

# THE HORMONAL MAIL

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## EDITORIAL

Welcome to the first newsletter for 2021 and may it be a safer and less disruptive one than the last year. I think that most of us, wherever we are in the world, were pleased to see the end of 2020 with all its unpredictable and largely unwanted activities. Here in Australia, we have been fortunate in that policies put in place have been largely successful in limiting the impact of the COVID – 19 virus and especially in comparison to many other countries in the world. In fact, it has really only been the major cities here that have been impacted to any degree. However, the restrictions put in place have affected us all.

What it has done is provide us all with challenges in terms of making changes in our lives whether we wanted them or not. From that is the opportunity to realise that not all change is wrong or bad, even though in recent months the changes we have been made may not have been ones we would have otherwise made to either our lives or our businesses. If nothing else, it is an opportunity to realise that maybe there are other changes in our lives and businesses we can make without them having to be made through necessity.

For the world to change, I must change, if you keep doing what you have always done, you will always get the same outcome and if what you are doing is not working, change it, are all presuppositions relating to reasons to change. Is your life/business perfect at the moment? Where would you rank it from 1 – 10 with 10 being perfect? If it is 10, that's great. If not, what needs to change to get it to the next step? Identify the things that you can change and work on those to achieve your goal.

Also give some thought to how you made the changes you had to make in your life and identify the things that you did that worked so that you can use them in the future when you are considering other changes.

## **WHAT'S (BEEN) HAPPENING**

\*Our plans for future travel continue to rest in the hands of what government restrictions remain in place over the next three months. At this stage we are not sure how the COVID-19 situation will affect our planning. We are hoping to be able to get into the southern states early this year if the current restrictions that have been eased remain that way.

\*We are still hoping that we might do a couple of one day field days closer to home in the next couple of months.

\* We have just been advised that we were successful in obtaining a site in the cattle area at Beef 2021 so can now start planning for that event. We have been allocated site CS17, a 10 x 12 metre site and will be joined there by Albert and Rachel Hancock and some of their Red Polls. We would welcome all those attending to visit us. Early plans include having a static visual display, power point presentations and demonstrations of our evaluation system and linear measuring on some of the Red Polls. Obviously, the organising committee are facing many more challenges in organising the 2021 event than in the past so we wish them well in making this event another success. So far so good.

\* We are still very keen to hold more field days in other 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.

\*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.

### **EXPRESSIONS OF INTEREST**

\*We remain happy to promote the sales of other breeders and would like to put them in the newsletter, so please let me know the details.

## **FERTILITY.**

This is a topic that I have not discussed as a single, specific topic previously. In the past, it has mainly been included as part of the numerous traits that make up our system that impact on our cattle (and other animals as well) and their ability to be productive. It goes without saying that without fertile animals we would not have a product to breed and raise. That is the level of importance of this factor in all aspects of our cattle business and it is reflected in most of the traits that we have identified as being important to raising a healthy and productive animal. When we ask what is the most important value in our breeding business then fertility will always be in the top one to three with almost all producers.

In this section, I would like to discuss some of the main indicators to look for when selecting an animal for fertility on the hoof.

I have found a number of definitions of fertility like the following – “fertility is the ability of a cow to conceive and maintain pregnancy if served at the appropriate time in relation to ovulation”.

This is supported by an abundance of information on how to manage fertility in a herd in terms of managing breeding programs and nutrition, but far less in focusing on what to look for structurally in an animal that will tell us how fertile it will be during its life.

Certainly, what happens once we have selected our breeding stock is a major ongoing part of our management program. However, before we can have a successful breeding program, we need to have animals that are genetically designed to reproduce.

Before I focus on traits for selecting fertile animals, I would like to acknowledge that the following breeding management practices are very important to the ongoing success of any breeding enterprise:-

- a) Time your calving program to coincide with seasonal conditions and feed availability. Calves reach their maximum milk requirement at about 3 months of age so that is the time that cows need access to most grass during the lactation period.
- b) Ensure that cows have adequate feed prior to calving, especially during the last month of gestation. Remember also that calves will generally grow best throughout their lives on the same feed that their mother was feeding on during gestation.
- c) Implement a culling program that culls heifers and cows that don't get in calf and cows that are regularly late calvers.
- d) Environment is important. Significantly, cattle will usually do better in the environment they were bred in. Remember, it is easier to change the cattle than the environment.
- e) Implement a culling program that is affordable and manageable for your enterprise. Ideally, breed your own replacements. Cull cows that are consistently poor in condition every year and produce poor calves, though be aware that your best cows put their effort into producing a good calf and often at the expense of their own condition.
- f) Temperament should be a major management consideration when culling.

