



Predictable, Functional Genetics....

Fertile, Gentle, Growthy & Adapted....

CBV Update

All CBV properties are very wet! Most have received their annual rainfall already with rain still falling and two months of wet season to go. We have been fortunate enough so far to receive the rain without any damage, unlike some areas of central Queensland that have received their annual rainfall in a 24 hour period with devastating effects to stock and property.

This flooding rain was needed at CBV with some water levels in stock bores dropping over three meters in the last couple of years. We have had reasonable grass rain over the past few years but have not run a gully for four years. It is all smiles here.

I thought I would have some preg test results for you by now but due to wet weather the only cattle work getting done is moving cattle from flooded river country to higher ground. Mating finished on February 21st and all breeders will be preg tested into two lines. Mob 1 Pregnant cows, these will be the super cows calving early in the season. Mob 2 Cows that are not detectable yet, some of these will calve later in the season and some will be empty. I would expect to have 70% in the early mob.

This will give us two large mobs to rotate, using what I think are the most important tools of grazing management, rest and utilization. With the moisture profile we have now we will see some very good results in cattle and grass.

By April all empties will be detected and marketed so only working animals are left eating grass. By keeping intensity in the management of our grass and genetics we can remain in control of our future regardless of what is thrown against us. This of course does not just happen without a very dedicated team of good people.

Recently we were given the opportunity to purchase "Gundaroo" from my Grandmother. Gundaroo consists of 15000 acres of excellent fattening country on the Connors River, 170km North West of "Belah Valley". It will be an exciting time continuing the development of this property.

Due to some agistment country coming to an end the CBV Bull Sale will be earlier than usual this year. We will advise you when we have a firm date. At this stage I am working to sometime in June.

Alf Jr

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CBV Gentle Cattle—A Letter from Jim

Dear Vashti,

It is great to hear from you and I apologize for not responding earlier but as you Aussies would say, I have been flat out and it seems to have gone into a chronic mode. This is not good and one of the reasons that Denva and I retreat to Australia each year with our great friends and scientific colleagues.

I have visited with your father many times about his life long-focus to have gentle cattle in the CBV herd. I have often communicated to him that I do not believe he emphasizes the advantages of having such cattle in his marketing. I believe in today's western cultures that such attributes in cattle contribute to addressing many issues.

One of the important aspects of having gentle cattle relates to the expectations that society has to a greater extent than any time in our history - the expectations that their food is produced in a fashion that they can support and trust. One of the aspects that is being emphasized to a greater extent all the time is whether consumers can have confidence in the welfare of animals as they are managed in our production systems. I have emphasized to your father my belief that during this time of emphasis on enhanced animal welfare in our food animal production operations that an emphasis on the "gentle" trait is without question consistent with addressing the issue of enhanced animal welfare. There is more and more appraisal of production practices in all food producing animal enterprises as to whether the food of consumers is being produced in a manner that is acceptable from their perspective. Focusing on production of animals that are adaptable to various settings during the production cycle will logically lead to selection of cattle that are gentler and that will have the attributes to "cope". Your father has always been a big believer of how the eyes of a person tell one much about them in many respects. Well when I have dealt with the issue of animal welfare it has been my observation that the eyes of your father glaze over in a manner that communicates here is this Yank getting on his bandwagon once again. This is, however, an aspect of animal production that cannot be ignored. Ask the wool producers of Australia and how the practice of mulesing in their production system is impacting their well being because of concerns by the public as driven by animal rights groups. Many believe it is only the animal "rightists" who are driving this agenda but I know first hand that we have wool spinners here in the USA who when they have learned of this practice begin to question whether they should any longer use Aussie-produced wool. The beef cattle production sector is not immune to issues of animal welfare. This area is one which we need to be aware and be proactive and in my opinion your father has been through his focus on selecting adaptable and highly gentle cattle. Producing cattle that better adapt and in doing so fear is less is going to be an even greater desired attribute in food producing animals in the future as compared with the past because the extent of fear is a primary indicator of animal welfare and with gentle animals the extent of fear is reduced.

