

Focus | Integrity | Respect | Innovation | Teamwork | Animal Care

EDITORIAL

We have gradually seen the reversal of the seasonal conditions over the autumn, with significant rain events in each month since March. The grass grew profusely while the soil was warm and then in June we started to see surplus water replenishing above and below ground storages. We sincerely hope your seasonal conditions have also improved, realising that it is still patchy around Australia.

During the 'lockdown' period since mid March there has been time for lots of reading and extending our thinking about management and leadership. Many thought leaders have commented on this and the luxury of spending more time on the 'how' we do things and less on the 'what'. There is an article in the newsletter which draw out some key learnings about what has worked best, particularly centred around the people with whom we connect.

When balancing the economic, environmental and social impacts of our business we need to develop and draw on many skills, soft and hard, to become the leaders we want to be and work with those around us. Leaders are clear about the values that are important for the team. At Rennylea our Values are written on the banner of this newsletter and elsewhere in our publications. It is actions that matter rather than words, ensuring we do what we say we will do.

It has also been a good time to carry out some projects we have not had time for previously. It has been fantastic to be involved in the Meat and Livestock Australia Carbon Neutral 2030 pilot program for cattle producers. We last carried out an audit of our emissions 10 years ago. We have updated our emissions audit. It is very encouraging to see the effect of the new systems we have implemented to maintain the growth rates of young cattle and reach their target end points. All this has been done with no grain inputs in 2020.

We are also hosting a research site in the Dung Beetle Ecosystem Engineers project, another MLA project aiming to understand and augment dung beetle activity throughout the year. The project leader is Strategic Professor Leslie Weston from Charles Sturt University, an international authority on plant biology investigating plant/plant, plant/microbial, plant/herbivore and insect/soil interactions.

The program includes the release of new varieties from France and Morocco over the period of the project. We enjoy the visits of the DBEE team each month, discussing the activity and the variation across monitoring sites here and in other locations. The closure of the Victorian border has created challenges for the team and we hope that is relaxed after the proposed 6 weeks.



Dr Russell Barrow with Bison dung beetles collected at the monitoring site

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The cattle have done well during the last 6 months, with the young stock carefully monitored to maintain weight gain and the cow herd fed in sacrifice paddocks plus the addition of some agistment. It has also enabled us to protect the country most at risk during the autumn and it has come through the last couple of years in good heart. The transformation from the smoke filled, hot and dry of the summer is incredible although water resources are still not completely restored to the levels of 2017.

We have catalogued 174 bulls for the spring sale and expect to offer around 160 on the day. This always depends on the continual assessment by our vets as we approach the sale. The bulls are fully described by their Breedplan data and the meticulous collection of data since birth.

Please contact Ruth (0400 302629), Anthony (0437 043443) or Bryan (0429 038993) to discuss any of the lots.

We are open on the mornings of the 7th, 14th and 21st of August for inspections and any other time by appointment. Please ring Anthony on 0437 043443.

After 26 years of publishing this newsletter, we are moving to a fully electronic format. This recognizes the changing operating environment, requiring great flexibility and online retrieval of information.

It also gives us time for reflection. When Lucinda commenced writing this newsletter in 1994 it was a completely different era in terms of communicating information and featuring

businesses doing things differently especially in the arena of genetic improvement. Quickly we developed a community of correspondents who would get back to us with commentary on various articles, make suggestions and work with us to disseminate new ideas. I could mention many names but wanted to acknowledge the wonderful support and encouragement given by Ross Allworth from "Talooby" Holbook. We hope we can support and inspire young people in Agriculture the way that Ross did for us during our early years.

We have wonderful letters (yes letters!) on file thanking us, sometimes admonishing us for a point of view. I wrote the newsletters through my 9 years as a Non Executive Director of Meat and Livestock Australia and shared the thought leadership that was emerging.

Our view is that the dissemination of information is now a much more crowded space, with more pitfalls for the novice. Our young team seek all their information digitally and hence now it the right time to make the switch. Thanks for sharing and reading.

Our online newsletter is called The Bulls Roar. You can subscribe on the home page of the website at www.rennylea.com.au or send an email to rennylea@bigpond.com

Bryan, Lucinda, Ruth and Anthony Corrigan

PROVENIR ON FARM ABATTOIR

The startup company Provenir has been travelling through the border region carrying out their weekly program of 20 head. The carcasses are taken back to their boning room in Southern Victoria and distributed to a clientele through direct marketing, grocery, butcher shops and before the pandemic, the food service sector.

