THE HORMONAL MAIL

THE OFFICIAL QUARTERLY NEWSLETTER OF CLASSIC LIVESTOCK MANAGEMENT SERVICES.

VOLUME 1. NUMBER 36.

April 2015

MANAGEMENT SERVICES

ACN 092435571

P.O. BOX 1181, MARYBOROUGH, QLD. 4650.

PHONE: 0741297029/0411201879.

Email:gewyatt@bigpond.com

Website:www.classiclivestock.com

EDITORIAL

At last we are starting to see beef prices heading in the right direction for most producers, especially in the Eastern areas of Australia. However, we must remember that there are still large production areas of western Queensland, in particular, that are still in a drought situation, and when the drought does break, the cost for producers in those areas to restock is going to be very difficult to justify especially in the short term. It is likely that their times of hardship will continue for probably several years into the future.

In this edition, I will describe a couple of the traits that readers have asked for more specific information on. These are traits that we look for when we are evaluating and the impact they have on future generations when they are evident in today's breeders. At the risk of being accused of being repetitive, I would like to highlight that as I discuss these traits, keep in mind that none of them exist in isolation and when one changes, it will impact on usually two or more other parts of the animal's body. This highlights one of the most important factors in cattle evaluation and ongoing breeding selection programs and that, of course, is getting the confirmation balance right in your herd. As I travel around visiting herds and particularly now when we are doing more linear measuring, it is quite frustrating to start evaluating an animal that, for example, has good tenderness and hormonal activity, but then has little milk producing capacity, or when we linear measure find that the heart girth, for example, is inches shorter than the overall top line. Other examples with bulls could be that the meat and milk quality are good, but their teats are on the scrotum or they have twisted testicles. What we are aiming for is an animal that scores consistently within one grade for all the traits we measure.

WHAT'S (BEEN) HAPPENING

* An ultra-sound machine has finally been purchased thanks to the support of one of our directors in particular and contributions from a couple of others. We are currently learning the intricacies of operating it and the software program that we have had developed to measure the images. We are now mastering its use and will be practicing and learning how to get the best out of it over the next few weeks. It should be available for field use in the next few weeks.
* We will have an outside site **S150** at Beef Week 2015 in Rockhampton from May 4 - 9. We were unable to get a site in the cattle area so will not be able to have cattle on site to demonstrate the ultra-sound machine or linear measuring unfortunately. However, we will be doing at least one daily demonstration of both on the Red Poll site with the support of Albert Hancock. Unfortunately, Health and Safety regulations prevent us from being able to do taste tests, something we have done at a couple of field days in the last year and were hoping to do at Beef Week this year.
* We held a day on February 28th in the Dorrigo, NSW that was attended by about 12 people. It was a little disappointing in the sense that quite a few others had indicated to the locals who were assisting us to organise the day that they were coming, but didn't turn up. We had a taste test of cattle that had been graded live prior to the day. This was a little inconclusive because the cuts were from different butchers and there was quite a difference in thickness so this affected the eating quality to some degree. However, most of those present selected the better grading animal as being the more tender. There wasn't much difference in the grades with one being a good 2 .5 on the jaw but a little less flat on the rib while the opposite was the case with the other animal which was graded as a 3.5 on the jaw and better on the rib. We were able to demonstrate the use of the ultrasound machine at this event though we were still waiting for the correct cable fittings to enable us to use the software program. We would like to thank Ken McCauliffe for supplying the two cattle we evaluated and then taste tested samples from at the field day, to Jennifer Wood for bringing in cattle to the sale yards for the live demos. and to Doug Tyler, all of whom have been strong supporters of our system and were instrumental in ensuring that the Dorrigo Day went smoothly.
* Another field day is planned for Saturday, April the 11th. 9:30 – 3:00 at **'Plain Creek ´315 Preston Road, Adelaide Park 4703.** Turn towards Yeppoon at DPI North Rockhampton. After 26 km turn left onto Neils road (towards Byfield). After 6 km turn left onto Limestone Creek Road. Drive for 6 km - Take last left before bridge onto gravel road - 315 Preston road
The property is on the left hand side of the road and we will have it signed on the day. It is then about 400 metres to the cattle yards. We would like to thank Sean O'Hare and his parents for allowing us to use their facilities on the day and for assisting us with the organising etc. The day will start at 9:30 and finish about 3:30 with a light lunch provided for a small fee. Sean has processed one of his steers and will have a sample for a taste test. It will be interesting to sample this steer because he was quite good on the jaw, but not so good on the rib. I have been using both sites over the last couple of years when evaluating and generally scoring whatever the lesser site grades.
* 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.