Another aspect of producing gentle animals and thus enhancing animal welfare relates to the following. I have visited with your father about the information in the attached articles for some time. I am not sure he has his mind "wrapped around" what I have been attempting to communicate. I have not ever shared the scientific publications with him so maybe he will function like somebody from my home state (the show me state) and gain from what I have enclosed after I have shown him. The summary of this work conducted under the direction of Dr. Ron Randal at Texas A&M University, who in the past has spent some time at James Cook University in North Queensland, should give your father some more fodder for thought in this regard. The research is showing that gentler cattle do not only facilitate management practices in our production systems but also as stated in the summary statement - "As stress response throughout the course of a typical production scheme was shown to be influenced by temperament, the benefits to a producer far exceed the benefits of having a gentler herd." The second article expands on this line of thought and provides information that indicate gentler cattle have improved responses to weaning vaccinations. This indicates to this "hill billy from Southern Missouri (correct pronunciation by we local folks)" the immune system of gentler cattle is likely more responsive to agents that stimulate the immune system whether it be from a vaccination or a natural agent in the environment in which our cattle are raised.

You may wonder whether I respect your father after having "had a go at him" in the above statements. Be assured that I admire your father so very much and he is one of the truest and most genuine friends of the entire Kinder family. His manner of functioning recently in contacting our oldest son, J.C.'s mother in law to be when he could not attend J.C. and her daughter Amanda's wedding is indicative of his kindred attitude toward we Kinders. He is in every sense a great mate! I always value his wisdom and desire to expand on such. I take this opportunity to provide him some fodder to continue to do so in a realm that I believe is going to be more and more important in our food animal production enterprises.

Until next time, I wish all our CBV friends the very best. Take care and cheers for now.

Jim Kinder

Dr James E. Kinder, Professor & Chair, Dept. of Animal Sciences, The Ohio State University, OH, USA.
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Alf Sr's Reply

Jim Kinder is usually right. This time "the Yank from Missoura" is dead right.

I do glaze over when I hear the term Animal Rightists & Environmentalists (ARsEs) as I am tired of impositions from ARsEs who have a very narrow perspective, no national interest, and no concept of conducting a business. They usually have no concept of caring for animals either. I admire their passion, but I am not inspired by their degree of ignorance.

However, I agree with Prof. Kinder's views, and am keen to relate to the academics in Jim's sphere. I have met with some of them and want to know them better.

Since the early 1990's Prof. Kinder and we at CBV have worked together co-operatively in research, along with Prof. Michael D'Occhio previously with CSIRO, then CQ University, and now at Qld University. They have integrity in research. The late Dr Vercoe helped this to happen via CSIRO with Dr Frisch & Chris O'Neill too.

CBV has taken thousands of measurements with them and been advised, as a result of that, on many thousands of measurements and analysis. Ever since I have been managing cattle herds, my search for '*cattle that do what they're supposed to do*' has been aided and encouraged by some wonderful researchers and extensionists. It does not take much more effort to measure traits than it does to guess. When you guess in any business, there is a lot of skin off, and lost time cleaning up the wrecks, then starting all over again. Conversely, once measured, you can progress steadily. Even then, when in error we can identify it, and delete the perpetrators, then make progress again quickly. Life is too short and assets too valuable to squander on repetitive errors.

"Very complex scientific issues need to become simplified by tight and specific management, and practical applications."

In our seedstock business, our clients' confidence in CBV integrity is not to be shaken or taken for granted. CBV policy is to have an open book on all of our data collection and analysis process. It is not perfect, just a work-in-progress.

With encouragement and advice we receive from scientists, advisors, family, friends, clients, extensionists, and mentors our path has been made easier, and our options refined. Very complex scientific issues need to become simplified by tight and specific management, and practical application.

