral.com/genetics/cow-size-is-biggeralways-better-video/





## PURPOSE & PASSION cont.

Another presentation at the Beef and Lamb NZ conference that caught Bryan's attention was from Prof. Dorian Garrick. Dorian gave the changes in mature cow weight. He showed the increase in yearling and weaning weights since 1980 in the Hereford and Angus breeds in the US, and the increases in \$energy EBV. He hypothesised that the result was genetic change and not genetic improvement, although there was no accounting for time taken to reach slaughter weights. See later in the newsletter and you can watch these presentations on the Beef and Lamb NZ Genetics web page through the following link.

#### http://www.blnzgenetics.com/news/video-clips

Also in May we attended the Angus conference in Albury where a range of speakers gave marketing and production updates. An interesting address was from Dr. John Langbridge from Teys Australia who spoke about the move to Value Based Payment systems. Once the subjective pieces of information are removed in the payment system this will be possible. These include colour, fat depth, butt shape etc. He spoke about the 'sweet spot' in carcase weight, at around 320kg the result of balanced selection.

Then in June we travelled to the Beef Improvement Federation of America's annual conference in Kansas, USA. This was a follow up visit to last year and there were a couple of excellent sessions, including those on cow efficiency and genomics. We were also fortunate to visit some excellent family seedstock operations in Kansas and Nebraska. See the report through the newsletter! Coming up is the Rennylea Spring bull sale on the 25th August. The Catalogue features calving ease and meat quality in great depth, in addition to the free traits, fertility, temperament and structure. All bulls have had a genomic test with the imputed i50k test to give you greater accuracy at a young age. The 141 bulls AVERAGE in the lowest 25% of the angus breed for birthweight, the top 20% for 400 and 600 day growth and the top 5% for eye muscle area and marbling. They have a moderate maturity pattern and fast growth and will take your herd in the same direction as ours, functional, fertile and flexible to meet grain and grass fed markets.

#### Buying a bull at Rennylea is like buying one next door with free delivery.



Lot 71 Rennylea L128, one of the many top 1% Heavy Grain Indexing bulls in the spring sale. We look forward to seeing you on sale day.

<image>

### MEAT QUALITY MEAT QUALITY MEAT QUALITY

# meat quality brand

Ceri Lewis Manager of Mount Linton Station west Southland, at the southern end of the South Island spoke about achieving New Zealand's highest eating quality compliance off grass. Mount Linton runs 3,000 angus cows and 45,000 romney, texel maternal ewes.

He started with the breeding objective which is very important.

Lower cost of production in the cow herd, robust cows in difficult winters, get in calf every year, and rear a calf every year. Recently Mount Linton is participating in beef cow efficiency trial and some interesting stats, cows lost 150kg from weaning to Pre calving, regained 150kg pre calving to pre mating, (90 days), and then lost 39kg when calf is on them (calf marking to weaning).

- 1. Maternal efficiency, keen on positive rib fat,
- 2. DTC calving ebv, range of pregnancy outcomes if DTC is positive.
- 3. Double breed average EMA to offset the positive.
- 4. Mature pattern, the challenge is to control frame size of cows, to handle seasonal conditions.

He outlined the compliance rates that rose in 12 months, through Silver Fern farms program. Fodderbeet is a terrific preparation for slaughter cattle, to achieve high compliance. 3 animals fell out due to their being too heavily marbled, score 8!

The economics of meeting beef eating quality specifications was worth 25c premium per premium, 300kg carcase weight, 70% hit premium on 1350 animals, at 16 months of age The total premium was worth \$68,000.

If cattle fall out of specifications they do so for the following reasons:

- I. marbling, 60% fail across NZ fall out with lack of marbling.
- II. fat, not enough rib fat
- III. meat colour, and pH

Most genetics from Australia, access to Japanese market in the early 1990s. He uses Rennylea genetics, breeding objective same as Mount Linton, strong fertility, carcase genetics. Takes time to get genetics through the herd. Consistency comes down the track with daughters of the high marbling sires.

This year's bull, he has selected Rennylea G420, ideal for grass reared production.

To achieve Value Based Marketing - marbling, ossification once cartilage to bone ageing increases, fat colour, docility is very important and meat colour. Oestrogen causes ossification so it is more difficult for heifers to meet specifications.