* I have just completed the annual trip to the Northern Territory to assist the O'Brien family at Coodardie and Numul Numul stations with their annual herd grading. It was a little earlier this year as Clair and Mike plan to attend Beef Week in May and spend some time on the East coast and wanted to have this year's evaluating completed before they headed east. The family are also considering some possible changes to their operation which are quite innovative and exciting for them. I hope I will be able to let you know more later if they go ahead with their plans.

*It has also been great to catch up with several other producers in New South Wales and Central Qld over the last couple of months. It is very exciting and stimulating to see some of the innovations that producers are planning to increase the choices they have in marketing their products. I believe this is a reflection of the stagnation of the broader industry and marketing chain to cater for innovation and lateral thinking in the industry, especially in regard to the smaller producers. I am seeing a growing trend towards producers taking more control of their destiny in regard to getting a fairer and more equitable return for what they produce. These producers are well ahead of the broader industry in regard to talking to consumers and producing a product that a growing number of consumers are now demanding. The recent move to brand grass fed beef on a national basis is something that could have happened many years ago if the industry had been more in touch with consumer demands. Now it is more of a catch up situation to regain a share of the wider meat market that beef has lost over the past couple of decades. There is also a growing move to organic production and again this is driven by consumers and those few usually smaller, innovative producers who are not prepared to be dictated to by the "mob" or sheep mentality.

* During the next three months I will be heading into Central Qld. to do some evaluations for breeders in that general area as well as visiting South Australia to meet a new client there.

* We have now received the results from the samples of meat we sent to the Victorian Department of Primary Industries for testing using the Warner Bratzler shear force test. As I explained earlier, these samples came from cattle that were graded prior to processing for bone shape and then taste tested and scored using our system. The main focus was on identifying any tenderness variations when there is a difference in the bone shape on one side of the jaw to the other or variations in shape between the jaw and the rib. Unfortunately, because we didn't have any choice as to what animals we took the samples from, we found that when we evaluated them there was not a lot of difference between them when we graded them for tenderness. The full trial results will be on our website in the next 3 – 4 weeks under the link "new research".

*We are still keen to get some marketing of graded cattle going so we are happy to advertise for any of our clients here in the newsletter.

#Another client has 20 CLMS graded Angus heifers for sale. These are an even line of consistent young females that would be ideal to use to build a herd on.

#We have breeders with some Red Poll x Brahman bulls for sale. This cross is fairly new in Australia and there have been some impressive animals bred over the last 2 – 3 years. There are also breeders interested in purchasing well-muscled Red Poll bulls.

****

TEAT PLACEMENT ON BULLS.

Most of you would heard the saying "as useless as teats on a bull". Well, we would like to question that old saying. We believe that the positioning of the teats on a bull is an indicator of the shape of the teats on his daughters. We also believe that it is a very under-utilised indicator in the bull show ring, judging by the number of bulls we are seeing that have one or both teats on the scrotum. Ideally, both teats should be clearly positioned on the bull's stomach in front of the scrotum. Half an inch plus in front is a good start. Invariably, bulls that have one or both teats on the scrotum will produce heifers that can start to develop bulbous and bottle shaped teats as early as their second calf and some even earlier. Certainly as the cow gets older, the teats will become more misshapen and difficult for the calf to suckle.

Bulls should have similar teat characteristics to those of well-proportioned cows, although of course, on a much smaller scale.

Bulls teats should be a cylindrical, pencil like shape and uniform in size and diameter and approx. 2 – 2.5 cm. in length. The size and shape of the teats will also accurately reflect the hormonal balance and activity of the animal.

