

BUFFALO-BREEDING INDUSTRY

– YESTERDAY, TODAY, AND TOMORROW

The South African buffalo industry has seen some remarkable growth in the last decade, and in fact buffalo, as a commodity or an asset, is outstripping many conventional and unconventional assets and markets.

The question that many are asking is: Why?

Where does the value originate? How does the market function? Can prices and

Well-known SA hunter-turned-conservationist LINDSAY HUNT, who played an important role in projects producing disease-free buffalo herds, reviews the history, and puts forwards some viewpoints on the current practice and future of the buffalo-breeding industry in southern Africa.



the market be sustained? And most pertinently, is the buffalo market a bubble?

The origin of value

Buffalo value is a hotly contested issue. The consistent argument is that the underpinning factor to a buffalo's value is its hunting value. The buffalo is arguably the most coveted of Africa's, and possibly the world's dangerous game. However, this argument justifies a price tag in the region of US\$10 000 – \$25 000. Recently, buffalo have sold for ten times this value. Buffalo breeders or investors are either living in a fool's paradise, or there must

be a sensible economic explanation.

There is little doubt that trophy quality and availability are diminishing across most of Africa, but even this consistent decline makes justifying some recent auction prices difficult. The only rational explanation is that the buffalo industry has entered a professional era. The professional era does not usually bode well for animals – ask any chicken. We can only hope that the magnificent spirit and tenacious brutality that defines the buffalo will protect it from a sterile future of genetic perfection (from an extremely imperfect human viewpoint). Ironically,

doing so may well preserve its value, as single-trait breeding invariably affects thousands of years of genetic selection and in the case of the buffalo, perfection.

The market system

The public assumes that market prices are a reflection of value, but history has repeatedly shown that markets react more to sentiment than fact. Global market buoyancy is invariably a consequence of collective global optimism. Selective market buoyancy is, in turn, either a reflection of selective optimism or comparative optimism. The buffalo market is,



Romulus, son of the big cow pictured on p 77, boasts excellent fertility, masculinity, horns, and temperament. He is a pure Kruger bull, but many would place a much higher value on East African or Madikwe stock.

in the author's opinion, benefiting from both selective and comparative optimism.

In the simplest terms, the buffalo industry is booming not only because buffalo are seen to be an excellent source of value, but also because both comparative and non-comparative markets offer such poor returns.

However, sentiment as a market force must at some stage be reinforced with real value – market crashes are invariably followed by a return to growth. The question is: What determines how far and why a market fails? Certainly, value plays a part, but again sentiment cannot be overlooked. Markets recover when the players in the market 'believe' that value exceeds price.

Supply and demand

The critical question is: How is value determined? The answer lies in the simplest economic theory – the law of sup-

ply and demand. Demand and supply curves are either elastic or inelastic. An elastic demand curve implies that a small change in price has a large impact on demand. An inelastic demand curve implies that demand remains relatively constant regardless of price.

Demand curves within the same industry can vary hugely across a product range. For example, the demand curve for a Ferrari is very different to that for a Tata. This fact is most pertinent to the buffalo industry – certain sectors of the industry face inelastic demand curves while others face highly elastic demand curves.

The demand for 47-inch bulls is highly inelastic – there are so few on the market that sellers can, within reason, set their price. The demand for 36-inch bulls is affected by the hunting industry and in the current economic climate that demand curve is highly elastic – so a small increase in price results in a sudden drop in demand, and vice versa.

Are all buffalo equal or perceived to be equal?

A buffalo is an exemplary compilation of

horn, hide, hoof and muscle. It is the most brutal and unforgiving adversary, the most affectionate and trust-worthy companion, and perhaps the most paradoxical animal in Africa. It is this paradox that adds enormous intrinsic value to keeping buffalo.

Essentially, however, all buffalo in South Africa are of one species, but are defined eco-typically: Kruger, Addo, KwaZulu-Natal, Madikwe and East African. These distinctions have until now been a critical factor in the value of animals. It is at this point that it is paramount to distinguish between fact and sentiment. This, in turn, requires a revisit to value.

I must emphasise that for the purpose of this argument I am using norms or means and am not considering record prices obtained at auctions. In conventional farming, value is determined by the primary income source of a product. The price of beef cattle is directly related to the market beef price. Stud animals in the beef industry sell for a multiple of the 'commercial value' and this can vary between four and seven times the 'car-

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cass weight'. So, in the simplest terms, when a Bonsmara steer sells for R7 000 the price for a stud Bonsmara bull can be anything from R28 000 to R49 000.