- g) Despite what many experts may advise, don't cull on age. If you have a productive cow that is producing a calf in the top 50% of your calves every year, why would you get rid of her, or not at least not until you know you have one that is better to replace her with. The cost of replacing cows is a significant factor in herd development and is too often overlooked.

I will not be covering all the important factors that indicate fertility here. However, I will focus on as many as possible without being too repetitive of previous articles on the various relevant traits. However, there are several key indicators to look for when inspecting an animal to join your elite breeding herd. If production history is available, then that can also be a useful guide.

Let's start with the cow.

A cow should display the basic feminine characteristics of the female (figure 1) starting with a feminine head and flowing back into a clean long neck and slightly angular body both from the shoulders to the rump and from the top line to the under-line.

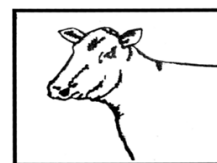


FIGURE 1



FIGURE 2



FIGURE 3

If possible, use linear measuring callipers to ensure these measurements are proportionate and accurate. The neck needs to be a third of the animal's overall length from top knot to pins and at least two inches (5 cm.) more around the flank than the heart girth. The heart girth also needs to be at least as long as the full top-line measurement to ensure good meat production. In cows, the rump width should be at least the same as the shoulders or more. The rump shape is also very critical in selecting for fertility. The angle from the thurl to the pins and the thurl to the hooks should be 90 degrees. See figure one below.

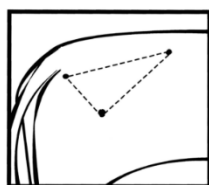


FIGURE 1

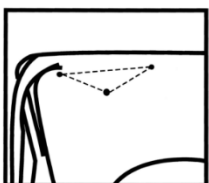


FIGURE 2

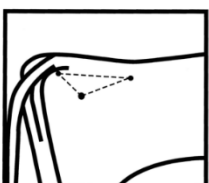


FIGURE 3

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If you are experiencing calving difficulties in your herd, it is quite possible that the cows have small or misshapen rumps e.g. the pins are as high or higher than the hooks. One way to correct this is to select a bull with wide shoulders. Wide shouldered bulls produce wide rumps in cows as a rule.

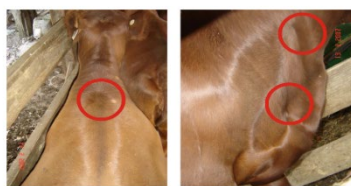
Hormonal activity is directly related to fertility. Thus, the feel and elasticity of the skin and hair are very important. In *Bos Taurus* cows the skin will be slightly thicker than in *Bos Indicus* cows.

However, softness of the hair and elasticity of the skin are important in all cows. Ideally the skin should feel like a piece of velvet. The other very important factor to look or feel for with the skin is its oiliness. Ideally, you should be able to feel the oil on your fingers after you have felt the skin. Rub your hand along their back and see the oil on your fingers.

There will be oil in the dark strip along the back of the heifer pictured below.



Another indicator of fertility is evident from the adrenal swirl (top left photo below). The characteristics of this swirl are governed by hormones. Hormones are chemical messengers released into the blood stream to cause an action somewhere else in the animal's body. The reproductive hormones of females are released by the ovaries and by a gland situated at the base of the brain called the pituitary gland and contain oestrogen. The release of extra oestrogen occurs when a cow is cycling or when her calf turns in the uterus at around the 4 – 5 months of the gestation to assist with this action. At this time, the hair in the middle of the Adrenal swirl tends to stand up and the more prominent this is the more likely that cow is to be highly fertile.



This cow has a prominent adrenal swirl between the shoulders that is also the start of a wide "greeny" strip that narrows slowly as it runs right along her spine.

This picture shows the neck of a cow with very prominent thyroid and thymus swirls.



