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CLASSIC LIVESTOCK MANAGEMENT SERVICES

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EDITORIAL

Welcome to our first newsletter for 2024. We would like to wish everyone a rewarding and successful New Year. Having said that, I also recognise that there seems to be an ever-increasing growth in the challenges and hurdles being presented to the rural community as a whole in many countries of the world. What we do know is that the environmental challenges, that is those that are presented to us by events such as weather events are things that we have spent a lifetime experiencing and coping with. On the whole, they are events that we are left to deal with in our way on the land as well as we can with, usually, little outside assistance. The thing that appears to be becoming increasingly out of our control are the decisions made by governments and their bureaucratic advisors. At least, in Australia, it seems quite evident that many decisions are made that affect rural communities and those people entrusted to feed the masses by decision makers who have little or no knowledge of the true facts about how their decisions will affect the country areas. This may well appear to be an over-statement of the facts. However, one cannot help but to draw that conclusion when we are confronted with some of the decisions that are made that affect rural areas and people. The reasoning behind these decisions is so far from what actually happens that one wonders if these people actually live on the same planet.

To further add to our confusion are policies and philosophies that were promoted as being the be all to end all a few years ago that are now being totally contradicted, especially in the areas of conservation especially of rural and bush property.

Where are the groups who were protesting against the removal of trees and bush vegetation, land clearing and general soil, air and water pollution in many areas now when large areas are being cleared for the installation of so-called sustainable power with wind

farms and solar farms, which are not even close to the proper use of the term “farm”

WHAT’S (BEEN) HAPPENING

*Albert and I are hopeful that we are still in good enough health to be able to hold another 5 day course, albeit a little modified, next year around July time. We hope that we may be able to promote it at Beef Week 2024 and the Ag-grow Emerald Field Days. Unfortunately, reality is telling us that we are not quite as young and active as we once were so we are just taking it a year at a time at present.

*We held a successful a one-day field day in North-Eastern NSW at Myocum (near Mullumbimby NSW) on Saturday the 21st. of October with 15 people in attendance. We would like to thank our host for the day, Johan Kortenhorst of Leela Plantation, for his support and the use of his cattle and cattle yards for the day.

*We are also considering options of further field days in the Gympie and South Burnett areas.

*If you are interested in having a field day near you or would like to host one, please let myself or Albert Hancock (0417244057/0267334666) 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.

*I would also like to report that Albert Hancock, who had a confrontation with his tractor over 12 months ago, has been given the all clear by his specialist after his successful final operation recently.

* Over the last three months we have visited clients in Surat, Gympie, Clermont and one of our earlier clients west of Charters Towers to evaluate their cattle. Fortunately, since we have visited those areas, most of them have received some useful rain to improve future feed prospects, at least, in the short term.

*We also presented at Justin and Amy Dickens “Day in the JAD Yards” Speckle Park practical workshop on their property at “Greenvale”, 911 Loombah Rd,, Yeoval, NSW on Friday November 17. Around 30 breeders were present to participate in the day’s events which included other presentations by Roger Evans, from Bovine Scanning Services, who demonstrated how he scans for muscle and fat measurements in the JAD bulls, Dick Whale, who explained what he looks for in selecting animals for structure, mobility and docility and Justin Dickens, who explained some of the trial work they are doing with their Speckle Park cattle and where he sees the Speckle Park breed fitting into the cattle industry in Australia. It was an extremely informative and interesting day and Justin and Amy are to be congratulated for their initiative in opening their business up for breeders to see what the Speckle Park breed has to offer. For further information, contact Amy or Justin on 0427 464 333 or jad@jadspecklepark.com.au

* We are continuing to put together requirements for anyone interested in becoming a registered evaluator and at this stage it will require attendance at one of our past or future long courses and supervised evaluation of a number of cattle (500 – 1000 depending on previous experience) with one of our registered evaluators. Our evaluators will be operating as private consultants mainly and work together when needed to run courses, field days etc.