We were keen to try the system and found 20 head to supply in mid June. You can read about the company and their goals and values on their website www.provenir.com.au



NEW FACES ON THE TEAM

Over the past few months we have been very fortunate to welcome three new young faces to the team at Culcairn and Rennylea.

Claire Scott

Brought up on a farm in Donegal, and trained as a Veterinary Nurse from the Institute of Technology, Letterkenny In the Republic of Ireland, Claire made her way to Western Australia in 2011.

With a background in Veterinary Nursing, feedlot management and fly in fly out Health, Safety and Environment Manager in the Pilbara, Claire shows remarkable ability and flexibility taking on new challenges. We are loving her sense of humour working with the bulls at Culcairn. No doubt you will meet Claire through the bull selling season.



Dylan Cook

From Pambula on the south coast and a pretty handy footballer, Dylan Cook completed a Greenkeeping apprenticeship before coming to the Riverina to work in various jobs in the Wagga Wagga saleyards and on farms.

Dylan has quickly become an indispensable part of the team at Culcairn and definitely has the best maintained lawns at 'Kalinya'.

Rhys Tapscott

One of the things we love about today's connected world is how we can post a position on one of the electronics sites and it is shared or travels widely through the wires. All three of our recent appointments have found their positions in this way, on one occasion the advertisement was shared 80 times.

Rhys met Anthony whilst Rhys was working with a mustering team in the Northern Territory in 2012 and Anthony was working with Crown Point Pastoral Company. When he saw the advertisement to work in the Rennylea cow herd he contacted Ruth. Rhys comes from Narrabri and is a qualified electrician in addition to having a farming background. He ran his own electrical business since completing his apprenticeship and specialised in commercial work.

Rhys, Virginia and their new three children Oscar, Elke and Eva have joined Rennylea at Bowna and he works with Ruth in the reproductive and nutritional management of the cows. A thoughtful and smart operator, Rhys has quickly picked up the considerable detail in a seedstock herd.



BEEF IMPROVEMENT FEDERATION OF AMERICA ANNUAL CONFERENCE ONLINE IN 2020

This year's BIF conference was moved to an online event and incredibly 1,600 people registered from around the world.

There are some very good presentations, the videos of which are now on the BIF website. These include great genomic presentations from Dr. Daniela Lourenco, alternate proteins from Dr. Alison Van Eannaam, a systems approach to beef cattle sustainability from Dr Clay Mathis. In addition there

were presentations from Australian researchers including Dr. Brad Walmsley on the Breedobject V6 revisions, Dr. Matthew Woolcott on the Trans Tasman cow efficiency project and Dr. Brad Hine on the Immune Dex development.

All videos and presentations online at www.bifconference.com

AUSTRALIAN BEEF REPORT

Ian McLean, Phil Holmes and Michael Wellington have recently released The Australian Beef Report, 2020 Vision. The three authors represent consulting companies Bush Agribusiness and Holmes & Co.

The authors hosted an online forum when they launched the report. The forum covered the composition of the writing team, independent reviewers including Dr. Andrew Ash, Andrew King and the Richardson family and the 27 members of the Pastoral Panel. These are the principals of beef businesses around Australia, family and corporate operators and their answers to 6 key questions.

We were asked to participate in the panel and the resulting reflections of the 27 players are very insightful. Some of the commentary is contrary which is to be expected but also challenges your point of view.

In summary the Report shows that beef businesses across Australia are not very profitable, on average. The Report recommends

- i. improving the capital management (capex)
- ii. Greater value on Intellectual Property
- iii. Preserving environmental capital
- iv. Improving returns on capital.

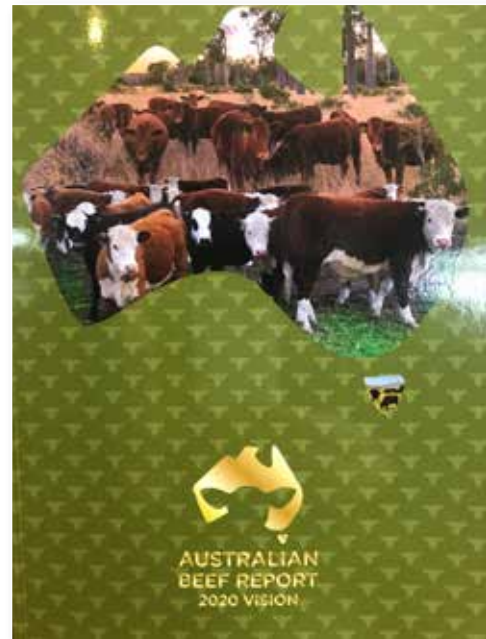
In the Report business performance is analysed in 8 regions across the country by herd size, and makes commentary about the relationship between scale and productivity. It discusses the barriers to profit and profitability, demographics, scale, the macro factors of land values, terms of trade, total factor productivity, herd rebuilding etc.

