



Sustainable Grass Based Farming

The Essential Key Requirements

The Sustainable Production of High Quality Grass Fed Beef

Profitable and Sustainable Farming → Nutrient Dense Food Production

Sustainable Grass Based Farming: The Essential Key Requirements

Over 50 years of active hands-on participation, including independent research and observation, in the Beef and Dairy cattle industries, Worldwide, forms the platform for this presentation.

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The Intention of this Document: From a holistic view, the intention behind this document is to illustrate the essential requirements for sustainably producing high quality grass fed beef. And also illuminate the fact why today's genetic design is antagonistic to the sustainable, natural and efficient production of high quality grass fed beef and dairy products. Whilst discussion focuses on Australian production, the facts cited are relevant to **sustainable and natural grass based beef and dairy production** in any region, in any country.

Preamble: The sustainable supply of naturally and safely produced beef and dairy products is only an **attainable possibility** when conducted via a holistic production system, meaning a balance in: environmental soundness, economic viability, social responsibility and animal well-being. At a global level, attaining continuity and sustainability requires holistic production systems designed to be adaptable to the differences of each country and region.

The backbone of any sustainable and natural production system must be nature i.e. safely and naturally produced in ecologically sound environments. The engine room of any sustainable, adaptable and (therefore) repeatable bovine production system is **sustainable genetic design**. When a bovine production system's engine room is holistically attuned, via sustainable genetic design, then and only then, are sustainable and satisfactory outcomes assured for **all** participants. Sustainable bovine farming begins with sustainable genetic design.

What is sustainable production? Sustainable synonyms: maintainable, supportable, viable, ecological, workable, and justifiable. Yes, we all understand what the general meaning of sustainable is, what is not clear is, what defines a sustainable bovine production system? A genuinely sustainable bovine production system is one which efficiently converts an operation's **available** resources into a high quality marketable product, at a **level of production** which is economically, ecologically and socially workable and supportable within the operation's **actual resource availability** (the operation's environment). i.e., the level of production which can be **economically** sustained, maintained and supported by the operations **naturally available** nutritional resource level. Matching naturally available resources and economically achievable production levels is the **key to sustainability**.

Successful sustainable bovine production, is only possible when the **genetic design** of the operation's livestock is **in sync** with the operation's nutritional resource availability (the nutritional environment). i.e., the genetics cannot have a propensity for a level of production (and hence maintenance requirements) greater than what can be economically supported by the operation's naturally available resources.

Introducing genetics which have been identified and selected in nutritional and management environments differing greatly (as in much higher) to the operation they are introduced into, creates a need to **artificially change the environment** to support the introduced genetics.

Attempting to **artificially** change a farming environment, to cater for the nutritional requirements of introduced genetics which are **out of sync** with the nutritional environment, usually comes in the form of **externally** sourcing the following: feeds; supplements; medications; copious quantities of chemical fertilizers and the poisonous sprays used in tandem with them; more and bigger machinery; and more employed labour. This places the farmer in the position of **relying** on many suppliers **outside their operation** for supplying their 'environment'.



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Separate to the fact, the direct and indirect costs of these imports, when accurately accounted for, usually outweigh the benefits. And now the operation is reliant on so many other operations which they have no control over. How **unsustainable** is this situation? Very! Now the sustainable synonyms: maintainable, supportable, viable, ecological, workable, and justifiable are all in question in the operation.

In summary: When the imbalance of farming the wrongly identified/designed genetics, in the wrong production environment occurs, the treadmill of purchasing supplements and other commodities begins in an attempt to **artificially change** the environment to cater for the requirements of the **out of sync** genetics. **Artificially created** environments are **unsustainable** and so is the farming based around them. Yes, there is no doubt at times, due to adverse seasonal conditions (e.g. drought) nutritional resources may need to be externally sourced, however, this is not a constant situation as with the example cited previously.

Sustainable Productivity Gains: Productivity gains through innovation are always the aim in any production environment, however, whether productivity gains are actualized through farming methodology, livestock selection or a combination of both - to be **sustainable** - it is **imperative** that these gains are **created within the system** via **ecologically sound methodology** which is **in sync with nature**.