*Coodardie have Brahman bulls available for private sale and further information is available on their website – www.coodardie.com.au.

EXPRESSIONS OF INTEREST

*We are also happy to promote sales for any breeders, stud or otherwise, who would like to put them in our newsletter, so please let me know the details.

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BREED OF THE QUARTER.

BELGIAN BLUE

Belgian Blue cattle originated in the central and upper Belgium (Ardenne Hills) region of Belgium and at one time accounted for nearly half of the cattle in the national herd. Shorthorn cattle were imported from England from 1850 through to 1890 to improve the native population which was primarily of the dairy type (red-pied and black-pied cattle). It is also possible that Charolais cattle were used in the breeding program throughout the 19th Century.

Between 1920 and 1950, there was active selection for this dual-purpose type of animal and between 1950 and 1960, there was a trend to select for animals with heavier muscling. The real break-through came in the 1960's with the development of the extreme double muscling characteristics. After a great deal of detailed selection, the 'Belgian Blue' as we know it today was born.

The breed was only recently formally established with the founding of the Belgian Blue herd book in 1973. Currently, the Belgian Blue breed represents 50% of the national herd in Belgium. 61% of the Belgian Blue livestock are in the Walloon region and 39% in the Flemish part of Belgium. At one time the breed was divided into two strains, one primarily for milk production and the other a beef animal. Selection is now primarily for beef.

The Belgian Blue has been exported to many parts of the world including Africa, the Americas, Europe and Oceania and a total of 24 countries at present. This includes Australia, with Victoria being the most populated state. There are about 40 registered breeders in Australia along with several hundred commercial breeders.

The most distinctive feature of the Belgian Blues is their enormous muscle development, known as 'muscular hypertrophy', which results in so-called 'double muscling'

Extensive research has shown that Belgian Blues possess a gene which suppresses the production of the protein myostatin, a protein that normally inhibits muscle growth after a certain point. Pure Belgian Blues carry two copies of this gene and in crossbreeding, one copy is usually transmitted and serves to increase carcass weight in the offspring of a cross-breeding program. Myostatin is a protein that inhibits muscle development. This mutation also interferes with fat deposition, resulting in very lean meat.

The muscular hypertrophy, or double-muscle phenotype, is a heritable condition in cattle that primarily results from an increase in the number of muscle fibres (hyperplasia) rather than the enlargement of individual muscle fibres (hypertrophy), relative to normal cattle.

This particular trait is shared with another breed of cattle known as Piedmontese. Both of these breeds have an increased ability to convert feed into lean muscle, which causes these particular breeds' meat to have a reduced fat content and reduced tenderness.

However, contrary to this, in an extensive 3 year test, done by the USDA at the Meat Animal Research Centre in Nebraska, the Belgian Blue crossbred cattle were tested with the industry standard Warner-Bratzler shear force test for tenderness. The Belgian Blue cattle had a lower shear value than the Hereford-Angus

contemporary average, 12.8 versus 12.9, with comparable tenderness and flavour on the sensory panel. Belgian Blue cattle also exhibited less than half the fat cover, a .21inch cover versus .45inch cover, a 53% reduction. Belgian Blue is on line for the new standards. The Belgian Blue also showed 16% less marbling and 14.2 more ribeye area than the average carcass.

Characteristics

As a modern beef breed, the Belgian Blue is recognised for its:

*Ease of Calving
*Short gestation period
*Good mobility and structure
*Excellent temperament
*Hyper-developed muscling
*High degree of conformity
*Precocity, good size
*Capacity for young meat development
*High food efficiency for fattening
*It is a large sized animal with rounded outline and prominent muscles.
*It has heavily muscled shoulders, back, loin and rump.
*Their backs are generally straight, with a sloping rump, prominent tail set and fine skin.
* Colours can be blue roan, blue roan and white, black and white, or just white. In other words, colours range from pure white through to black, with any degree of blue roan in between
*The breed is generally known for its quiet temperament.
*The weight of an adult bull ranges from 1100 and 1250kg for a height at the withers of 1.45m to 1.50m. It is by no means rare to see animals of more than 1300kg.
*Cows can reach a weight of 850 to 900kg and can exceed 1.40m.
* The muscle is a natural development for the breed. They are not born with that extreme muscle, but start developing that muscle at 4 to 6 weeks old.