The top 25% of businesses analysed make an average of 3% return on assets in Northern Australia and 2% ROA in Southern Australia.

Regional variation was also analysed. Producers need to understand the strengths and weaknesses of their location.

The final section is an analysis of natural resource management by 3 experts in the field, Dionne Walsh, Col Paton and Bob Freebairn. They discuss the current state of knowledge for maintaining the natural resource base.

We think the Report is essential reading for the professional beef producer, to understand the challenges and think about different approaches. The report is available to order through the Bush Agribusiness website. www.bushagri.com.au



The Australian Beef Report



The replicated dung beetle breeding site at Rennylea

WONDERFUL CONTRIBUTORS REMEMBERED

Two of Australia's foremost pioneers of science based performance testing of livestock in the grazing industries have recently passed away. We acknowledge their service for the greater industry's benefit.

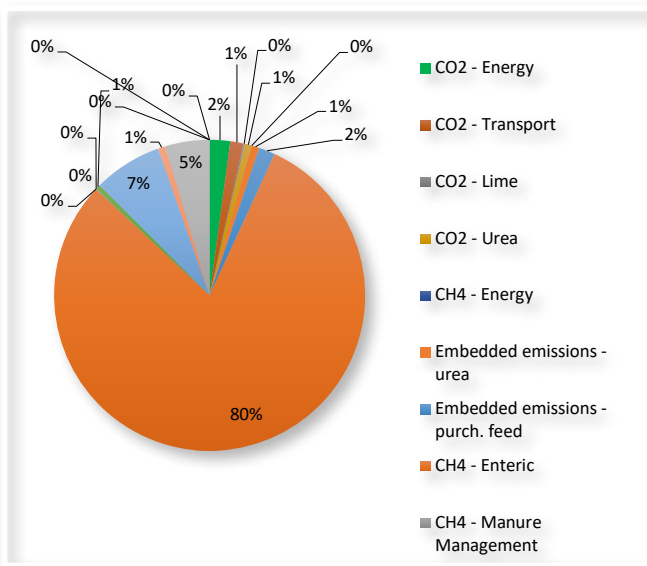
James Litchfield in our minds is the foremost leader of genetic selection in both Angus cattle and Merino sheep. He was a quiet man but always inspiring to talk with about performance livestock, a great mentor to us and hundreds of others.

Andrew Gubbins was a great innovator and performance tester of Angus seedstock. He and his wife Mary produced many bulls and females that have had an incredible impact on modern day Australian genetics. Bryan purchased a bull at their first auction which stirred his passion to produce cattle with lasting commercial relevance.

CAN WE BE CARBON NEUTRAL 2030?

We have recently been a participant in the MLA Carbon Neutral 2030 pilot. We have many questions about how to head down the carbon neutral pathway and the pilot program has assisted our thinking.

Firstly we have completed an audit which updated the earlier one Ruth completed in 2010. The accounting tool used is the one developed by the University of Melbourne's Primary Industries Climate Challenges Centre led by Professor Richard Eckhard. See the diagram below.



Rennylea Emissions Profile 2020, as part of the CN2030 Pilot

The key message is: Weight for age is driving lower emissions. High quality planned grazing systems can rival the emissions profile of feedlots and emissions intensity falls with greater productivity. The two big drivers are the weaning rate in the herd and the growth rates. Getting these right will reduce emissions intensity by 30% and total emissions by 23%.

With all our cattle produced to reach target weights, bulls 600kg minimum at 18 months, heifers 300kg by 14 months etc, achieved with very low inputs, we are very heartened by the resulting emissions intensity. The model includes all electricity and transport inputs and the life cycle analysis of inputs through the value chain.

We included all our tree plantings since 1990 which with set asides are about 200ha and it raised for us questions about the ongoing quality of their growth and density. Like many of the issues around carbon accounting, there will be detail to work through. The analysis also includes the percentage of permanent, perennial pastures and their role in improving organic matter (soil carbon) to 30cm.

We concluded that we could reach carbon neutrality within a 10 year plan (and shorter time period) using our current approach of genetic improvement, fast growth to 400 days so that turnoff cattle reach maturity and are marketed as young as possible. Further landcare, stewardship, biodiversity and environmental plantings will offset the remaining emissions from the cow herd. We also recognise there is a body of research in the pipeline that will most likely give us more options for reducing and mitigating our emissions profile.