This is our task at CBV in the unending quest to understand Nature better, then to apply ourselves and cattle cost-effectively. *The 'sunlight to food' route is still open.*

The nett result is superior genetics, affordable as inputs commercially, and an enhanced bottom line. Naturally gentle cattle with naturally enhanced immune responses are part of this CBV quest. The opinions of Jim Kinder are to be taken seriously, explored further, debated vigorously, and more than likely, applied.

Thank-you Jim, the respect is mutual.

Alf Collins Sr.



Angus Finger, Alf Sr, Maggie Finger—'Tondara Stn' - September 2007

Abstracts from Articles Referred to in Jim's Letter

RELATIONSHIPS OF CATTLE TEMPERAMENT AND STRESS RESPONSES TO HANDLING DURING TYPICAL MANAGEMENT SITUATIONS

K.O. Curley Jr, C.E. Schuehle Pfeiffer, D.A. King, J.W. Savell, R.C. Vann, T.H. Welsh Jr, and R.D. Randel (2006).

Summary

"The degree to which an animal reacts to novel or stressful situations is influenced by that individual's temperament."

"As stress responsiveness throughout the course of a typical beef production scheme was shown to be influenced by temperament, the benefits to a producer may far exceed the benefits of having a gentler herd."

Introduction

"Temperament in cattle is commonly associated with a fear response to handling. Animals with a poor temperament will be easily excited and exhibit a greater fear response. Biologically, this response can be assessed by measuring the stress hormones cortisol (CORT) and epinephrine (EPI), both secreted from the adrenal glands. Poor temperament negatively impacts multiple facets of cattle production. Temperamental cattle exhibit lower weight gains (Burrow and Dillon, 1997; Voisinet et al., 1997b), produce tougher meat (Voisinet et al, 1997a), yield increased amounts of bruise trim (Fordyce et al., 1988), and have a compromised immune system (Fell et al., 1999). Differences in the stress response associated with animal temperament may be of value in understanding the link between animal behaviour and economic endpoints within the beef industry."

Implications

"As animal temperament is linked with stress physiology the benefits from decreasing numbers of temperamental animals within a herd may extend beyond behaviour. These data show that increased physiological stress responses associated with temperament persist throughout the course of typical beef steer's lifetime. With stress responsiveness having biological links to growth performance, immunological proficiency, and meat quality there may be financial gains to come from reducing the number of temperamental cattle within a herd."•



*~Max, Maggie, Angus & Jack Finger~
With S'08 Sale Bulls at 'Tondara Str'
July 2007*

Full articles are available for everyone interested.
Email glennandvashti@aapt.net.au for your copy.

CALM CATTLE HAVE BETTER RESPONSES TO WEANING VACCINATIONS

R.A. Oliphint, T.H. Welsh Jr, R.D. Randel, J.C. Laurenz, and J.A. Carroll (2006).

Introduction

"Animal temperament, in normal production situations, has been described as the degree of fearfulness and reactivity to humans, as well as to common handling procedures. Cattle with calm temperaments exhibit less of a fear response, whereas cattle with wild temperaments are more easily excited and have a greater response. This increased reactivity, or stress response, has been shown to have a significant negative impact on animal performance (Voisinet et al., 1997), beef quality (Lacourt and Tarrant, 1985), and beef tenderness (King et al., 2006). Not only has animal temperament been found to negatively affect growth and carcass performance, but it has been shown to negatively affect the immune system as well (Fell et al., 1999). Cattle with impaired immune responses, due to undesirable temperaments, may have a greater difficulty in providing a sufficient response when challenged with disease causing organisms in various production situations."

Implications

"Calm calves will have a better response to vaccination at weaning and should have reduced sickness and death loss as they move through the production system. Calm calves may have desirable physiological attributes, relative to the more temperamental calves, which may make them more profitable than temperamental calves for all segments of the beef industry." •



Welcome Makayla Lebbie Woods

Born 11th September 2007



Congratulations Aaron & Kelly, of 'Belah Valley', on the safe arrival of Makayla.
Well done...