The economics of breeding and raising Belgian Blue cattle are inconclusive. Like the majority of breeds, they have some very strong traits mixed with lesser traits. Things like their increased need to have Caesarean sections when calving means increased cost and work. However, the carcass value of double-muscled animals may be enhanced due to increased dressing yield, lean carcass content, and upgrading of some cuts leading to a higher proportion of higher valued cuts.

Their slower rate of fat deposition causes slaughtering to be delayed in most cases and this adds to maintenance costs. Belgian Blue cattle require more skilled management and don't thrive in harsh environments as well as some other breeds so if you are considering them as a breed to run on your property, check out the type of climate in Belgium where they originated from to see if it matches or is close to your climate to ensure they have every opportunity to perform at their maximum.

In bulls, testicular weight and semen quantity and quality are lower than in other cattle, perhaps because of the greater amount of connective tissue in the testicles. However, this is less of an issue when compared to the dam's difficulties in calving.

The Belgian Blue breed was introduced into Australia in 1988 and the Australian Belgian Blue Cattle Society Inc. was formed in the same year.

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ABOUT TENDER MEAT.

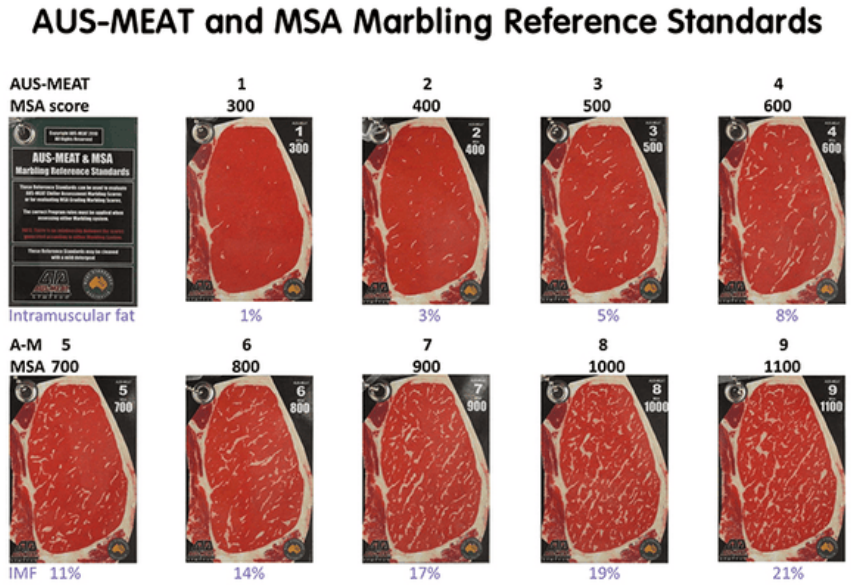
The thing that impacts most with our consumers as a rule is the eating quality of the meat product that they purchase, whether it be at a retail meat outlet or in a restaurant. Whilst consumers are showing a growing interest in the history of the food they are consuming, if, in the case of meat, it doesn't give them a satisfying eating experience, they will think twice before purchasing it again. Palatability or taste is also an important factor in the eating quality of meat. However, because many people are not as aware of what good meat should taste like, they don't put as much emphasis on it as they do tenderness. The other factor is that tenderness is related to one of our three main senses in feeling, whilst taste is not quite as prominent for most people. I've heard quite a few older cattlemen who rate their meat for taste rather than tenderness within reason and would rather have a great tasting piece of meat compared to a tasteless super tender piece. Though there is little relationship between taste and tenderness, it is most satisfying when you get both in your meat-eating experience.