THE BEST BETS FOR METHANE REDUCTION

Professor Richard Eckhard from the Primary Industries Climate Challenges Centre outlined the best bets for reducing methane emissions at the recent Northern Australia Beef Conference. These include the addition of tannins and oils to feedstuffs for intensive production systems – dairy and feedlot cattle.

Animal house studies conducted by CSIRO have found up to an 80% reduction in methane with the small addition of red algae (*Asparagopsis*) to the diet. The caveat on this work is the present of bromohalogen compounds which have been shown to have toxicity issues in some studies.

Vaccination against methane production to save energy has been a program of work for more than two decades, the hypothesis being that if the belched methane is converted into a different biochemical pathway in the body, the energy currently lost can be saved.

The low hanging fruit in the reduction of methane is the potential to change herd structure, reducing the average age of the cowherd and also improving productivity so that prime stock are marketed at an earlier age. These practices lower

the emissions intensity in the product.

Then there is the approach taken with genetic improvement, to improve growth and productivity and the potential to change the rate of methanogenesis in the rumen. There are antagonistic relationships that need to be managed, as leaner and faster growing animals in a supplemented situation have been shown to have lower emissions. The question for the breeder is always, what will such a selection goal have on the efficiency of the cowherd, grazing on forage in the paddock. Will it raise cost of production or lower fertility in a commercial situation?

The answer is similar to many trade offs in selection efficiency, there are animals that have the genetic profile that counter the common relationships which can be used to progress to the breeding goal. Progress will be slow with a number of priorities, high fertility, calving ease, fast growth, tender, marbled beef, docility, structure to name the topline goals.

For the full article on Richard's address refer to Beef Central.

US BEEF CONTINUING TO ACCELERATE ITS MARBLED PRODUCT

Key points:

- Composition of US beef continues to shift towards higher marbled product
- Half of beef consumed in the US is in the form of ground product – a blend of domestic and imported beef
- Lean manufacturing trim imported from Australia remains a critical component of US value chain.

Like *Meat Standards Australia* grading system, American beef undergoes a similar process of grading to identify carcasses of differing quality. This is a voluntary process however the majority of US fed cattle are graded through this system.

US beef grades:

- Prime grade: high quality, abundant marbling (8-13% fat)
- Choice grade: high quality, less marbling than prime grade (4-10% fat)
- Select grade: uniform in quality, some marbling (2-4% fat)

Over the past ten years, the composition of US beef has shifted, with higher marbled beef becoming much more prominent due to strong price-grid premiums. Marbling underpins much of the segmentation and price differentiation of US prime cuts within the domestic and international markets.

The percentage of US ‘Prime’ and ‘Choice’ graded beef has continued to lift, as more product with higher levels of intramuscular fat is produced, an outcome of a production system centred almost entirely on feedlots. ‘Select’ grade beef made up just 17% of all US graded beef in 2019, down from 36% at

the beginning of the millennium.

US beef consumption

Over half of US beef is consumed as ground product, with the burger the most popular item consumed through the vast array of fast foods chains that stretch across the country. Over the decades burgers have remained a mainstay of the US diet and underpinned the beef trade from Australia – trim from US fed cattle is typically too fatty to simply grind into a desirable chemical lean (CL) burger mix and requires blending with leaner product.

If US feedlots continue striving to create this densely marbled beef, this will uphold the need for leaner imported trim to supplement the blending process. With the US fast food industry expected to continue growing, these factors should help to underpin demand for Australian lean manufacturing beef.

US beef exports grow

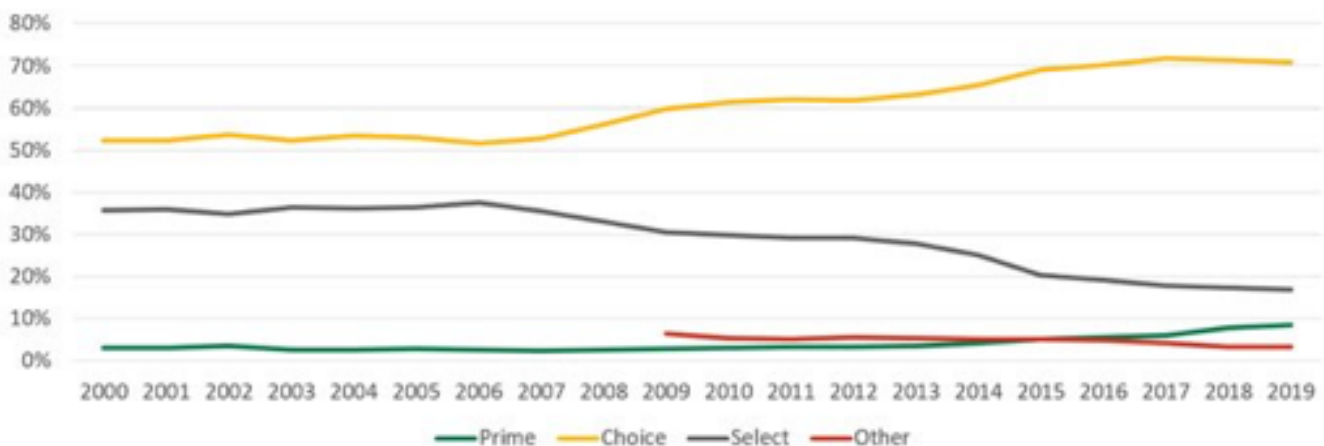
US beef exports have been growing; in 2019 they exported 966,000 tonnes swt, up 33% on 2010’s figure of 727,000 tonnes swt. In particular, key Asian markets such as Japan and South Korea now account for approximately half of all US exports. These markets in particular value high quality marbled beef, a product which the US is very well suited to produce and deliver.