Left: Heath Collins started Prep. at Marlborough State School and loves it.
Top: Graham Moody, Scott Finger, Viv, Caralyn & Skye Caspani, Victoria, Jack & Angus Finger, Andrew Moody. Max & Maggie Finger are up on the rails at "Tondara Stn".

Thankyou Dan Bishop



Dan came straight from high-school to CBV. He worked extremely hard to the point that when Alf Jr & Louise married and went overseas for two years he was a perfect fit for overseer at 'Belah Valley', and right hand man for Alf Sr from 1998-2000. From there he worked in other industries including mining and as a motorbike mechanic, only to confirm that his heart was in the cattle industry. Dan has been managing 'Gundaroo', and attends to 'Tondara', 'Belah Valley' & 'Coorumburra' in our intense periods. We will have a life long involvement with Dan in his business and ours, as he has always been a perfect fit with our families.

Dan, of course we'll miss you; however our hearts and minds are very much with you as you develop in this next chapter of your career with your family cattle business.

This is a very sincere Thankyou to a very sincere and capable young cattleman...



Factors Affecting Reproduction in the Bovine Female

By Ken Rowan BVSc (Hons), MVSc

The most important contributing factors affecting bovine reproduction are genetic reproductive capacity and the plane of nutrition (see Diagram 2 – page 8). Brahman cattle, although highly adapted to environmental stress (heat, humidity, radiation (high thermal index), low levels of nutrition, external and internal parasites, etc.) have been deficient in their capacity to reproduce. Sustained and intense selection pressure on both male and female fertility will eventually improve this production trait. Unfortunately many seed stock producers place more importance and greater selection pressure on show ring traits which will retard the breeds overall rate of improvement in the area of reproductive efficiency.

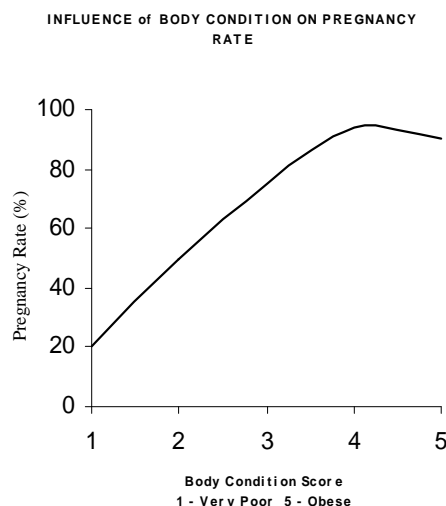
The beef cow breeding process commences at the time of heifer and bull selection. It is intended in this article to focus on the female breeding aspects.

Heifer selection in a commercial herd is usually done on eye appraisal and maybe on weight. Frequently one hears that heifers must look feminine as those that do not are poor breeders. In reality very few show other than female traits and rarely is it possible to predetermine a heifer's calf getting ability by eye appraisal. Heifers selected should be those which will cycle at the commencement of the mating period and this, in this class of female is determined by them having reached their **target weight**. The target weight for Brahman heifers is approximately 300kg, while that of smaller, early maturing breeds is less, while large, late maturing European breeds is greater. Within all breeds there are **strain** differences and this is also the case with Brahmans where sustained selection pressure can alter target weights in heifers. Selection for absolute size where "big is best" moves heifer target weights higher and sexual maturity is usually reached at an older age, hence a late maturing **strain** evolves. While such animals may function economically in an extremely benign environment they are unlikely to do so when stress factors are operating, particularly when seasonal nutritional insufficiency exists as is the case in northern Australia. Selection for early sexual maturity at lower target weights is an enormous advantage when aiming for higher weaning rates.