This cow has a thymus swirl in front on her lower break and a pancreas swirl above and slightly behind her navel. This will move upwards and forwards as she gets closer to calving.



Another good indicator of fertility is the size and brightness of the Thymus swirl (see photo top right – lower marking). This swirl is an overall indicator of an animal's general health and whilst not easy to see in lighter coloured animals, is still well worth taking into consideration when selecting heifers.

Now let's consider a few of the less known but important indicators to consider when selecting bulls for breeding. Bulls are going to change the characteristics of your herd faster than selecting desired characteristics for your herd just through female selection. As they can more quickly improve your herd performance, a poor selection can just as quickly set your herd production back so the importance of understanding and planning what you want from your herd is critical when selecting your replacement bulls.

A bull should display the basic masculine characteristics of the male (figure 1) starting with a masculine head with coarse hair flowing back along the neck, which needs to be thickset and have a prominent crest (more so in Bos Taurus than Bos Indicus).

Again, as with cows, if possible, use linear measuring callipers to ensure the heart girth to flank and heart girth to top-line measurements are proportionate and accurate. The neck of a bull needs to be a third of the animal's overall length from top knot to pins less two inches (5 cm.) and at least two inches (5 cm.) more around the flank than the heart girth. In bulls, the rump width should be slightly less than the shoulders.

The hair on the head area and down the neck should be coarse to feel. In breeds that have longer hair such as most Bos Taurus, thick tight curls also are a strong indicator of fertility as well as the hair coarseness.

When the hair on a bull's head is not lying down and tight, it is an indicator that something is dysfunctional with the bull. It may be because of a nutritional deficiency or imbalance, a decline in the bull's health status or a recent injury. All of these also lead to infertility. The two photos below show the hair standing up on the top knot of these two bulls.



Another indicator of infertility in a bull is the shape of the facial swirl. All cattle will have at least one swirl somewhere on their face. If it is elongated, there is a good chance that bull will have reduced fertility. See figures below.



Figure 1. Spiral hair whorl



Figure 2. Elongated hair whorl

The facial swirl is not always in the centre of the face though and has also been used as a guide to temperament. Our experience has leaned towards the indication from the swirl that is below the eyes and to one side or the other as being likely to indicate a worse temperament than average.

The adrenal swirl is also a good indicator of fertility and the further forward on the spine the better and ideally in front of the

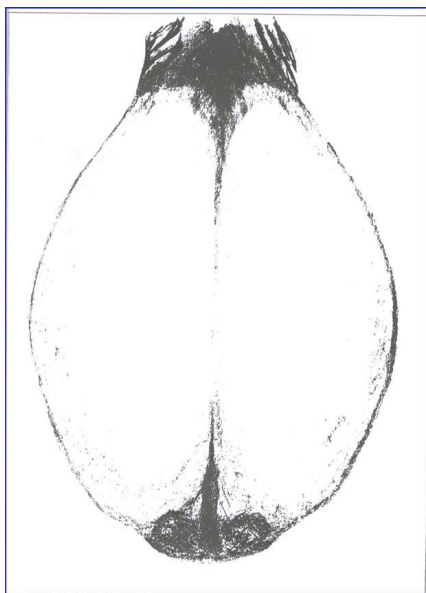
shoulder. The swirl on *Bos Indicus* bulls and cattle generally is always behind the shoulders though I have several Brahman bulls with the swirl on their hump.



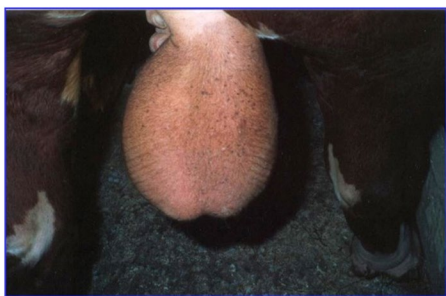
The tail can also be a good indicator of bull fertility. Where it leaves the body, it needs to be quite thick structurally and covered with coarse hair. It should remain thick and coarse down its length with a slight reduction in circumference towards the swish. Compare the tail of a bull with that of a cow and it will have coarser, thicker hair and be much broader. If your bulls have tails like their cows, check other fertility indicators.