How much is enough? Marbling probably now the EBV range is 3.5 to 6.

To fit the Angus pure index: strong growth to 400 days, low mature cow weight, marbling. There is a strong correlation between the Angus Pure Index and the Beef Eating Quality program.

Minimise stress, walk to yards the night before, holding paddock, access to silage and water, double loading ramp, upstairs and downstairs.

Fodder beet making a considerable impact in meeting specifications. (what is the Australian equivalent?).

In summary: there is no substitute for fertility and it is worth 10/10, while carcase is 3/10.

All heifers are scanned for IMF% and EMA and the bottom 15% for scan culled after their first calf. For the steers targeting 1.5kg per day from birth to slaughter.

Management is key all about the little things - Learning new things all the time. Need the right genetics in the first place through the females, and their compliance falls. Ossification is not an issue with the steers. Once calved heifers fall out on ossification after the calf is weaned.

Firstlight Foods (see www.firstlightfoods.co.nz producing grass fed wagyu) tested Mount Linton angus and compared them with F1 Wagyu, they performed very well, accepted better on taste test and finished 12 months earlier. However, wagyu has its own brand and aura, and hard to compete at this stage.

Mout Linton's decision is to chase meat quality rather than high yielding cattle, which fits in with their environment.

## COW EFFICIENCY COW EFFICIENCY COW EFFICIENCY

## Things are set in stone for 2030 with this year's breeding program in a seedstock herd, 7 year old daughters will still be in reproduction.

Dorian Garrick address at Beef and Lamb NZ focussed on changes through selection in the US herd since 1980 and what has been achieved. "It is easy to make things bigger," he said.

A 2015 heifer eats  $US130\ more$  in equivalent dollars that a heifer did in 1980

A 2015 steer ears \$US143 more than a 1980's steer

Carcase weights have increased by 30kg from 2000 to 2015 Collectively, this is genetic change, not improvement.

What is preventing more sustainable genetic improvement?

- i. Lack of total herd recording, many herds do not record all traits in all animals. The industry needs more comprehensive phenotypes and genotypes on smaller numbers of animals and this needs to be funded by a socialised system as everyone benefits. (levies or taxpayer funded collaboratively).
- ii. This will enable more accurate selection of superior parents, to move the average of the population.
- iii. It will include complete reproductive performance for every year, data on commercial animals, more carcase data and disease and include complete genotyping of the participating herds. In Australia, MSA data will be an important addition alongside DNA data.
- iv. The model will reward those who invest in these approaches.

COW EFFICIENCY: GRAIN VS GRASS Dr. Dan Shike from the University of Illinois reported on recent comparison of feed efficiency on grain vs roughage diets. There are large differences in intake and efficiency on roughage, and intake may be limited by gutfill on roughage diets. The correlation between forage and grain dry matter intake was .58. Animals that are more efficient when fed forage tend to be more efficient when fed grain. The conclusion is that feedlot performance of heifers during the growing phase may 'have application to the cowherd'. Other studies (S. Hansen et al) show there is greater variation in performance on roughage than grain diets indicating greater genetic variation for efficiency related traits such as protein turnover. Progress in the US feed efficiency work can be found at www.beefefficiency.org

Research at Whatawhata Research Station in NZ shows cows are increasing at about 5kg per year, for the last 30 years, so they are 150kg heavier. Do we want cows to be 750kg by 2030? This is a rhetorical question!

The answers are that animals need to grow and be turned off more quickly from a sustainable cow herd. And the commercial cohorts of cattle need to be reared together so that commercial data can be used in genetic analysis.

There is experience in other parts of the world such as Ireland which has the most complete database in the world (subsidised by the EU) and best practice herd recording, seedstock and commercial. These data show that when the Irish introduced limousine cattle into the maternal cow herd, costs increased and they lost maternal functionality, calving at three years.

More commercial data will lead to the development of maternal and terminal lines, similar to the prime lamb industry.

Dr. David Thalman from the Oklahoma State University presented some recent work on the performance of commercial cow/calf operations. In a challenging address, he presented data showing the increase in running costs in commercial cowherds, from four sets of data in Kansas, Minnesota, and some of the southern states. The data shows that profitability has not changed over 25 years, as income and costs increase.

