

THE HORMONAL MAIL

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MANAGEMENT SERVICES

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EDITORIAL

At last there have been some useful rains in many of the main rangeland cattle breeding areas in Northern Australia. This will increase the optimism in these regions and with some follow up falls over the next month or so will hopefully give breeders the confidence to start restocking and rebuilding their breeding programs. I hope that wherever you are in the world that the seasonal conditions are being kind to you and if not, then you are able to adapt and adjust to the conditions to get through the tougher times and work with Mother Nature.

In Australia, we are currently preparing for the largest beef industry exhibition in the country. This event occurs every three years and attracts hundreds of overseas visitors as well as producers from all over Australia. I am referring, of course, to Beef Week 2018, an event that is held every three years in Rockhampton in Queensland. This event has something for everyone involved in the beef industry and provides a great forum for producers, breeders, researchers and all other sectors of the industry to meet and share information both on an informal and formal basis. Many people put a lot of effort into organising this event so many thanks to them for their efforts and foresight in bringing all aspects of the industry together for this feast of learning, sharing and socialising. For some, this is the only time they can get away from their business so it is a combination of work and a holiday.

In this newsletter I have added some comments on feed efficiency and how it is measured. This has been a point of interest and discussion for many years in the beef industry and there are a number of differing views and methods of assessment. I must add that I certainly am not familiar with them all or understand them fully. However, it is a most important consideration and is necessary to give us an idea of the most efficient feed converters in our herd.

Finally I would like to encourage as many of you as possible to come to the field days we are holding in April in NSW and visit our stand at Beef 2018 (stand S124). This is part of our philosophy of sharing knowledge so we look forward to you making a little time to share with us.

WHAT'S (BEEN) HAPPENING

*We are currently preparing for Beef 2018 at Rockhampton Showgrounds from the 7th. – 11th. May. We will have a stand at **S124** which is an outdoor stand just west of the cattle pavilion. We will have a range of displays explaining the CLMS system plus power point presentations running during the day. We also hope to have one of Albert Hancock's show bulls or cows on the stand at specific times to demonstrate linear measuring and ultra sound scanning of the bone shape. We would welcome your presence and the opportunity to share knowledge and learn.

* I will plan to be visiting New South Wales the week after Easter in April to run field days at Gerogery and Yass and visit clients in NSW. The Yass field day will be held on Wednesday the 11th. April with the morning session to be held at Swaggers Motel on the main road into Yass where we will present some of our power point presentations and have morning tea and lunch. In the afternoon, we will move out to Mark and Mandy Wales' Alloura Angus stud about 15 km. out of town on the Good Hope Road.

*The Gerogery field day will be held at the Gerogery Commemorative Hall in Bent St., Gerogery starting at 9 a.m. and then going to Ian and Jill Coghlan's Eurambie Red Poll and Shorthorn stud after lunch. Gerogery is about 20 km. northwest of Albury on the Olympic Way highway to Wagga Wagga. If you live in either areas and can't make the whole day, don't worry, you are welcome to attend for however long you can.

* I would like to thank both the Coghlan's and the Wales families for making their cattle and properties available for us to hold both these field days. We are indebted to them for their generosity and willingness to open their properties to us and those who participate on these days.

* We are still very keen to hold more field days in localised areas over the next few months, so if you would like one in your area, please let myself, Albert Hancock (0267334666) or other company directors know and we will get it under way. We would like to be as flexible as possible in our future planning and would welcome and appreciate any input that you can provide for us in this regard.

* I have had several enquiries about when we will hold another 5 day course and whilst we plan to hold more of these in the future, there are some challenges, especially in getting a minimum of 10 people to attend in one area. Unfortunately, the enquiries I have received have come from at least 3 states and we don't really want people to have to travel too far to attend. We have had a couple of generous offers from people to use their facilities for both 1 day and 5 day courses and we are grateful to those people and hopefully can accept their offers in the not too distant future. The main requirements for us when we are holding these days are yard/crush facilities plus a building suitable for catering and running a power point presentation.