The reason stud prices are higher is because it is assumed that genetic traits in the sire or dam will be passed on to the offspring and offer a higher future return. Historically, stud selection was either on 'gut feel' or empirical evidence. However, modern science is allowing for far more scientific selection. Each animal's DNA contains genetic information. Technology increasingly allows the genotyping of a wider range of species, of thousands of different DNA markers. These markers remove the guesswork from predicting heritable traits. Increasingly, all domesticated stud animals will be selected scientifically.

What then is the value of a buffalo?

The basis for the value of buffalo is in the hunting price. This varies between US\$10 000 and \$25 000 depending on the quality of the trophy, which in most basic terms translates into the size, volume, spread, and curl of the horns. This value rests primarily with bulls, as cows are retained as breeding stock.

Using this extremely loose model, productive animals are worth anywhere between four and seven times the hunting value. Thus, at a hunting price of US\$10 000, a productive buffalo is worth \$40 000 to \$70 000. At a hunting price of \$20 000, productive buffalo are worth \$80 000 to \$140 000. The difference in hunting value rests almost exclusively with horn size, and it is this very factor that has seen record prices at auctions. However, single-trait selection in buffalo is a slippery slope. The biggest bull or cow in the world rapidly loses value if it is infertile or if the cow conceives calves that are simply too large to be born without risking the dam's life.

Using the above theory the value of productive buffalo producing average offspring is between R280 000 and R490 000, and the value of productive buffalo expected to produce exceptional offspring is between R560 000 and R980 000. This value is attributable to both bulls and cows but, as a bull can cover many cows, it is not unusual to see remarkable bulls selling for many times

these values. At these levels, the buffalo market is comparable to the beef industry. In fact, at current prices, buffalo are still under valued and opportunity abounds. Moreover, using the above model, it is clear that the buffalo market was significantly under valued two years ago and a lot of money was made by simply buying, holding and selling stock.

Where is the market going?

The future of the buffalo market is going to be affected by two critical factors. The cleanliness (certified disease-free status) and phenotypical appearance of buffalo will override all other aspects. To date, the market has seen a huge premium paid for animals of 'East African' stock. This premium is simply because these animals are deemed to be 'cleaner' and have wider horns than other eco-typically defined buffalo.

Buffalo beauty is in the eye of the beholder. However, in future, big-bodied, big-horned animals with excellent fertility and unquestionable disease credentials will sell for a premium, regardless of their origins.

The supply of phenotypically impressive disease-free animals with excellent genetic diversity is extremely limited. Small numbers of excellent quality animals reach the market each year and often fetch exceptional prices, but these prices cannot be regarded as norms or new benchmarks. Exceptional animals in all aspects of commercial livestock farming often set records, but this does not translate into huge price increases in all commercial animals.

There may be a move towards establishing DNA markers for buffalo so that in future, specific traits could be guaranteed. I, for one, will be sad to see the prices of buffalo reduced to assessing DNA codes. There is remarkable opportunity and excitement in establishing a herd and improving the quality of that herd over time. There is opportunity in this market for breeders at both ends of the spectrum. Those who choose not to spend more than R350 000 a head and those who spend as much as R2 000 000 a head can coexist and benefit from a fas-



An outstanding Kruger dam that produces exceptional offspring. She is the mother of Romulus. However, trait transfer is never certain. Some sires and dams 'punch well above their weight' – an issue that will be discussed in a second article.

cinating and growing market.

Ignorance is bliss

There is a tangible delight and trepidation that come from living at the southern tip of Africa. It is a blessing that our country is not all farmed into a patchwork quilt of dreary uniformity, and that our wild animals retain a capricious and sometimes lethal, but essential mistrust of man. It makes working with buffalo so enthralling. It is this very uncertainty that preserves the value of all these noble animals. They have not been gene-mapped to such a degree that we can with certainty predict and anticipate every aspect of future progeny and discard with human insensitivity any animal regarded as sub standard. It is the delight in the triumph of the under-dog to realise that the runt of the litter can so readily become the alpha male, precisely because we know so little.

In concluding, it is clear that the hunting value is the underlying basis of value in the buffalo industry and that this value can fluctuate over time. Moreover, buffalo are no longer simply visual assets on a game ranch, but have become an independent and professionally managed asset. Prices are clearly within market norms in comparative industries and there is enormous scope for growth in what is proving to be a dynamic and growing industry.

Due to lack of space in this issue, some important aspects have not been elaborated on. A follow-up article will focus on genetics and 'trait transfer' – why do some excellent sires produce mediocre offspring, and some mediocre sires produce outstanding offspring?
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