Similar to Australian benchmarking data, there were farms that made profit in 'bad' years, and farms that made a loss or broke even in 'good' years.

Significantly, controlling costs was substantially more important in driving profitability than increasing weight of sale or price received. A higher cost of production accounted for 2/3 of the difference in profit. This is the same in Australia.

Where are the potential gains?

There is no sign of improvement in pregnancy or weaning rates, and limited potential to do so. There are potentially gains to be made through planned heterosis in crossbreeding and composite programs. Similarly, there have been no increases in weaning weight across the data sets.

The failure of the commercial industry to reflect the improvements in the seedstock sector has led the author to hypothesise that the seedstock gains are 'decoupled' from the commercial industry and more focus on controlling



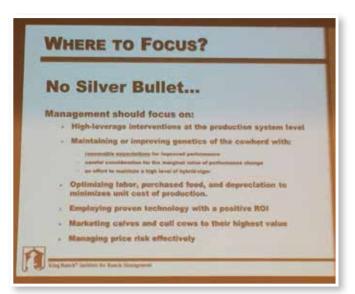
cost needs to be balanced with increasing post weaning performance. These improvements will be made with better tools to balance antagonistic (cost) traits, ie carcase weight, milk and increased growth. For example the area of hay harvested per cow is 2 tonnes per year and the rate of hay feeding is increasing by 30kgs per head per year.

Practical solutions will improve the efficiency of forage utilisation.

Professor Mark Enns from Colorado State University expanded the profitability theme by examining the maintenance requirements for energy in the cow; 91% accounted for by cow size and 9% by milk.

Maintenance requirements are accurately described by mature weight, hip height and body condition score and in the US combined with milk ebv to produce a dollar energy \$EN EBV. Higher milking cows have higher maintenance requirements related to the energy for lactation, and further increased if they are also higher mature cow weight.

The weakness in the system is the poor recording of mature cow weight: in US angus there are only 197,497 mature weight records and 8.1m weaning records. If half the animals are female, it is an appalling record.



#### Dr Clay Mathis, Director of the King Ranch Institute for Ranch Management summarised his address with this slide. Management needs to keep on top of the major costs, labour, feed, depreciation and improve to take advantage of genetic improvement.

Dr. Enns quoted the work from Landcorp in NZ, 20 years from the 1970s to the 1990s which showed evidence of a response to selection where growth was improved and maintenance energy reduced. A decrease in mature cow size was accompanied with an increase in slaughter weights. The caveat was that there must be full recording of mature cow weight and condition scores, (and hip height) to develop the selection indicies.

## PADDOCK TALK BY BRYAN

Peter and I attended the ABS seminar in Tasmania, and thank the Archer and Hughes families for the fantastic job they did hosting the group. We loved seeing the large numbers in the progeny groups.

An interesting address by Cliff Lamb from the University of Florida focussed on the average calving date and length of joinings in commercial herds. It reinforced what we have always stressed at Rennylea in our commercial clients' herds. Shifting the average calving date into a tighter calving makes average weaning weights 1kg heavier per day.

In 6 week joining period, average calving date is 20 days (give or take a few days), particularly 65/70% of cows are impregnated in the first cycle. Apart from heavier weaning weights, well managed tight calvings give far more uniform groups of cattle available for sale, more efficiency and lower cost of production.

At Rennylea we take pride in practising what we preach. The 2015 spring calving of 950 females had an average calving date at day 14 and the 2015 autumn calving of 400 cows was day 15.

Management practices such as this keep the Rennylea Angus cow herd at the forefront of female fertility at work in the real world.

SIRE BENCHMARKING RENNYLEA SIRES

The Angus Sire Benchmarking project commenced in 2010 and Rennylea has submitted sires for progeny testing each year. The results are on the Angus website and below are the current performance records for the 11 sires that have been progeny tested. There are additional Rennylea sires entered by other breeders, including bulls Rennylea E11, F340, & F857. The younger bulls are still going through data collection. The average of these bulls illustrate the Rennylea breeding focus.