In 2019, the US exported 11% of its total beef production.

Source: © Meat & Livestock Australia Limited, 2020

USDA grading averages

Composition of graded US beef



Source: USDA

Percentages are calendar year averages

BEEF IMPROVEMENT FEDERATION CONFERENCE 2020. SYSTEMS APPROACH TO BEEF CATTLE SUSTAINABILITY - DR. Clay Mathis, Texas A & M

Dr. Mathis sits on the US roundtable for Sustainable Beef. This has assisted a better understanding of sustainability. His presentation is accompanied by a rather complex diagram which illustrates the developments in systems thinking to understand the interconnectedness of the different parts.

“What is sustainable beef?”, he asks at the beginning of the presentation.

It is not just passing on the property and looking after all resources. It is a triple bottom line for all parts of the value chain.

Trends:

- A. Global
 - i. World population and inc food demand
 - ii. Urban sprawl affects land values
 - iii. Consumer interest in food production increasing
 - iv. More regulations and complexity of doing business, 6.7% / year USA, Harvard Business Review
 - v. Incr speed of technology development
- B. At the production level
 - i. Climate change
 - ii. Commodity input values
 - iii. Land values increasing
 - iv. Decrease, or more expensive labour

The triple bottom line of sustainable beef, environmentally sound, socially responsible and economically viable

1. Start with profitability – of the entire production chain
Focussed on the profitable management of cattle and natural resources, efficiency of beef production, this was necessary to stay in business.

What is the risk framework, expand cow numbers, product and revenue, does fear drive decisions making?

- i. Rain creates limitations! Or lack thereof. The risk of drought, supplementary feeding increases cost of production. Market forces, selling on a low and buying when cows are more expensive.
- ii. World population, urban sprawl increases land values up, drive profit down

2. Social acceptability of beef production

If we improve social acceptability we improve consumer trust.

It has to be a virtuous cycle. It becomes a continuous reinforcing loop – for both social and environmental cycles

If you look at the global trends:

World population and speed of technology development are good for the industry, while the other 3 are negative. We are counting on an increase in price due to increasing world population. All the on farm challenges increase cost.

Where are the levers to overcome the challenges?

- i. Increase consumer trust – for the industry, it is the one thing that determines the global demand for beef (US 13% exported)

So the opportunities are #1 export market expansion, production quality and certification eg. NLIIS #2 Domestic market, handling practices, cattle well being, environmental impact.

THESE ALL INCREASE CONSUMER TRUST. This is the greatest leverage for the industry and producer.

The US Beef Industry is underinvesting in this area.

INDUSTRY - Improved cattle management: some producers are not responsive to financial signals for improvement. Are the production methods and beef products from these operations continuously improving.

AT THE BEEF ENTERPRISE LEVEL – sustained profitability results from implementing efficient production systems to withstand the effects of drought and other external challenges.

Put all three together as virtuous NOT vicious cycles! Only produce truly sustainable beef if the production is economically viable. Continuous improvement started with the incentive or desire to produce beef and then continually improve and make change or these will be VICIOUS CYCLES.

Need the data to market the environmental, animal welfare etc. to make the sustainability of the production system.

Transparency is part of Consumer Trust

Work even harder, who we are and what we do to cross the threshold to turn the tide of negativity and grow trust.

One bad actor – hold those in the industry personally accountable. How do we motivate and incentivise those who don't respond? Hold them accountable.

Continuous improvement – match cattle to the environment is very important.

Can we model away the assumptions? LCAs and all models are only as good as the assumptions



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