In all other categories of breeding cows, **condition score** and not weight is a vastly superior indicator of likely reproductive capacity as measured by pregnancy rates (see Diagram 1 below).

In a study of 13,000 cow breeding years I have plotted pregnancy percentage against condition score. There is an almost linear response up to a score of 4, which is prime, after which there is a very slight decline as the cow becomes obese which is infrequently seen in northern Australia, but is not uncommon in temperate regions in good years. This disproves that fat cows are poor breeders and in fact overfatness is usually a symptom of infertility rather than its cause.

Diagram 1



Factors Affecting Reproduction in the Bovine Female (cont'd)

If maiden heifers have attained their **target weight** and fertile bulls are used then very high pregnancy rates are achievable if diseases of reproduction are not causing reproductive failures. Pregnancy rates of 95% or better are to be expected.

Vibriosis is the most common infertility disease and is extremely prevalent in Australia's northern and western beef breeding herds. It is a true venereal disease caused by a bacterium which localizes in the uterus and fallopian tubes where it causes inflammation of the lining of these organs and adversely affects the uterine environment. This results in failure of the fertilized egg to implant in the uterus and the most common symptom is a repeated return to service at about 24 to 30 day intervals. The normal cycle length is approximately 21 days. In some cases implantation does occur but pregnancy is terminated at about 3 months, hence early abortions which are seldom observed are also a feature of vibriosis. Another outcome of vibriosis infection is that it renders about 10% of infected breeders permanently sterile due to blockage of the fallopian tubes and is commonly referred to as tubal blockage.

Eventually the infected female builds up an immunity by producing IgA type antibodies which are concentrated in the female reproductive tract. Other than those which are rendered permanently sterile, the remaining breeders eventually conceive, carry the pregnancy to full term and produce a healthy calf.

In endemically infected herds where preventative vaccination is not undertaken, a reduction of about 20% in fertility can be expected. The reduced pregnancy rates are greatest in maiden heifers but can also occur in first calf heifers on their second mating and to a lesser extent in older cows. Bulls which become infected by serving infected females show no symptoms but spread the infection to clean females. Vaccination of heifers prior to mating and an annual booster for bulls is extremely good insurance.