Whilst the MSA grading system has been very helpful in assisting consumers to purchase a product that is generally going to be of good eating quality, not all retail meat is currently sold under the MSA system and the other factor is that the grading process takes place after the animal has been processed.

That means that the MSA system is similar to all the other generally accepted methods of determining meat tenderness in that it is only done after the animal has been processed. This means it is difficult to develop a breeding plan related to MSA quality. I spent some time looking at the main current methods of identifying tenderness and could really only find methods relevant to the processed product and nothing really in terms of an on the hoof way of determining tenderness, apart from some general trait qualities that may indicate tenderness. I have added some of the information here that I have found out about tenderness and some of the ways that we are encouraged to use to select tender meat.

As I stated above, the current most accepted measurement for meat tenderness is by the MSA system. Meat Standards Australia (MSA) is a grading system developed to improve the supply of consistently high-quality meat to the beef consumer. MSA is a 'tenderness guaranteed' grading program that grades beef based on eating quality

It was designed to take the guesswork out of buying and cooking Australian beef by meeting strict criteria to ensure it meets consumer expectations for tenderness, juiciness and flavour. It provides several benefits for quality improvement, such as improving the accuracy and reliability of measurements, detecting and correcting measurement problems, enhancing the credibility and validity of data, and supporting the analysis and improvement of processes. A carcass with a higher MSA index will have higher beef eating quality scores for many cuts compared to a lower MSA index carcass. Currently the average MSA Index score is 57. Indexes over 61 are in the top 10% of cattle.



Another technique for detecting tenderness is to use a Warner Bratzler shear force test, a device that has been used since the 1930s and remains the most widely used instrumental measure of meat tenderness. The original concept of the Warner Bratzler shear force test instrument has undergone many analytical studies and modifications since its original use.

Still another indicator that is often used as a guide for tenderness, especially in the USA, is marbling. Marbling refers to flecks of fat found within the muscle of beef carcasses and is evaluated at the 12th and 13th rib interface. It helps to predict the flavour, tenderness, juiciness and palatability. The more there is, the greater the potential for a high-quality eating experience. One thing to bear

in mind with marbling is that with all the extra intra-muscular fat, it tends to give a greater perception of tenderness of the actual meat fibre than leaner meat. To obtain a true indication of the actual tenderness of the meat fibre, one would need to melt the fat out of the meat fibre before tasting.

THE AMERICAN BEEF QUALITY SYSTEM

One source that I read in regard to the factors that influence meat tenderness considered factors such as genetics (which we believe contributes to about 95% of the degree of tenderness), age of the animal (which I would very much question), location of the cut on the carcass (more tender from the first rib and go back to the last primal cut – the rump), processing and method of cooking.

Another piece of information I read indicated again that several factors affect how tender a cut of meat will be. One of the major factors is the location on the animal from which the meat is taken. The fewer muscles that develop in the area and the less collagen that can build up in the muscles, the more tender the meat will be. That's why meat that comes from cuts along the backbone from the first rib and include the loin and back to the rump are much more desirable. There's also the question of preparing the meal. I have heard of many different ways of preparing beef cuts for a meal. As a rule, though, the more tender the cut of meat, the less you want to cook it to avoid loss of moisture. The more it is cooked, the drier it becomes and therefore usually feels tougher to eat. If the meat is already tender, you should avoid slow cooking, because this method will fail to add any additional flavour to your meal.

Some of the things that you can do to add to the perception of tenderness is to physically tenderise it, hang/age it for a longer time – up to 30 days, use a marinade and for secondary cuts cook them at lower temperatures for a longer time and slice against the grain.

Factors that also influence tenderness and juiciness are: The animal's age at slaughter, the amount of fat and collagen (connective tissue) contained in particular cuts, and, to a small degree, brining. Collagen is a long, stiff protein that is the most prevalent protein in mammals.