"One of the most serious factors affecting the sustainability and profitability of today's **commercial** beef and dairy farmer is the fact that most genetics supplied to them evolve from totally non-commercial environments and have been identified and evaluated by very questionable computer generated breeding values. i.e., they are unthrifty, have very poor adaptability and are **out of sync** with the **commercial** environment and the numbers they carry bear little semblance to **actual** performance." John O'Brien

Globally, the greater majority of today's bovine genetic design and selection is focussed on high input production systems (**More Inputs Equals More Production**). This production principle is erroneously marketed as generating gains in productivity when, in fact, all that is occurring is the 'buying' of production and "profitless production" is the final result. This high input system and principles underpinning it are unsustainable, unnatural, unprofitable, inefficient, unhealthy, unsafe, ecologically unsound, environmentally damaging, socially irresponsible and oblivious to animal well-being.

Hence, because today's genetics are designed for these high input production systems, today's genetics are unadaptable, economically unviable, unsustainable, and ecologically unsound.

With the USA being the world leader of the MIEMP system in dairy production one has to question the sustainability, viability, innovativeness, social responsibility, and concern for animal welfare of a system predicated on using heavily subsidized grain (possibly GMO); exploiting cheap labour; housing livestock like battery hens; and utilizing every Government hand out available. What is innovative and sustainable about this? Are USA beef feedlots any different? No.

And with all these 'benefits' we have still seen 42,500 dairy farms shut down in the USA in the last decade. So what hope do Countries (i.e.) Australia have farming these genetics? Very little – read on.

Profitless Production: Much of the world's supply of dairy genetics evolves from this USA MIEMP system with these genetics being introduced to Countries which do not have the concessions underpinning this system. And now, these countries have also become high input producers.



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In simplistic terms what is happening is genetics with the propensity to produce (at least) 12,000 litres are being farmed in nutritional environments (mainly grass based) which can only **economically and ecologically** support production levels of 6-7,000 litres without enormous amounts of inputs being purchased. The problem is the maintenance costs of the big engine (12,000 litres) are still incurred regardless of the final production output.

The Cost to Victorian Dairy Industry: This is a real and serious situation which is costing the Australian Dairy Industry enormous amounts of dollars annually. Independently analysed statistics reveal in Victoria (@ 1.2 ml cows milked): over a 13 year period (1999-2012); actual production per cow rose by 9%; purchased concentrate feed rose by 100%; and fertility decreased by 13%. The loss to the industry: an estimated **cost of \$20-\$30ml per year**. Farmers have borrowed against real estate capital gain to fund this unsustainable production principle and even this measure has not saved some. In general those with the latest of everything fell the hardest.

This all equals unsustainable production and the **root cause** is unsustainable genetic design and selection. It is the principle of farming (high input) feed lot genetics in pasture based environments and the **same principle is also happening with beef production**. For verification check the losses being incurred in the Australian beef industry cited on pages 7 & 8. This is a systemic production cancer which is rife in all bovine production systems, Worldwide.

“Worldwide there is a serious disconnect in the mainstream supply of bovine genetics (live and frozen) to commercial farmers. Commercial farmers are being supplied with ‘promotable’ genetics which are proving far more profitable for the supplier than the end user.” John O’Brien

Farming genetics which are out of sync with an operation’s available nutritional resource level, and attempting to ‘change’ the nutritional environment to cater for this imbalance, is the perfect description of **unsustainable farming**.

The Key to Sustainable Bovine Farming: The genetic design must ‘fit’ the environment and therefore have high economic functionality within the environment. Redesigning the environment to ‘fit’ the genetics is unsustainable farming.

On a global or a regional level, sustainable bovine production can only be successful when underpinned by genetics evaluated and designed to create satisfactory outcomes sustainable for **all** participants in the chain. **Sustainable production** equals genetics sustainable in design, farmed in sustainable production systems.

To introduce genetics for sustainable farming we must return to the genetic design which **nature intended**, the Nature’s Blueprint Cow design. The Nature’s Blueprint Cow design is underpinned by the critically important and time tested selection criteria; survival of the fittest (natural selection); and thriving in **all** nutritional conditions. Thrifty and highly adaptable is the key. Selection, via survival of the fittest, is the key essential element for guaranteeing the success of any sustainable, efficient, natural, safe, adaptable, socially responsible, and ecologically sound bovine production system. Being in tune with Nature is time-tested to be truly sustainable. Nothing is more sustainable than Nature.