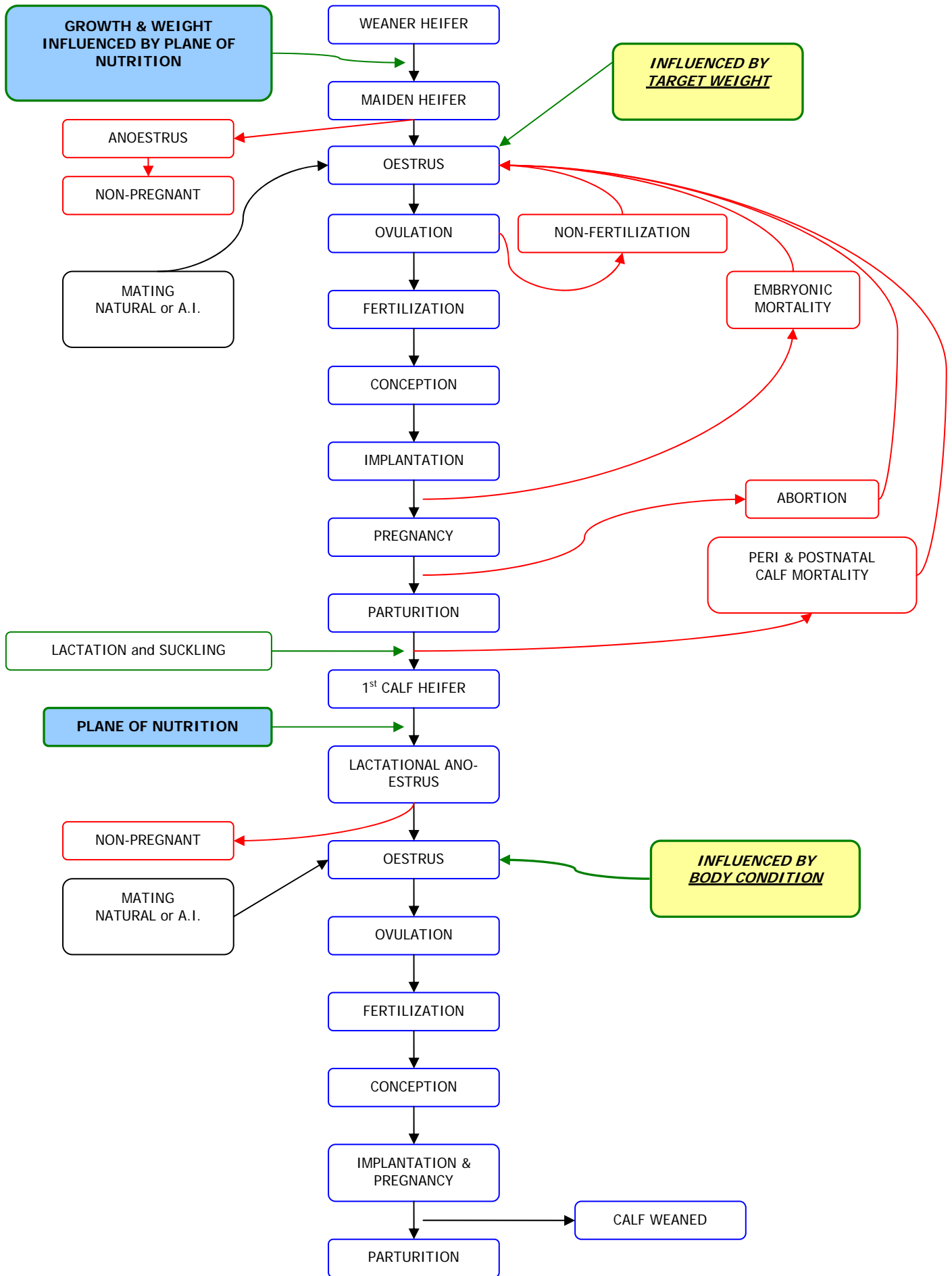
Heifers on their first calf are extremely susceptible to nutritional stress as they are still immature and are attempting to grow and mature while they are experiencing parturition and lactation for the first occasion. Even with good nutrition, first calf heifers generally experience a longer post-partum anoestrus period than mature cows. It is not uncommon for a percentage of such animals to remain in this non-cycling state while lactation and suckling continues. Strategic weaning is often employed to induce cycling in such situations.

Many beef producers give maiden heifers a second chance to become pregnant. Provided such animals have reached their target weight there is little rationale in this strategy. It may be better to give first calf heifers a second chance if culling of all non-pregnant breeders is not possible.

In summary there are a few basic aspects which are critical in achieving optimum reproductive rates for each beef breeding enterprise. These can be listed as follows:-

1. Ascertain the level of **total environmental stress** which exists on the property in question.
2. Select a genotype which is capable of **functioning economically** in such an environment.
3. Appreciate that the **single most important** economic factor in a beef breeding enterprise is **reproductive rate** or calves weaned as a function of cows mated.
4. Realize that it is expensive and **an ongoing cost** to attempt to significantly alter the major stress factors in a hostile environment. It is usually much more cost effective **to select a genotype** capable of functioning in such an environment. This is not to say that inputs in economically selected areas are not warranted, but it is wise to target those areas where economic returns will occur.
5. Select breeding stock from seedstock producers which exert **significant selection** pressure on those **traits of maximum economic importance** and where scientifically proven data is available.
6. **If in doubt seek professional advice.** •

DIAGRAM 2.
DIAGRAMATIC REPRESENTATION of the BOVINE REPRODUCTIVE SEQUENCE



About the Author

Ken Rowan is a North Qld bush boy from SW of Bowen, where his family operated a property in an extremely tough environment. The School of Hard Knocks is the best place to start your career, and the then young Ken got all of his early knowledge there. Mustering in the Urana Gorge behind the Eungalla Ranges is right up there in steep learning curves.