The spacing between front and back teats should be similar. Avoid using bulls that have misshapen teats. I have seen many with little more than a bare patch of skin with a slight extension where a well formed teat should be. This will also reflect through to that bull's daughter's teat shape. I have also seen some bulls with 6 teats on rare occasions. I'm not certain what this means, However, especially when they are all off the scrotum, I am prepared to say at this stage that the extra teat will provide an indication of butter fat as it does with the extra teats on the back of a cow's udder. Another point to be aware of is that sometimes at first glance the rear teats on Bos Indicus bulls will appear to be on the top of or in the corner of the scrotum. Closer examination will actually reveal that they are off the scrotum because Bos Indicus bulls will often have a fold of skin at the front of the scrotum that the teat is attached to that can be misleading if you don't actually physically move it forward.

Teat placement on bulls is just one indicator that the scrotum area on a bull has that can be used by producers when they are selecting a bull for their herd. A bull's scrotum area should be seen as the mirror for the udder and teat area of his daughters. We have previously discussed some of these other considerations and will do so more in the future. Suffice to say at the moment is that scrotum shape and testes placement will have a strong bearing on udder shape and balance. So-called minor indiscretions in a bulls scrotum like twisted testicles will impact on a bull's daughter's udder and is likely to cause unevenness and imbalance. Usually twisted testicles are caused by the piece of skin at the rear of the scrotum that stretches down from above the scrotum and holds the back of it in place. It usually also becomes more prominent as a bull ages. We also believe that this skin strip is indicative of the strength of the suspensory ligament in a cow so if it is weak in a bull or to one side of the scrotum it will ultimately lead to pendulous udders in an offending bull's daughters.

Another important consideration is the hair on the scrotum. It needs to be soft, silky and have a velvety feel with it. This carries through to a bull's daughters. Long course hair on the udder is a good indicator of "see through" milk i.e. low in butterfat. So with hair on bulls, look for course, curly hair (especially Bos Taurus) on the head and neck going through to the shoulders of a bull until you get to the rear end where it gradually becomes soft and silky on the scrotum.

BREED OF THE QUARTER

SENOPOL

The Senepol is another breed that was developed through the crossing of two or more breeds to utilise a combination of local environmental conditions and meat and milk quality. They originated in the Caribbean Island of St. Croix, when a local breeder there decided to improve the milking ability, fertility and horn status of the local breed N'Dama, which were originally natives of Senegal in West Africa and were taken to St Crois in the 19th.century. They are of the Bos Tauris type, and have a high tick and fly resistance. This local breeder selected the Red Poll breed as the one to cross with his N'Dama to provide the traits that he felt were not dominant enough currently in his herd.

Red Poll genetics were added over the next few years to improve traits such as early maturity and maternal efficiency, poll status and a solid red colour, good milking ability and a gentle disposition. By the mid nineteen forties, the desired genetic combination of Red Poll and N'Dama was achieved and the Senepol breed has been bred as full blood ever since. The original herd was dispersed to local breeders and the Senepol breed grew into four primary island herds. The Senepol name was trademarked in 1954. A herd book was established with an on-farm performance testing program through the USDA and the College of the Virgin Islands Extension Service in 1976 and in 1977 the first plane load of cattle left for the U.S. mainland.

Because of its isolation, St. Croix was sheltered from many of the "fads" that have influenced the purebred seed stock industry. They made a series of small, multiple-trait steps toward animals whose production met the demand of their breeders. This isolation provided a unique situation where ranchers practice selection for the traits they desired and mother nature provided natural selection for cattle that could produce at superior levels under the harsh St. Croix environment. The cumulative St. Croix herd was closed, with no outside influence. The Senepol breed has had a limited genetic base and selection for superior performance has led to cattle that can take substantial levels of inbreeding. This accounts for the "true breeding" ability or consistency of the Senepol and the high degree of heterosis that they provide in crossbreeding systems. The Senepol breed combines characteristics of heat tolerance and insect resistance with the docile nature, good meat, and high milk production of the Red Poll.

The breed is now found in Australia, South Africa, Botswana, Namibia, Venezuela, Mexico, Paraguay, Philippines, Zimbabwe and Brazil as well as the USA.

Some of the main characteristics of the breed are a solid red colour, ranging from dark red to a lighter ginger colour, a short hair coat type, a natural poll, good eye and skin pigmentation, a docile temperament giving easy management, early puberty, females renowned for their ease of calving and calves for their fast 'get up and go' vigour, heifers that calve as two year olds under normal management conditions with an average birth weight of calves of 34kg. The average mature weight of cows is 550 - 650kg. and bulls 930kg on pasture. Bulls have a high libido, are fertile and virile breeders from an early age.