*Our current plans are to hold another 5 day course in Central Qld. in the next 2 – 3 months, hopefully June, depending on availability of a site and cattle. We currently have around 8 – 10 producers who have indicated a willingness to attend a course in this area so we are keen to accommodate this need as soon as possible. We have been greatly encouraged by the interest from producers in this region and would like to meet their needs.

*We now have linear measuring callipers available for sale for \$100.00 plus freight so if you are interested, please let me know.

*We remain keen to get some marketing of graded cattle going and are happy to advertise for any of our clients here in the newsletter or on our website.

*The bi-annual Coodardie (Northern Territory) bull and heifer sale will be held on Wed. August 15th. 2018. The O'Brien's would welcome any interstate visitors to the sale and are happy to assist with accommodation arrangements etc. Phone - 0889754460 or Moira – 0428474262.

If any other clients are having sales etc. and would like me to put them in the newsletter, please let me know the details.

***CONGRATULATIONS**

Our congratulations to James and Sally Morse, Wongalee, Molong, for taking out overall Grand Champion at the 2018 Beef Spectacular Feedback Trial held in Central NSW. A field of 95 competitors took part in the competition showing a pen of 5 steers each. The Morse's winning pen of Simmental-Angus steers scored 806.5 points

out of a possible 1000. The runner-up pen scored 731.5 points so it was a comprehensive winning margin. The Morse's have been entering the competition for the last three years and have figured prominently in the placings in every year they have entered. It is a just reward for James and Sally as they are always looking for ways to improve their herd productivity. We have been grading their cows and heifers for the last 6 years so it is pleasing to see the Morse's success and hopefully, in a very small way, a reflection of the CLMS evaluation system. However, the credit must go to the Morse's for their perseverance and hard work and we are thankful that they trusted the system and stuck with it.

*Congratulations also to Albert Hancock and his daughter Rachel for their success at the Sydney Royal Easter Show currently in progress. They showed the champion 16 – 20 month old Red Poll heifer and also had success in the steer carcass competition.

FEEDING EFFICIENTLY

There have been numerous attempts and methods used to find an accurate method of measuring the amount of feed an animal eats and what it produces from that feed. However, those who have attempted to accurately assess this factor have encountered a range of variations that can affect the end result. I'm sure that when you give this some thought you will soon be able to work out most of these variables yourselves. Each of these affecting factors has their own individual impact on the end result and will also vary within each other on the terms of their impact. They include things such as:

- a) genetics
- b) feed quality
- c) feed quantity
- d) animal size
- e) maturity stage
- f) metabolic efficiency
- g) environmental conditions

Certainly, the current trend towards cross breeding is not making the task of identifying methods of measuring things such as feed conversion rates and feed efficiency any easier. We can control, to some extent, other important factors such as feed/nutritional intake and environmental conditions. At least in terms of

being able ensure that all the cattle we are feeding at the same time and the same place are outwardly getting treated similarly. However, what happens when the feed goes in the animal's mouth is not so easily controlled. Certainly, if we have studied the type of animal that does best in our environment and select and bred for the traits that produce the most productive animals, then we are on the way to achieving higher rates of feed efficiency. Unfortunately, there aren't any really fully objective ways of measuring the feed intake again conversion to meat or milk, particularly in a pasture feeding situation. There are feeders called grow safe units that can be used in a fully grain fed situation that can fairly accurately measure the amount of feed each animal eats. These units read an electronic tag on each animal as it enters and leaves the feed stall and records the amount of feed consumed by each animal based on their tag identity. There are limitations in terms of how many animals can access each feed unit, but it does provide a reasonably accurate measure for each animal.

Measuring feed intake in a pasture represents a different challenge altogether. There is research currently being undertaken to measure feed intake by the amount of grass an animal bites off with each bite. However, there are also obvious challenges with this.