The Consumer today: ‘Every picture tells a story.’ 2014s consumers’ experience and observations are more sophisticated and educated than ever before, which means their demands have grown exponentially. The consumers’ expectations today are radically changing and their voices are heard loud and clear and so they are a force to be reckoned with!



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Worldwide a high percentage of consumer beef demand is rapidly moving towards sustainably and naturally produced, high quality, grass fed beef.

The media has contributed to this demand by highlighting the multiple benefits of naturally produced grass fed beef products; including their associated health benefits for both bovines and consumers; which is now the most widely advertised message associated with beef produced this way. Demand for sustainably produced, high quality, grass fed beef will only increase, so tapping into this opportunity now makes perfect sense.

Question: For decades in Australia we have seen our cheapest and worst quality beef (from cull dairy cows) imported to the USA and combined with the cheapest and unhealthiest fat and sold in fast food outlets as premium burgers.

Why not source a sustainably supplied, naturally produced, naturally blended (by Nature), very healthy, genuinely high quality product in the first place and market accordingly? Healthy "Fast Food" is a Win-Win.

A snapshot of the current genetic situation in Australia: One of the greatest problems facing Australian high quality grass based beef production right now, is the fact that for far too long, we have been involved in the breeding of genetics designed to fit feed lot systems (GABBY cows); a state of affairs having a history of 3-5 decades. This topic will be discussed in greater detail later in this article. The U.S.A. (from where Australia sources many of its genetics) has been breeding feed lot genetics for many, many more decades.



These feed lot genetics consistently fail to produce nutritious and flavoursome beef from natural grass based environments, creating problems with our producers failing to meet processors and retailers targets, and consumers suffering bad eating experiences.

Producers take note here: Processors and retailers are wanting to expand their supply of grass fed beef. Today, right now, there is a demand that is gaining momentum for high quality Australian grass fed beef, mainly driven by customer demand. Farming feedlot genetics in grass based environments is not only unsustainable and unprofitable, it is creating a product that will become increasingly difficult to market and to sell. Retailers will not purchase a product that consumers will not buy.

The following, taken from a **USA website**, confirms the above:

Grass finished beef has gone beyond the 'fad' stage and has legitimately entered the mainstream of consumer demand.....the primary problem it faces however is most of it doesn't provide a positive eating experience.....it doesn't taste good!.....Why??.....a big reason is a large portion of the product in the market place today comes from an 'industrialized' animal bred to end up in a feedlot.....not genetically programmed to fatten on grass.....if the product doesn't taste good, consumers won't buy it long term.....doesn't matter how 'healthy' it is.



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The following is a very serious situation: The appearance/phenotype/body type, actual physical conformation, of all our bovine species has changed dramatically over the last three decades. The upshot is the loss of the art of accurately physically appraising cattle for holistic function, encompassing every aspect from easy of calving, to cow maintenance, to meat quality and yield.



Our saleyards are full of cattle with very poor physical conformation, so when being auctioned you will hear all the excuses and reasons for their poor, scrawny body condition (for example), poor seasons, when in fact **the actual cause** (in the greater majority of cases) is incorrect genetic design due to the lack of application of accurate physical assessment.

Hand in hand with their poor physical conformation comes a very poor ability to thrive in nutritional environments **any less than perfect**.



These cattle are sired by bulls which have been produced with the express purpose of carrying the most marketable computer-generated breeding values (EBVs estimated breeding values) versus correct **breeding** (encompassing correct physical evaluation) of cattle for holistic function. There is no light at the end of the tunnel!

The numbers (EBVs) can be seen each year to be getting better, as the physical conformation and the ability to **thrive in grass-based environments and adapt to environmental fluctuations**, of the resulting progeny, deteriorates even further.

Thriving in natural grass based environments is an inherent trait of correctly designed cattle. EBVs are erroneously marketed as accurate indications of an animal's genetic merit.

Producing seed stock with the 'best' numbers (a paper-based numbers game using hypothetical cattle) is an off-field designed program which has become a marketing tool and skill. While this system promotes better numbers, supposedly denoting better genetics, the results in the field tells a different story because no attempt is made to show or confirm any attempt to strengthen their physical conformation and ability to thrive. The result: unsustainable genetic design creating unsustainable farming practices.

Feed lotting has covered a lot of the 'sins' (poor physical conformation) of the progeny of these **computer controlled 'number'** bulls. How? No matter what state of neglect or poor physical makeup, eventually, most cattle do well when confined and fed constant levels of high energy feed.