To date, the Senepol is the only breed available in Australia that is known to be a carrier of a Slick coat gene - a gene that confers a very short haired, sleek coat when an animal carries a copy of the gene. This gene is associated with the heat tolerance of the Senepol breed.

BONE STRUCTURE

As I have indicated previously, I have been asked to discuss a number of topics relating to the CLMS system in more detail by readers in recent months. I have addressed some e.g. developing an elite herd, controlled grazing management systems and bull teat placement in this issue. Another topic that several readers have expressed interest in is to have more information on how bone structure, i.e. fineness and shape can influence meat quality and thus, we believe, also indicate milk quality.

Over the years since we first became aware that there could be a correlation between bone fineness and tenderness, we have been working on refining the indicators that could influence this hypothesis one way or the other. Since we became convinced that there was a strong relationship between these two factors, we have found that there are a range of influences that need to be considered in making a final judgement on an animal's meat quality. I strongly believe that as with most everything in Mother Nature, there can always be exceptions to the rule, regardless of how much scientific or other evidence might suggest otherwise.

To start in the beginning, so to speak, we believe that meat quality and tenderness, in particular, are very much influenced at conception by genetics. In fact, we feel that genetics influence this trait as much or more than any other in cattle and other cloven hoofed animals. What happens from an environmental aspect after birth will have some influence on how the animal develops skeletally. However, again, we believe that tenderness is less influenced by the environment than most other traits within the animal. Whilst our data base is not a scientific one, our observation and experience has shown us that even when an animal lacks nutrition such as dairy cow calves that are weaned from their mother's within days of birth and fed a synthetic milk replacer, the tenderness of their meat is not greatly affected. What we believe is much more affected is how they develop structurally from a skeletal perspective. They will have the characteristic high chine, prominent hooks, pin bones etc. when compared with, say, a beef animal that has had 9 months suckling a cow with milk high in butter fat. Many of you who have eaten meat from a Jersey or Jersey cross animal will have experienced the tenderness of that meat. The challenge in using the Jersey breed as a meat producer is that it is only a small animal with limited capacity to produce meat. They have been bred and developed over centuries to produce high quality milk. The fact that, generally speaking, their meat is tender assists in verifying our belief that there is a relationship between meat and milk quality.

Again, in our limited research, we have found a strong relationship between meat tenderness and A2 milk, which again supports our premise that there is a relationship between milk and meat quality. These results are available on our website through the link to research results at www.classiclivestock.com Whilst we believe bone structure to be a key indicator for tenderness, as we learn more, we can now add other indicators that previously we weren't aware were connected. So when we are grading for tenderness, we are finding that the scores for tenderness are within at least a minimum of 1 score to that of milk quality which we grade based on tail flakes, ear wax, udder hair softness, extra teats etc.

Another issue that makes dairy breeds less attractive as meat producers is an old favourite of ours in terms of how producers are not being paid for every kg. of meat that they produce. Whilst dairy breeds haven't been bred specifically for meat, our observations would indicate that if the animal, say, a Jersey, scores well for bone

shape and therefore from our perspective, tenderness, she will have an above average saleable meat yield. Yet because she is not shaped like a beef breed is, she will be difficult to sell, as a rule, to processors. We also believe that, again just through observation, that a finer boned animal will also need less feed to convert that feed to meat. Whilst dairy cows use most of the feed they are fed to convert to milk, if they were just fed to produce meat it may surprise some people to see how little feed the fine boned cows need to produce a kg. of meat. We believe there is several years of research just waiting for someone to perform in the above comments alone that would be beneficial to both the dairy and beef industries.

The old belief that you can make tender meat tougher by what you do with it after it has been killed is quite true, but it is very difficult and costly to make tough meat tenderer. Therefore, it should be in every breeder's interest to use proven genetics that will guarantee that their animals produce tender meat and by so doing take much of the risk out of tough meat being sold to unsuspecting consumers.