We had discussions with a beef research centre in Victoria some years ago about feeding a small number of animals each on a small block of pasture measuring only a few square metres and shifting them on a daily basis while measuring the amount of dry matter in the block before and after the animal grazed. There are fairly accurate methods of measuring the dry matter available in a pasture situation now, so assessing the amount of feed, whilst not totally accurate to the last gram of feed, would give a good enough indication to provide fairly accurate information in terms of grass eaten to weight gain. The drawback with this is the obvious size limitations and intensive nature of such a trial. Each animal would need its own block on probably a daily or maybe up to 3 days grazing period before moving on to the next block. It could be fairly easily controlled using electric fencing, but would be labour intensive given that each animal would require their block to be changed regularly and

need access to water. The trial we were planning would have only had 10 animals in it given the labour requirements. Unfortunately, the research centre closed their beef research facilities before we could carry out this trial.

I think you have probably all heard of measuring tools such as NFI's (Net Feed Intakes) or RFI's (Residual Feed Intake). NFI refers to a measure of residual feed intake after adjustments for differences in body weight maintained and growth through the test or feeding period. Cattle with a low NFI indicates an animal that is more efficient in gaining more weight on less feed than its contemporaries. An animal with a positive NFI value will consume more feed than expected for their growth performance and average body weight.

Whilst these measurements have some merit, it is probably not a wise move to breed just based on these figures because of the danger of single trait selection. Trials that I have read around the world have given a variation in results using these measurements – some positive and others not so optimistic. As I have implied above, there will always be some variations, no matter what steps are taken to make the data fully objective and quantitative. If you have had success with using this type of measurement as a selection tool, then keep using it as long as you also give equal weighting to all the other important traits that ensure you are breeding a well-balanced animal.

I believe the most accurate measurement of productivity for any agri-business is the gross margin i.e. the return per hectare or acre. This figure is a little more complex when adapted to a fed lot situation, but not unachievable. Certainly, an animal's feed conversion rate will have an impact on that bottom line. However, in a grass fed situation, other factors such as grazing management and stocking rates will also have a major influence on the bottom line. Gross margin is an accurate measure of where your business is heading on an annual basis and takes into account things such as market fluctuations.

I have discussed in previous newsletters the impact of animal size on productivity and how the endocrine system is most efficient and reaches its maximum efficient production peak in a cow of around the 550 kg weight or 1100 – 1150 lb.

This is a factor that is so often overlooked when we discuss animal size and feed efficiency. The bigger the animal, the more feed is needed to just drive the animal's metabolic functioning before they can start putting on muscle, fat or feed a calf. Over the last 4 – 5 decades, the trend has been to breed big boned, large animals that are later maturing and are popular with feed lots, in particular. This has impacted on the type of animal that breeders have been focusing on. However, the down side of this is that these larger, later maturing animals are often less fertile, a factor that has no impact on the steer component of a herd because they can be force fed in an intensive environment. However, their sisters, the cattle left with the responsibility of keeping the species alive are later maturing and less fertile leading to lower calving percentages and lower gross margins. I would suggest that over the last 50 years or so, the industry has been controlled and forced to adapt to the type of animal that the feed lot industry has demanded rather than the other way around. Until we get back to breeding the type of animal that produces most efficiently where it is born and therefore gives itself a better chance of survival longevity, then we are going to continue to have growing fertility, calving etc. issues.

We haven't any real proof that our evaluation system has a positive impact on selecting higher feed converters as our attempts to do our own trials on feed conversion rates were thwarted by some partners we were working with at the time. However, just through our own experiences and observations we believe that our system is geared in that direction.

BREED OF THE QUARTER

WAGYU

Some of you might say that the Wagyu breed is getting plenty of promotion and publicity to build their image as producers of a quality, highly marbled meat product without any further recognition by us. However, it is our aim in this section of the newsletter to present some general information about as many breeds as possible so that if any of them particularly appeal to you, then you can do further research to see if that breed might be suitable for your environment. As

with breeders of any breed, Wagyu breeders are passionate about the product they are producing. The fact that they, along with a couple of other breed societies, e.g. Angus, have done the promotion of their breeds very well, is not a reason for the rest of us to ignore them. Certainly, they have obviously had more resources behind them to initiate large promotional campaigns. However, that doesn't necessarily mean that they are the only breeds that produce good quality meat. If you have been following our system, you will know that we do not favour any breed over another and that the traits we evaluate on are generally fairly consistent regardless of the breed. On this topic, I have decided to add some more comments to those that I have mentioned previously about the slight variations we have found between various breeds in the cattle industry in the next article in this newsletter.