								July 2(	016 A	' sngu	Austra	alia Bl	2016 Angus Australia BREEDPLAN	LAN										
Name/ID	Calving Ease Dir (%)	Calving Ease Dtrs (%)	Gest. Length (days)	Birth Wt. (kg)	200 Day Wt. (kg)	400 Day Wt. (kg)	600 Day Wt. (kg)	Mat. Cow Wt. (kg)	Milk (kg)	Scrotal Size (cm)	Days to Calving (days)	Carcase Wt. (kg)	Eye Muscle Area (sq.cm)	Rib Fat (mm)	Rump Fat (mm)	Retail Beef Yield (%)	IMF (%)	NFI-P (kg/ day)	NFI-F (kg/ day) D	Docility	Angus Breed. Index	Dom. Index	Heavy Grain Index	Heavy Grass Index
RENNYLEA	+0.4	+0.7	-1.1	+3.4	+37	+73	+89	+72	+16	+2.9	-6.5		•	+1.5	+1.9	+0.6	_	+	10	+	\$141 +	\$124	+\$166	+\$127
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RENNYLEA	+2.3	+0.7	-6.0	-0.4	+41	+75	+101	+66	+29	+1.0	-3.3	+48	+7.8	-0.4	-0.2	-0.7	+2.4	+0.32 +	+0.28	٩	L			
F266 (AI)(ET)	%06	84%	98%	98%	98%	98%	88%	%96	91%	97%	72%	91%	91%	92%	%06	86%	89%	79%	86%	67%	cUI¢	- 001\$+	+\$104	4\$1Ub
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RENNYLEA	-5.1	-3.9	-3.5	+3.9	+49	96+	+136	+124	+24	+0.5	-2.5	+85	+6.3	-1.0	-2.5	+0.1	+4.3	-0.04 +	+0.03				ر ب ب	- F F J .
G255 (APR)(ET)	81%	74%	98%	98%	97%	96%	96%	88%	77%	95%	61%	81%	85%	85%	83%	79%	83%	77%	85%	+ 86%	+ 1514+	- /nt¢+	+¢104 +¢11/	/11¢+
	Moder	Moderate birthweights, plenty of growth and high marbling	hweigh	ts, plen	ty of gr	owth ar	id high	marblin	g.															
RENNYLEA	+4.9	+5.1	-6.4	+2.4	+47	+95	+120	+89	+20	+1.7	-9.4	+70	+7.6	+2.8	+2.5	-1.5	+3.8 +	+0.35 +	+0.56	م	¢160	, , , ,	¢100	, ć 1 10
G420 (APR)(AI)	70%	60%	92%	92%	88%	88%	89%	81%	67%	89%	59%	76%	77%	77%	78%	73%	72%	63%	63% 8	87%	+ cot¢+	- CCT¢+	001¢+	40 +740
	Fantas	Fantastic fast growth, moderate maturity pattern, positiv	jrowth,	moder	ate ma	turity po	attern, I		'e fat.															
	+2.4	+4.4	-8.6	+2.9	+47	+89	+118	+85	+23	-0.2	-3.0	+57 -	+12.8	+0.3	-0.9	+1.7	+1.2 -	-0.01	-0.11	+15	, , , ,	1013	5	, ć 1 3 3
	80%	62%	98%	97%	95%	94%	93%	85%	74%	92%	56%	80%	81%	83%	81%	76%	79%	64%	64%	95%	7CT¢	_		cc1¢+
	Low bi	Low birthweight and calving ease	ht and e	calving	ease.																			
RENNYLEA	-2.6	+2.8	-3.4	+3.8	+47	06+	+117	+85	+26	+3.1	-6.8	+68	+9.5	+1.7	+1.7	+0.6	+3.4 +	+0.19 +	+0.38	+11	¢110	2013.	, ċ 1 6 0	76135
H556 (APR)(AI)	76%	56%	896	96%	%06	87%	86%	81%	%69	84%	53%	76%	71%	75%	73%	68%	%69	55%	55% 8	86% 7		- 07T¢1		001¢1
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RENNYLEA	-2.5	-1.0	+1.5	+3.9	+45	+86	+105	+83	+22	+3.1	-4.8	+58 -	+15.7	-0.6	-0.8	+2.0	+4.0 +	+0.34 +	+0.61	+12		1 20	172	10121
H708 (APR)(ET)	73%	63%	94%	92%	88%	83%	81%	78%	67%	78%	57%	73%	70%	68%	%69	65%	67%	57%	58%	87%	- 0+T¢			1¢1¢+
	Elite carcase.	rcase.																						
RENNYLEA	-11.8	-2.2	+0.8	+7.0	+60	+112	+143	+121	+22	+2.6	-4.2	+88	+10.7	-0.9	-1.3	+1.3	+3.2 +	+0.12 +	+0.08	-4		. ć11 F	, Ć 1 E E	. 6127
J140 (APR)(ET)	72%	57%	94%	94%	89%	84%	81%	77%	63%	78%	43%	73%	68%	68%	67%	63%	65%	49%	50%	+ %68	+ 761¢+		0	+7144
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High performance.