This 'covering up' situation continues to cause the flooding of bull sales (and hence producers' herds) with an increasing number of bulls with poor physical makeup, **whose sole superior qualification** is in the higher EBVs they carry.

What is the point here? Breeding more and more cattle with poor physical conformation which must be lot fed (or held until over 3 y.o.) to finish is of no help to anyone requiring sustainably and naturally produced grass fed beef from young animals.



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Farmers have invested heavily in the 'better numbers equals better cattle' concept which has been exceptionally well promoted and marketed. All energy has been channelled into promoting the 'concept' rather than accurately evaluating whether it is delivering what is promised.

The results can be clearly seen in the field when one looks through clear, untainted glasses.

When accurately applied, correct physical assessment clearly illuminates the flaws and inadequacies of these 'paper' cattle. Farmers, and all participants of the grass fed beef chain, only benefit from cattle with great physical conformation **not** from cattle with great numbers on paper.

Accurately assessed physical conformation is the guarantee of good year round performance: in the paddock, in the boning room, and on consumer's plates.

The poor physical conformation and hence, poor ability to thrive in natural environments of the progeny of these numbered bulls, is a loud and clear testament to the lack of industry knowledge and experience of those behind the number system.

The further insanity of it all: The EBV system is theory based which uses a lot of averaging; ignores the gravity of raw data; shows greater preference for very questionable weightings and assumptions over raw data, and has all monitoring (and continual altering) being overseen and performed by people who have never bred or fed a cow, or marketed a cut of beef in their life! All decisions focussed on the marketability **of the system**. Most seed stock suppliers are also heavily involved in this number system.

Case in point: Around 12 years ago, after much research and investigation, John O'Brien imported the genetics of a true grass based Angus Sire. After initial progeny were scanned an EBV for eye muscle area (EMA) was allocated to this bull. On analysis of scan data and physical assessment of the progeny John O'Brien questioned those allocating the EBVs - to no response.



And now, (at least a **decade later**), after a progeny test trial was run and **17 progeny** were slaughtered and assessed, this bull's EBV for EMA is **now nearly double** what it was 'held' at for over a decade - **even though** - over 400 scans of progeny

were been submitted from over this 'held' period, which made no significant changes to the sire's EMA EBV during that period.

And what is even more bizarre is the fact that scanning is what the EMA EBV system is supposedly based on!

And finally there has been research conducted where results (unintentionally) verify the losses farmers are incurring because of the incessant introduction of feed lot genetics into grass based environments, genetics which can only do well when nutrition quality and quantity is perfect.

Losses to the Australian Beef Industry: Meat and Livestock Australia (MLA) recently published a 58 page report titled: Autumn ill-thrift in Tasmanian beef herds. A summary of the key points follow:

Autumn ill-thrift has been widely reported as occurring in temperate pasture systems world-wide. The project was to determine the severity and possible causes of ill-thrift during the autumn period.



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Objectives: Explore evidence for suboptimal performance and identify causal factors.

Results: underperformance was reported in winter and autumn in a large majority of herds (over 50%).

Causal Factors: 1) mycotoxins; 2) pasture quality; 3) parasites.

Economic impact: The economic impact of autumn ill-thrift in cattle in Tasmania is estimated to cost the industry around **\$3-11m annually** (based on the estimates presented in this report) depending on the length of the period over which it occurs each season.

If, and it appears likely based on the amount of feedback on the subject and the literature review, that the problem is widespread throughout the southern region then the **loss to Australian producers** could be in the order of **\$25-100m annually**.

Comment: The Causal Factors listed above are not the causes of the problem. The actual cause is incorrect genetic design which for generations has been directed toward animals requiring the perfect nutritional environment to express the (supposed) potential farmers are told they have. Nature's time-tested law of 'Survival of the Fittest' identifies those which thrive regardless of mycotoxins, poor pasture or parasites! This is a 90+% genetic situation caused by the compounding effect of the incessant introduction of erroneously evaluated genetics. This is the same systemic production cancer as previously mentioned. Interesting that MLA has heavily supported the introduction of these genetics and now they conduct research and still cannot get it right. And the farmer continues to pay for MLA, the research and the cost of the unthrifty genetics which most commercial herds are now generations deep in.