By pure grit, determination and an extremely gifted intellect he gravitated to Queensland University with a Bachelor of Veterinary Science with Honours.

In 1965 Ken did pioneering experimental and research work in lot feeding. The change from green chop to higher grain rations was full of problems at that time. He solved a lot of this.

Ken held various positions in Qld DPI, quickly progressing to Divisional Veterinary Officer based at Roma, covering a huge area of pastoral lands. During this period, Ken continued his studies in the practical School of Hard Knocks, as a 'hands on' veterinarian, with the will to contribute practical assistance to cattlemen and other livestock owners over a wide area. The area extended from Miles, north to Boulia, and west to the Sth Australian/Northern Territory/New South Wales borders. Ken studied further whilst working over a wide area of mostly arid country to earn his Masters degree studying the economic effects of nutrition on reproduction in large herds. This involved palpating over 100,000 in that study (over 30,000 annually). That is a real degree.

"He was rarely home—a sort of athletic blonde tornado..."

Ken's childhood experiences kept economics in grazing always at the front of his mind. I first met Ken in 1970 when he operated a private vet practice from Rockhampton. I write "from," as Ken never worked on cats & dogs unless they were working animals and they all lived with cattle, Ken's favorite subject. No cattle lived in town. Anything that didn't work only earned his scorn!

He was one of the most dynamic people I had met. His arrival was always before daylight, quick coffee while we discussed our plans, and usually he would ask for another mob to be mustered just before dark so we could get another mob preg tested before midnight. In the progress of the day preg-testing, I was inspired by Ken's running commentary of reproduction efficiency as applied to our herds, and by his energy level. I had found synergy working with Ken Rowan, and when the last cow was out, our late night supper was always a constant foment of new or innovative ways to manage better; this helped set the stage for CBV management and development strategies for reproduction genetics and profitability.

Ken took on overall supervision and acted as assistant to the General Manager of the national portfolio of properties owned by Scottish Australia Ltd. They ranged from lush clovers & rye grass of SE Sth Aust, to the gulf country and Cloncurry. He was rarely home - a sort of athletic blonde tornado. His knowledge of such a broad range of grazing conditions from superb clovers to spinafex combined with a keen sense of economics and survival was acute & valuable.

To regain more family time Ken later accepted a teaching position at what is now known as Gatton Campus of Qld University, while farming his own country, averaging 2.3 crop cycles per acre per year. Legendary production. He later sold the farm to enjoy time with his wife Lorraine and their five live-wire children. Lorraine is still not sure about him taking extra time with the family, as Ken's preference for hard work & intense thought was well established.

I value some of his outstanding pupils as longtime friends, and each are leaders in their careers. He mentored some beauties, and encouraged many to do better than they ever thought possible. He is still legendary among his past pupils; he was demanding of them, rewarding effort and excellence with total respect. Ken had no tolerance of non-functioning livestock, nor students who chose to waste their parents money & their own youthful years. He achieved a great deal there.

Ken has retired to Toowoomba with Lorraine, where he still gardens with the same excellence, and has morphed into the role of a doting husband, father, grandfather and great-grandfather. You will gather that I have very high respect for Ken Rowan; he always focused on the facts, and had positive opinions to innovate and to develop, along with the energy to carry them out. We can be very fortunate to develop synergies with outstanding minds in our youth; thanks Ken.

Alf Collins Sr.



“A man never stands straighter than when he stoops to help another.”
Russ Tyson (1963)

We would like to expand the contact list for our newsletter distribution. We would appreciate email or postal addresses of progressive and interested people.

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...Thankyou, Vashti...

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