When a bull's fertility is in question, also check the hair on his scrotum. If the scrotum has long silky hairs up to 3 – 4 inches (10 cm.) in length, then he may well be infertile.

Other indicators of fertility that the scrotum/testes can provide for us are shape, size and placement. Whilst there has been a lot of publicity given to the importance of the scrotum circumference and length, the main indicator of fertility is the presence or otherwise of the epididymis.



The epididymis is where the final stages of the maturation of the sperm takes place and where they are then stored prior to ejaculation. If a bull doesn't have them, he cannot get a cow in calf. The epididymis' should be situated at the bottom of the testicles and be walnut shaped. Size, shape and position in relation to the testes will determine how many cows a bull can get in calf in a cycle. If you can see both epididymis on a bull as he walks around the yard in front of you, he should be able to serve at least 50 cows in their first cycle.



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## **BREED OF THE QUARTER. BELMONT RED**

The Belmont Red is a breed of beef cattle developed by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) to meet a need in the Tropical regions of Australia for cattle which would improve the fertility of Bos

Indicus cattle. Work first started on developing this breed at the National Cattle Breeding Station, 'Belmont' Rockhampton in 1954.

The Research programme evaluated the role of the Afrikander and Brahman breeds for beef production in Northern Australia. Imported Afrikander (Sanga) and Brahman bulls and Australian Hereford and Polled Shorthorn bulls were mated at random to Hereford and Polled Shorthorn cows. These crosses formed the basis of the breed that was finally released to Australian breeders by the CSIRO in 1969.

They are phenotypically and genetically a mix of *Bos taurus* and *Bos indicus*.

Genetically, the Afrikander component in the Belmont Red makes them different from all other tropical composite breeds based on the Brahman.

These crosses produced three more distinct genetic lines of cattle based on the genetic differences between the sire breeds. The main difference between this program and other composite cross programs developed over the last 60 years was that the Afrikander (Sanga) cattle were used instead of Brahman.

The main traits that were used as a basis for selection included higher fertility, high resistance to ticks, superior heat tolerance, good growth, better meat quality, a placid temperament, and feed efficiency on grass or in the feedlot.

The time taken to develop this breed through rigid selection processes has resulted in it being a breed that has adapted well to both tropical and temperate climates.

This has been re-enforced by the success of the several large commercial herds that have adapted successfully to the native pastures of Queensland and the Northern Territory.



Rigid selection for the traits recognised by the developers of the breed has resulted in the evolution of a breed of "Australian Made" cattle which has been remarkably successful when compared, under trial conditions with older breeds and their crosses.

The fertility of the breed has been used by many beef producers to assist in correcting reproductive deficiencies in their herds. The Belmont Red is also recognised by beef producers who use them for their placid nature.

### Characteristics

The Belmont Red are of a medium size with a smooth, short haired coat which is mainly red in colour, with some white occasionally on their coat. They are of a moderate size and have a good conformation in relation to beefing quality and reach sexual maturity at about 10-14 months.

They are known for their higher fertility, good meat quality, good growth rate, high resistance to ticks, placid temperament, heat tolerance and good feed efficiency on grass or in the feedlot.

### Summary

Fertility  
 Adaptability  
 Tick resistant  
 Docility  
 Quality beef  
 High carcass yield, up to 76% off grass

Efficient conversion  
 Easy care and productive



The Belmont Red cattle are a breed of beef cattle from Australia which are raised mainly for meat production. Currently the Belmont Red cattle are popular and produced mainly in Australia. They have achieved many wins and placings in Carcass competitions.

Performance of the breed has been proven in comparison trials on research stations in Africa and Australia. Their good performance has also been recognized by the Philippines and the Pacific Islands producers where improvement in livestock production is highly after.

Just as an aside to the above, a young agricultural scientist came to Tasmania from South Africa in 1960 to take up a position with the Tasmanian Department of Agriculture at my old home town of Deloraine and to teach Agricultural Science to school students at the local high school. Dr. George Seifert was my Ag. Science teacher in my last two years at high school in 1961-62 before he took up a position with the Belmont Research Station near Rockhampton in 1964 where he was instrumental in the development of the Belmont Red breed. His daughter and her husband have carried on breeding from some of his original lines and now have one of the leading Belmont Red studs in Australia.

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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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