Where are the productivity gains these (supposed) better genetics were promised to deliver by all those behind them? How can farmers be sustainable with these (hidden and compounding) losses? As cited in the above results of the Victorian Dairy industry - this is no different. Farmers have invested in (been sold) genetics which threaten their sustainability.

"There is a systemic cancer in all bovine production systems. The symptoms: frail, unadaptable cows with insatiable requirements of higher and higher levels of inputs, supplements and medications; and very poor fertility. The prognosis: unsustainable and unprofitable farming. The root cause: decades of incorrect genetic design and selection of the bovine species used in these production systems; i.e. there is a major disconnect between the seed stock supplier's products and the end user's requirements." John O'Brien

What has been done to date: John O'Brien CEO of Nature's Blueprint Cow has spent over 50 years actively involved at the grass roots level in several countries worldwide evaluating, designing and breeding bovine genetics.

This involvement has led to a clear understanding of the complexities and intricacies of **economically, consistently and sustainably** producing nutritious, high quality grass fed beef.

Years of research illuminates the facts that today's feed lot genetics are **incompatible** with this quest and correct physical conformation is the key to economically producing, high yielding and high eating quality carcasses in natural, sustainable grass based environments.



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This relentless research and hands on activity leads to the following statement: "The actual art of accurately evaluating the physical traits of livestock, relative to holistic function, has been lost. This is a very serious state of affairs, impacting negatively on every aspect of sustainable livestock production, processing and consumption." John O'Brien.



What must be remembered is that the consumer demands this product 52 weeks of the year. So we **must** have genetics which have the ability to be finished at most times - **not only** when seasonal conditions are perfect. We once had strains of cattle which were finished everyday of their life. This is one of the traits the Angus breed was originally famous for.

Satisfying this 52 week a year requirement is heavily tied to correct genetic design resulting in correct body conformation. Retailers and processors targeting this expanding market, purchasing cattle over payment grids, gain no benefit when a supplier's cattle 'miss' the grid; in fact, they eventually lose suppliers.

Correct genetic design, encompassing accurate physical appraisal, is the foundation of sustainable high quality grass fed beef production and supply.

How can this situation be sustainably rectified to benefit all participants? Beginning at the beginning is the only solution. Whether suppliers are actual breeders or finishers they cannot **consistently** supply the products in discussion when genetic design and physical conformation is flawed. We must return to accurate physical evaluation to ensure all participants of the chain are sustainably satisfied.

Correct Physical Evaluation and Design must be implemented: Over the past thirty to fifty years the shape of our beef cattle has mutated to taller, narrower, leaner **and bare on the rump**. John O'Brien calls these altered genetics GABBY (Genetically Altered Bovine Breeds) or feed lot genetics.

This modern, or GABBY, body shape is only manageable in a feedlot when supplied consistent levels high energy nutrition. However, for **all those** in the sustainable and natural, high quality grass feed beef chain, the GABBY cow **creates many problems** and solves none. This is a serious situation which must be changed.

Are GABBY genetically altered? The answer is "yes". There has been a direct intention to move from the design Nature intended by completely ignoring the critical importance of Nature's number one time-tested selection criteria, **survival of the fittest**.

Numbers have replaced this critically important selection criteria, with the cattle with best numbers being sold as 'the be all and end all' solution to breeding decisions.

This purposeful, ignorant and arrogant disregard for this time-proven, imperatively important selection criteria, has caused the demise of the natural function of the modern bovine to the point of becoming unsustainable in natural (sustainable) production systems. Check previous figures for verification.

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Unsustainable and economically unviable genetics resulting in farmers continually pouring more and more hard earned dollars into more supplementation, management and medication in an attempt to create the perfect environment for these very unthrifty, inefficient, unnatural and unadaptable strains. Dairy Farmers' quality of lifestyle has also diminished whilst farming in the production systems 'built' around the GABBY cows. The view through a holistic lens is very murky.

Those (mainly academics who have never bred or fed a cow in their life) behind this push had their eye on the (supposed) gains the pork and poultry industries have made, **not accounting** for the fact, these species are housed all their lives; have prescriptively controlled nutrition; and are not genetically bred using questionable computer generated breeding programs controlled by individuals who have no hands on participation in the industries.