RENNYLEA	-0.8	-1.6	-0.5	+2.0	+40	+76	+101	+65	+27	+1.2	-3.6	+59 +	+18.8	-0.2	-1.7 +:	+1.5 +3	+3.9 +0	+0.44 +0.64	54 +4	ل ± 138	۲¢12	±¢120 ±¢160 ±¢127	, L', T
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RENNYLEA	-1.0	-0.6	-3.0	+4.0	+48	+91	+127	+89	+24	+1.0	-5.0	+78 +3	+12.3 +	+2.2 +	+1.3 0	0.0	+3.6 +0	+0.29 +0.34	34 -10	) , 6157	, ¢173	5173 C	1 ÷ 1 ÷
K178 (APR)(ET)	61%	49%	71%	77%	73%	75%	75%	73%	62%	79%	44%	65% 6	65% 6	67% 6	66% 5	58% 60	60% 4	48% 48%	62%		71¢+ 7	71¢+ c	1414
	Curve	bender	growth,	, modei	ate ma	iturity <b>F</b>	Curve bender growth, moderate maturity pattern, marbling	marblin	ıg.														
RENNYLEA	+1.1	+1.1	-3.7	+5.0	+49	96+	+122	+112	+16	+2.8	-7.2	+ 67+	+8.3 +	+0.7 +	+1.0 -1	-1.0 +/	+4.7 +0	+0.43 +0.54	54 +1	, ć1 F0	, t'j	, , , , , , , , , , , , , , , , , , ,	. 6120
K1082 (APR)(AI)	56%	42%	85%	76%	71%	73%	77%	74%	59%	78%	41%	64% 6	61% 6	64% 6	63% 5.	54% 51	55% 44	44% 44%	6 55%		NST¢+ 0	0 +5T24	+ + + +
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Breed Avg. EBVs for 2014 Born Calves	-0.2	-0.1	-3.5	+4.3	+41	+75	+98	+86	+14	+1.6	-3.6	+54 +	+4.4 +	+ 0.0+	+0.0+	+0.3 +)	+1.5 +0	+0.08 +0.14	14 +4	+102	2 +101	1 +104	4 +102
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At the Beef Improvement Federation conference in Kansas in June, Doctors Glynn Tonsor and Ted Schroeder from Kansas State University outlined the vision of where the North American Beef Industry will be in 20 years.

At a high level the comparative advantages will be:

- i. World trust and customers place a premium on US product
- ii. Known for its grain finished high quality product
- iii. Sound & effective infrastructure, feed base, genetics & meat quality expertise, research and outreach
- iv. Property rights encourage investment, surety of contracts

The competitive disadvantages will be:

- i. Not the lowest cost producer
- ii. Less research dollars are being invested for the future.
- iii. Disagreements and poor communication, coordination & signalling, eg research that builds demand
- Iv. Fragmented support of increased traceability, focus on current and future beef demand.

Key opportunities and challenges

- refining domestic consumer efforts, key questions (85-90% of US production is consumed domestically, wealthy country) -cultural mix & diverse food preferences, see graph -identify wealthiest 10% globally, TPP& TTIP (trains Atlantic Trade & Investment Partnership, TPP 830m people, building a Japan focus with reduction in tariffs of 38.5% to 9%, also focus Chile, Mexico, Vietnam, -global competitiveness eg Mexico building infrastructure, Brazil moving into grain finishing, buffalo meat expansion eg Indonesia & Phillipines
- Expanding foreign consumer focus

To achieve the vision by 2030 will need improved communication, coordination and signalling (eg. Meat quality) through the value chain. There will be less operations producing more beef, and exports as a proportion of production will be more than 11%.