Anyway, my apologies for the introductory rambling for this section of the newsletter. Wagyu (和牛 *Wagyū*, "Japanese cow") can refer to any one of four Japanese breeds of beef cattle. These are the Japanese Black, the Japanese Brown, the Japanese Polled, and the Japanese Shorthorn. In Japan, Wagyu beef can be marketed under the name of the region from which it originates. Some examples are Matsusaka beef, Kobe beef, Yonezawa beef, Mishima beef, Ōmi beef, and Sanda beef. Japan's rugged terrain created isolated pockets in which different breeding and feeding techniques were used. This resulted in distinctly different characteristics in terms of flavour and tenderness of meat produced. The most distinguishing factor and in most circles, the most desired feature of the breed is their genetic predisposition to intense marbling and to producing a high percentage of oleaginous unsaturated fat. The meat from such Wagyu cattle is known for its quality, and commands a high price. Wagyu cattle's genetic predisposition yields a beef that contains a higher percentage of omega-3 and omega-6 fatty acids than typical beef. The increased marbling also increases the ratio of monounsaturated fats to saturated fats. Of course, nutrition has a bearing on the amount of marbling and the ratio of Omega 3 to Omega 6 fat

in the meat as well as the ratio of monounsaturated fats to saturated fats.

Wagyu beef have traditionally, at least, been finished on high grain rations which tend to increase their marbling capacity as well.

The Wagyu is a Japanese cattle breed that was developed from what were originally draught cattle. The original animals were introduced to Japan between 500BC and 300AD as domesticated cattle from North-East Asia. Buddhist leaders prohibited eating meat from four legged animals and it was only from around 1867 that cattle began to be used for meat production in Japan.

From 1635 to 1868, the cow herd in Japan was officially closed by mandate of the Shogun. Except for a short period during the Meiji Restoration in the late 1800's, the national herd has remained closed to this day.

Although, there are reports that most of the cattle were influenced by British and Continental breeds for a few generations nearly 100 years ago. Brown Swiss, Shorthorn, Devon, Simmental, Ayrshire, Korean, Holstein and Angus had been imported by 1887 and impacted today's Wagyu.

It is also probable that Jersey's were also used at some stage to increase butterfat production. Crossbreeding was prominent for several years, but when the price of crossbreeds collapsed in 1910, no further crossbreeding was conducted. The result was selection for specific traits determined by region and extensive linebreeding was used to achieve those traits. Producers in Japan believe that hair coat and softness of skin are related to meat quality.

There has been a great deal of cattle breeding since then, resulting in modern Wagyu cattle becoming by far the dominant breed in Japan. There are different types of Wagyu cattle, typically with a parentage that includes the original Japanese cattle (introduced from North-East Asia), together with breeds from mostly Europe and England. Wagyu have a coat colour of black or red. Their horns are straight to slightly curving forward and start off a whitish colour then darken to black at the end. Wagyu's are known for being very fertile and give birth easily, partially because of lower birth weights (usually 30 to 40kg). Females can

become fertile at one year old. Coat colour can be black or red. They are renowned for their gentle, docile temperament and have a good conversion of feed to meat. Wagyu cattle are unusually healthy cattle and readily adapt to a wide range of climatic conditions. They have a couple of trait characteristics that are slightly different to most Bos Taurus breeds. The main obvious one is that they are usually bigger around the heart girth than the flank. Wagyu are also often crossbred with other breeds, in particular Angus or Hereford cattle, to make them suitable for farming in larger herds, with less attention.

A number of tests have been carried out over many years to assist in quantifying tenderness within the breed using a Warner Bratzeler Shear force test. This is a highly sensitive coring machine to measure shear resistance. Laboratory - trained taste panels have also been used to judge the flavour and palatability of Wagyu meat and their findings have confirmed the hypothesis of the food scientists that the combined characteristics of flavour, tenderness and palatability were at the top of the meat quality tree.