Length of cooking time depends on the cut. Secondary cuts such as Chuck etc get tender with prolonged cooking, because they have a lot of connective tissue which melts in a braise. Leaner beef will just get tough

The main structural component of the muscle fibres in meat is myofibril, which is composed of thick and thin filaments. Higher-than-normal levels of salt cause these filaments to swell and separate from one another and depolymerize, or break down. This process can also help make meat more tender.

Tough meat comes from animal muscles that work a lot, such as the muscles used for walking or breathing. These muscles contain added

connective tissue to handle all the extra work they do. To make tough meat tender, it is usually recommended that you cook it slowly (i.e. a low temp) for more time to melt the connective tissue.

The Best Cuts of Steak

1. Rib-eye (and Tomahawk) – 5 stars. Blake's Rating: 5 stars
2. Scotch Fillet – 4.67 stars. Blake's Rating: 4 stars
3. Rump Cap – 4.17 stars. Blake's Rating: 4 stars
4. Fillet – 4.17 stars
5. T-Bone – 4 stars
6. Rump

I also found the following information, basically related to saleable meat yield to also be of some interest.

When we consider the three components of cutability in a carcass (bone, muscle, and fat), bone changes the least from one animal to the next. This refers to the fact that the amount of bone or size of skeleton as a percentage of the total weight varies very little between cattle of similar height and weight. (What we know does vary within the concept of the bone is the shape and density. The finer the bone, i.e. more concave the surface of the last rib or jaw bone the tenderer the meat will usually be – not 100% but close to it.)

You can get a good indication as to whether animals have a similar skeletal structure by looking at the areas where there is only bone. Look at the cannon bone. If two animals have the same length of cannon bone, they have a similar size of skeleton because the length of the cannon bone is always a constant percentage of the whole skeletal size. This will help you if you see two steers – one that looks taller and heavier and another that appears smaller and lighter. When you look at their cannon bones, you find that the cannon bones are the same length. This tells you that they have a similar size skeleton so that means that the difference you see in their size and weight must come from either muscle or fat.

Whilst there appears to be plenty of information about how to grade meat after it has been processed, I could find very little about ways of selecting animals on the hoof for tenderness. There was some general information about what confirmation traits that could give an indication of tenderness, but nothing specific. The main source of information was from an American, Steve Campbell. We at Classic Livestock know Steve because he was a colleague of the late Gearld Fry and often supported him at the seminars and field days he ran in the USA. Steve also attended one of our five-day evaluator training courses in 2018.

I suppose what concerns us at CLMS is the lack of emphasis on developing a system of identifying meat quality on the hoof. It just seems that the researchers and scientists have put it in the too hard basket. We would welcome any attempt to develop a system of live cattle evaluation that identifies meat quality, especially tenderness, on the hoof and whether we were involved in it or not, we would support it because we believe it is the missing link in the cattle industry.

Imagine what it would mean to the industry if breeders could select cows and bulls that they were confident would produce offspring that would be sort after by consumers. I believe that if we were able to offer a lot more consistent quality of meat, the industry would regain much of the ground it has lost to other food products and especially other types of meat in recent years.

Whilst we have identified traits in cattle that will give a strong direction in what animals to select for to get quality in our meat, we know our system is not perfect. There is a degree of human error

that can impact on our scores as well as the role that genetics play in the very important considerations of consistency and repeatability. We also know now though, given the number of years we have been sharing our system that the breeders that are using our system have benefited from using many of our selection traits. Whether you contact us directly to ask about our system, buy our book off our website or take maybe just some of the traits that you see your neighbours using who are using our system, we don't mind. We do know that there are benefits to be had from doing that. As we have explained previously, we see ourselves as just passing on knowledge and information that generations of cattlemen before us have taken for granted when selecting in their herds.

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.