#### US demography is changing, especially the Hispanic percentage, and alongside that, changing demand for red meat and other proteins.

Verified practice claims will be more important, key questions will be can the industry specialise without fragmenting. More sophisticated hedging and investment will enable growth.

In the US the National Restaurant Association market research in 2016 shows the top 5 factors for maintaining consumer confidence

- i. Transparency and trust
- ii. Local is trendy but fuzzy
- iii. The story matters through brand positioning
- iv. Premium product is in, quality is everything
- v. Fat is back, marbling reigns supreme



At McCurry Angus, in the gorgeous Kansas tallgrass prairie.





Connealy Angus Ranch, Nebraska, cows grazing summer pasture in the Nebraska sandhills.

Mr. Brad Morgan from the Performance Food Group, a very large distributor of protein and everything to do with food service, from serviettes to water jugs, gave an interesting presentation on meeting consumer needs.

#### He outlined the THE 5Ms of consumer demand

- Meat lovers, know what they want, high quality, 1/3 of the dollars spent on red meat category, they are mainly middle aged women who do the shopping for their household, and eat meat 6x per month
- II. Milennials or in Australia are called Generation Y (born 1981 – 1996), and their preference is for ground beef. They are the first digital generation and they are the future of the meat category.

- III. Motivation: research shows that customers are looking for new reasons to use meat, from how it is raised, to safety, health, animal welfare and sustainability.
- IV. Mums are the global weapon, spend \$20 trillion and the major shoppers. In the US it is predicted that in 10 years women will control 2/3 of consumer wealth and already control 85% of consumer purchases. The Milennials are the major change driver and the average age of a US first time mother is 26 years.
- V. Marbling: the demand for high quality beef, produced transparently, underpinned by brands is growing. Marbling has improved the flavour and tenderness. 71% of the variation in beef sensory attributes is attributed to marbling.

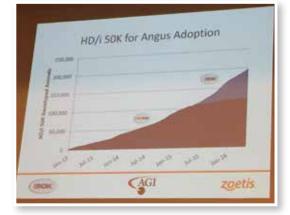


Connealy Angus bulls being prepared for sale in their progeny groups. This was a superb visit to a wonderful family operation.

### GENOMIC UPDATE

One of our key motivations for attending the Beef Improvement Federation Conference this year was to keep abreast of genomic developments. Since last year, Rennylea has implemented full scale genomic testing in our calves by 6 months of age. After weaner females are sold for export, the rest of the calves are tested.

Dr. Dan Moser from AGI (American Genetics Inc, a subsidiary of US Angus) outlined recent progress in the US angus breed. There are 110,000 samples tested in the US now with the i50K (imputed 50K) test. Growth in testing has risen quickly since the imputed test was released in 2015. The large body of data is improving the calibration and accuracy of the tests. It also reinforces the fact that continuous phenotyping and genotyping is required to improve the accuracy.



Analysis shows that the accuracy from the i50k test is improved as if the following numbers of progeny of the sire (or dam) had been measured:

For calving ease this is = 24 For growth and efficiency traits = 18 For carcase traits = 10

These results confirm the promise of improving accuracy at a young age, and subsequent selection decisions for replacement sires and dams. It will be equally useful for the selection of superior females for embryo transfer programs.

Dr. Kent Anderson from Zoetis explained the new GeneMax product to assist commercial cattlemen select replacements. Zoetis has a training population of 37,000 animals to validate the test. The Genemax test is being used to produce an index for commercial female selection (called Cow Advantage), combining calving ease maternal, weaning weight, heifer pregnancy rate, milk and mature weight. It can also create the sire parentage information. The training population is based up > 75% angus content.

There is a similar 'feeding index' for feeder cattle combining yearling weight, carcase weight, marbling, rib eye and fat. If the potential costs and income are known, this test has the potential to refine the bulls purchased by commercial customers.