COMPARING TRAITS ACROSS BREEDS

When we first sat down as a group to form the company, Classic Livestock Management Services, our aim was to put a system of evaluation together that would be as simple yet as effective as possible. When we considered what traits we would focus on, our main concern was to consider the traits that were as comparable as possible across all cattle breeds. Our aim was to have a system that was relevant to all breeds. Whilst this has been achieved to a great extent, we have found that Mother Nature, in her wisdom, has made some slight variations to some traits in some breeds that we feel need to be taken into account when we are evaluating different breeds.

I have touched on this topic in the past, but thought I would add a little more again now as we learn more through experience and working with more and different types of cattle. I hope that these will be of some interest to you as you go about the process of deciding what cattle to purchase or select for future breeding purposes. A lot of these variations that I will mention are nature's way of assisting our cattle to cope with the large variety of nutritional and climatic conditions that cattle find themselves subjected to throughout the world.

There are some fairly obvious differences between beef and dairy cattle and Bos Indicus and Bos Taurus cattle. However, there are also some less obvious ones that are also important in the selection of the best cattle to adapt to a certain environment. The ability of managers to adapt and innovate does add to the flexibility and variability in a breed's ability to do well in an environment that is not as natural as their native environment is. I've seen Brahman cattle that have adapted and do well in our temperate climate southern states such as Victoria in the same way as I have seen breeds such as Shorthorn and Wagyu doing well in sub-tropical Central Qld for example.

Knowing the subtle changes in confirmation and trait characteristics helps significantly in being able to work with cattle to adapt to an unfamiliar environment.

The following are some of the differences that we have noted between breeds that are relevant to our evaluation system:

1. Angularity – this varies particularly between beef and dairy breeds with dairy cattle usually having a 2 – 4 inches longer flank to heart girth difference compared to beef cattle when linear measuring. There have also been some differences in these measurements with Wagyu, for example, as they are usually smaller in the flank measurement compared to the heart girth. However, we haven't measured Wagyu's after they have been on feed for say 300 days.
2. Body length – again when linear measuring, a breed such as the Bazadaise is usually 2 – 3 inches longer than most other breeds.
3. There can be quite large variations in skin thickness between breeds raised in temperate climates compared to tropical climates. Again when evaluating, some adjustments are necessary and consideration given to what is a herd norm for that particular climate. This will also affect elasticity, so again it is necessary to make adjustments for climatic, and to some extent, nutritional conditions at the time of evaluating.
4. Greasy spine – this will vary somewhat at different times of the year and at different nutritional levels.
5. The Adrenal whirl – in Bos Indicus cattle this is usually 3 – 4 inches behind the back of the hump whereas in Bos Taurus cattle, it should be up between the shoulders and even in front of them.
6. Some cattle will have more than one whirl so grade on the front whirl position though I believe that more than one whirl is a very good indicator of high hormonal activity.
7. Tail flake for butter fat – Here the flakes are much more prevalent in Bos Taurus cattle than Bos Indicus. Ideally, flakes should be around 2 – 3mm in size and yellow in colour. However, we have found a lot of variation in this area as well with cattle with darker pigmented skin

having darker flakes. With Bos Indicus cattle, we usually find finer flakes more like dandruff if present at all, so we tend to look more closely at the ear wax and adrenal whirl placement to assist with this evaluation.

8. Escutcheon – whilst I can't be very specific about the many variations of the escutcheon, I can say that we have found some markings that don't appear in Mr. Guenon's book so don't be too phased if you see a pattern or marking, more likely, that is not in the book or exactly as it is described.

Thank you for your continued interest in our newsletters, our website and our book. Please feel free to order one of our books and become familiar with the CLMS system and the directions we are taking in the overall scheme of animal and food production for human consumption

PLEASE FEEL FREE TO CONTACT US ABOUT ANY ITEMS IN THIS NEWSLETTER, ON OUR WEBSITE OR IN OUR BOOK. WE WELCOME PRODUCER INPUT AND INTEREST AND WANT TO INVOLVE YOU IN WHAT WE ARE DOING.

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