Only in a feedlot do cattle have an environment anything like this and this is where these GABBY cows function best. And we all know how unsustainable feed lotting is, not to mention the increasing consumer distaste for the concept and demand for change

GABBY genetics are high input cattle with poor fertility and very poor doing ability, let alone the ability to finish to a **required quality, under a required age** in natural grass based environments. These genetics are antagonistic to farmers, processors, retailers and consumers requirements for sustainable production.



To arrive at this required outcome we need to begin at the beginning. Commercial breeders' herds require accurate appraisal to become **evaluated and certified for sustainable grass based production**. This is the first step in establishing the rock solid foundations of the chain.

Concurrently, an accurately evaluated and accredited genetic supply must be identified, certified, and expanded to build on the base foundation, ensuring that a sustainable supply can expand and grow with increasing demand.

The Commercial Breeder: Breeders must be evaluated, educated and trained in correct genetic selection to ensure:

1. They are running efficient cattle and they are producing cattle which will finish most times of the year
2. Their cattle have acceptable performance in grass based environments
3. Their cattle have high compliances with carcass and eating quality requirements
4. Their cattle have good performance on the boning table

Seed Stock Evaluation, Certification and Supply: As well as having their herds evaluated commercial breeders must be supplied the correct genetics to ensure sustainability of supply. A source of correctly identified, evaluated and certified seed stock must be made available. This tailor made, well designed genetic pool is the essential key to expanding the sustainable supply of efficiently produced, high yielding and high quality grass fed beef. **Wholly Cow Certified Genetics** equals genetics pitch perfect in design for sustainable farming.



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Seed stock strains must be independently accurately evaluated and certified. The greater majority of seed stock available now, of all breeds, are designed to fit the numbers system and supply feed lot genetics (GABBY genetics). The critical importance of accurate physical evaluation has been ignored for decades.

Independent evaluation and certification is the only way to give commercial farmers clarity, direction and certainty in their genetic investments.

Getting the foundations right is the guarantee of a solid structure. Accurately evaluating and certifying commercial herds and seed stock supply will create the rock solid foundations of a sustainable and expandable supply program, of naturally produced, high quality grass fed beef, which will benefit all participants in the chain.

The Finisher: The finisher must be educated and trained in selecting genetics which are evaluated and identified for high quality, grass based beef production. The finisher requires cattle which can efficiently finish (to processors/retailers requirements) most times of the year under a required age. The finisher must be **linked to the breeders** with properly designed grass based genetics, so the chain gets stronger.

The Processor: Consistent high quality, high yielding carcasses which adhere to required specifications are where a processor makes money and expands top end markets. Low yielding carcasses, continually falling out of specs, create unsatisfactory relationships with suppliers and customers.

The Retailer: All retailers are looking for a point of difference, a marketing edge. Promoting the benefits of naturally produced, grass fed beef and not being able to consistently satiate an expanding demand works for no one. The retailer wants to consistently supply what he promises his customer – a consistent supply of sustainably and naturally produced, high quality, grass fed beef.

The greatest challenge for any retailer in the beef industry is consistency in flavour and eating quality. Correct genetic design and correct nutrition **are the keys**.

The Consumer: Worldwide, consumers are becoming more and more concerned about where their food comes from, what it consumes, and how it was treated before they purchase it. Their other requirement is eating quality and consistency. Humanely treated, reasonably priced, naturally and safely produced, flavoursome beef with high eating quality is where consumers' interests are now focused. With beef products, consistency and eating quality are great challenges which can only be **overcome and actualized** through correct genetic design and nutrition.

The key to ensuring ongoing success: We must return to the genetics with the body shape (phenotype) which will satisfy all above requirements. The body shape which is thrifty is all environments.

We must apply standards of evaluation and certification to accurately identify the strains within breeds which will satiate the holistic requirements of sustainable and natural, high quality, grass fed beef production and supply.



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Our modern cattle are tall, narrow, lean, **very bare** on the rump, **frail** and **unthrifty**. All traits which are antagonistic to efficient and sustainable high quality grass fed beef production.

The phenotype in cattle which naturally accommodates all the above requirements is the **Nature's Blueprint Cow** model. This is **the design which nature intended**. Accurate identification, evaluation and certification is the clear and solid way forward.

The critically important design as Nature intended, has been lost and cast aside by (supposed) experts breeding cattle on computers and seed stock suppliers more focused on supplying a product with fashionable and marketable numbers than whether the progeny of that product is working for all sectors of the chain, i.e. the finishing ability, boning yield and eating quality of the final product.