We are not saying necessarily that every producer should be using our evaluation system. However, we have yet to see one that considers as wide a range of traits in regard to determining tenderness as well as whole range of other related traits and management choices. There are many producers, breeders, fatteners etc. who have their own ideas about what type of animal will produce more tender meat and this is good in the sense that it keeps those of us who are interested in this topic focused on being open to other possible indicators as well as our own. The sooner that the industry finds or settles on a system of indicators in live animals that will give a high percentage of success in the selection of animals that produce high quality meat, the sooner the whole beef industry will be able to much more confidently market its product.

Whilst bone structure may not yet be the ultimate indicator of meat tenderness, it is probably more because we are still learning the intricacies of Mother Nature and how to accurately interpret them than that bone structure cannot be a reliable indicator. We are also still learning how to take the human error out of how we measure the variations in an animal's bone shape. I guess that the most frustrating aspect of what we, as a company are doing, is that none of the industry representative bodies are interested in it whether to prove our theories wrong or even to discuss the possibilities that we may have some useful information for the industry as a whole. Again, is it because the most astute and experienced cattlemen from past decades have known these indicators and because it was "past experience and knowledge" it is no longer relevant?

One of the things that we haven't done any research to speak of on to date is the possible relationship between bone shape and bone density. The only experience we have had is when I took 5 bones I had graded to a bone densitometer at the local hospital a couple of years ago to have them tested for bone density. There is no other way of having them tested in a crush at present because of the size of the testing machines. They are two large and expensive to take into cattle yards. The results of this small test were encouraging because it certainly showed that 4 of the 5 bones correlated with the scale of densities with the most concave bone being the densest.

The thoroughbred racehorse industry, in particular some of the leading trainers, have been using bone density measurements as one of their criteria before agreeing to train a client's horse. They have found that the larger, rounder bone horses are often more prone to injuries during racing and training.

As I indicated above, we are still learning in regard to what bone structure tells us about tenderness. We are convinced that there is an important relationship between tenderness and bone shape. However, as I grade more and more animals, I am finding slight variations in some areas that need more research before a definitive outcome in terms of grading can be assured. As a general rule though, I believe that the grades I give an animal are as accurate as I can give bearing in mind human error as a factor and I feel that becomes less of an issue as I grade more cattle. That has also been vindicated by taste tests we have done with restaurants etc. recently.

I would like to just discuss a couple of the main variations that I have found. The first is that when we grade the bone for shape we use either the jaw bone or the last rib or both. The main thing to ensure is that the bone is felt in the same place on all animals and in this regard the jaw is usually more accurate because you can use either the rear corner of the mouth or go up the outside of the jaw directly opposite the rear of where the two jaw bones meet. The rib is usually graded about a third to half way down from the spine on the last rib. It needs to be remembered that in most animals, the rib gets flatter as you go down. Also, the other ribs in front of the last rib tend to be flatter than the last rib.

Secondly, we have found variations in shape between the rib and jaw and between either side of the animal. I now tend to feel both the rib and jaw and then grade on the worst one. We are still working on what all this means by taste testing and Warner Bratzeler testing.

Another factor to consider is that not every bone is perfectly formed in terms of a nice even shape that shows up as slightly rounded, flat or concave, where the extremity of the curvature is situated nicely in the middle of the bone whether it is the jaw or rib bone. Sometimes it can be on one side of the bone or the other or it may go diagonally up the bone.

When I grade, given the above comments and our increasing experience in feeling bone shape, if I am at all unsure, I will now consider other indicators such as some of the main milk quality indicators to assist in clarifying the grading.

In conclusion, we have not found any other indicators that are as easy to use and as accurate for determining the tenderness of meat in live cattle than what we are doing now. I think there are other indicators such as how fat is distributed in the animal's muscle that could give a good indication of tenderness. To determine this an ultra sound machine is required with a special probe to determine suitably clear images. So in the foreseeable future we will continue to develop our knowledge of how bone structure determines meat tenderness.

****

I would welcome any feedback from you on any subject that is discussed in this newsletter. I have had some feedback over the time we have been publishing it and it is most appreciated and helpful. Please keep the feedback and comments coming.

****

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 NEW MANUAL. WE WELCOME PRODUCER INPUT AND INTEREST AND WANT TO INVOLVE YOU IN WHAT WE ARE DOING.