HD SOKY - CORREL	ATIONS &	GENERAL M	AL RECORD)
HD SOROY - CORREL NON-PARENT GEEE Intel Water States Const Man Weeds Water South You Man Intel Water Intel South Constanting Man Programs Matter Weight Matter Weight Mater Regist Mater Regist	A 01 19 <sup>4</sup> 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27	HO BIEK VE / (HO) 4/2 (40) 4/2 (40	HD SIRL VS ACC 0.54 0.37 0.39 0.39 0.34 0.42 0.31 0.24 0.31 0.39 0.31 0.29 0.31 0.29 0.31

#### This slide shows the correlation of the breeding value (EPD) from the i50K DNA test, with the measured performance, in animals with no pedigree record for the various traits. What it shows is that these correlations and accuracies are becoming significant for commercial animals.

The developers have modelled the return on investment for using this GeneMax test in commercial herds. If the top 2/3 heifers are tested genomically and the top 45% selected, bulls are selected on the same index, using the top 25%:

- i. Using a 6% discount rate, accounting for the cost in testing in year 1, there were total benefits of US \$250, breakeven years 3 & 4, with 6 calves \$300 extra income.
- ii. Other benefits include sire matching, and the ability to corrective mate.

The progress in both the i50k test and the commercial test illustrate the progress made in the last 12 months.

significant Importantly we need а number Australian seedstock of herds, with complete data recording to embrace genomic testing. The important point is to test whole drops of calves, rather than small numbers of selected animals. That will assist further validation and improvements to the algorithms. Implementation of genomics will not replace complete collection of phenotypes, but what has become clear is that less herds carrying out more complete recording, particularly fertility and the hard to measure traits, will assist the whole database. THIS **REQUIRES A NEW MODEL OF COST AND REWARD** where complete collection of phenotypes is rewarded.

We have some other conclusions. Incorporation of MSA data into the commercial indicies will be a significant source of data. More complete recording will assist our current lack of accuracy on mature cow weight and ability to moderate maturity pattern and cow size. We can see the potential to produce indicies for clients based on their requirements and select bulls at a younger age.



## **RENNYLEA VIDEOS**

There are three videos on the home page of our website, all produced for different purposes. The first captures the breeding philosophy of the Rennylea program, and Bryan speaks about his 45+ years and the direction he has taken the herd.

The second is an educational video for the NSW Department of Education for agriculture students in years 11 and 12. The topic of the video is Rennylea W449 and her incredible breeding record, 137 calves. It uses her story to describe reproductive technology and how embryo transfer becomes a tool to increase the rate of genetic improvement.

The final video we were part of as a Aus Inc promotion for McDonald's Japan in early 2015. It was an honour to be part of this production, on behalf of the Australian industry and quite an experience with a large film crew of around a dozen people. McDonalds then made a placemat with a couple of photos from the shoot and 40 million were distributed across the stores in Japan.



## **RENNYLEA SCHOLARSHIP THOMAS KEOGH 2016**

Tom said in recognising the award, "This scholarship is an enormous help to me as it enables me to find the time to focus more on my studies and enables me to complete my placements at various livestock enterprises. Working on farms in the areas that interest me are where I think I learn the most and am able to put into practice the things I learn at university. This scholarship allows me to cut down on the amount of work I am currently doing around Wagga, and really focus on what is most important to me.

This scholarship significantly reduces my workload allowing me to focus at uni to enable me to do a research project next year in an area that will hopefully send me in the direction of my professional aspirations. I am very interested in genetics and nutrition in the livestock industry and really look forward to learning through research and placement all about recent advances and find ways to further this technology.

I am extremely grateful for this scholarship. I thoroughly enjoyed doing placement with Rennylea and learnt a great deal from how their business is run. The work that Rennylea does is certainly an area of great interest to me and I cannot thank them enough for assisting me in my aspirations to learn more about their work and other, similar enterprises. This scholarship will hopefully, one day, enable me to give back to them and many others.



Thomas Keogh, Bachelor of Animal Science Rennylea Future in Livestock Recipient 2016 receiving his award from Executive Dean of the Faculty of Science, Professor Tim Wess.



## Newsletter Winter 2016

Focus | Integrity | Performance | Profit | Commitment | Innovation

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www.facebook.com/RennyleaAngus



twitter.com/CorriganLucinda







Sue Govan: "being meticulous with all of our cattle records guarantee that we are giving our clients the most accurate information available, as correct records are the foundation of all recording. I take great pride in my job integrity of Rennylea Angus."

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