The Nature's Blueprint Cow design is moderate in height, wide based and well fleshed. More importantly, it is **built to thrive on grass**, and designed as Nature intended. This body type is the most **efficient** at converting available resources into high quality beef and producing higher percentages of high valued cuts. It results in beef cattle with the ability to 'beef it up' on grass. Overall, it represents the motto of Nature's Blueprint Cow, "The Design as Nature Intended".



This much larger body capacity (wider and deeper) has a much larger rumen which has the ability to extract maximum nutrition from low energy (pasture) feed.



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The phenotype of the GABBY cow, with small body capacity, and thus a small rumen, requires high energy grain feed to finish and cannot thrive on grass.

Farmers breeding cattle to supply the continual demand for high quality, naturally produced beef **must have** cattle genetics which have the ability to thrive in any environment and nutritional conditions. This is a multi-country, multi-region requirement of sustainable farming.

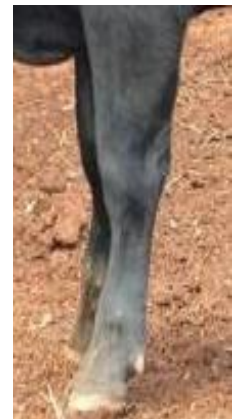
High dollar value, **cut based** carcasses are related to the body shape (phenotype) of the animal. This is not about red meat yield versus fat, it is about a higher percentage of high valued cuts with very good eating quality.

Payment grids are not the answer to educating suppliers when processors and retailers aim is to increase their sustainable supply by creating sustainable supply chains. Education and certification are the key.

Processors and Retailers please note: GABBY cows are taller and narrower, Nature's Blueprint are more moderate in height and wider based. From **a cut value base** perspective, 2 inches of extra width at the stifle, is worth at least 10 times more (**in total dollars returned**) than two inches of extra hip height which results from longer legs.



Keep this in mind: The modern, feed lot or GABBY cow is promoted as being better than the Nature's Blueprint Cow design because it is taller which is mistakenly thought as bigger. All research points to taller not necessarily equating to bigger where it counts, and is of no benefit to farmers, as taller cattle are much harder to maintain and finish, and to the processor this extra size manifests in products shown in these pics. The meat (if there is any) from these products is not worth a lot, as there is more size in these low value parts and less in high value cuts. **Everyone loses.**



Ensuring ongoing success: The accomplishment of expanding the supply of sustainably and naturally produced, consistently high eating quality grass fed beef is underpinned by the supply of accurately evaluated holistic genetics; education in physically appraising cattle; and the reintroduction of the **Nature's Blueprint Cow model**, the design which Nature intended, through **Wholly Cow Certification**.

Objectives:

1. Educating all participants in correct physical evaluation of cattle
2. Raising the awareness about requirements for facilitating the sustainable supply of natural high quality grass fed beef
3. Implementing ecological sound, sustainable and profitable, grass fed beef farming principles and production
4. Identifying and evaluating commercial herds and seed stock cattle for grass based production



Sustainable Grass Based Farming

The Essential Key Requirements

The Sustainable Production of High Quality Grass Fed Beef

Profitable and Sustainable Farming → Nutrient Dense Food Production

5. Identifying and evaluating a supply of genetics custom designed for grass fed beef production
6. Increasing the percentages of cattle hitting the ideal grid parameters
7. Increasing the supply of finished cattle in the 'off' seasons
8. Raising the overall quality of the grass fed beef being supplied to the market
9. Substantially increasing the quantities of high quality naturally produced grass fed beef supplied
10. Satiating the growing consumer demand for high quality, naturally produced, grass fed beef products
11. Solidify and strengthening the entire supply chain

Outcomes:

1. Creating an expanding supply of sustainably and naturally produced high quality, grass fed beef
2. Empowering farmers to farm sustainably and profitably through an ecological sound methodology
3. Ensuring grass based beef farming is a sustainable, expanding, profitable and an attractive business model
4. Facilitating farmers being able to supply required grass fed beef products
5. Enabling processors and retailers to expand markets
6. Supplying more consumers with superior beef products
7. Minimizing the peaks and troughs in supply
8. Raising the yields of high value cuts from carcasses with very good eating quality



Nature's Blueprint Cow

Wholly Cow Certification

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