South African Brahman Selection Indexes

There are three standard selection indexes calculated for South African Brahman animals. These are:

- ❑ Brahman Rangeland Grazing Index
- ❑ Brahman Wean Index
- ❑ Brahman Feedlot Index

Each selection index has been developed for a different production/market scenario

Brahman Rangeland Grazing Index – Estimates the genetic differences between animals in net profitability per cow joined for an example commercial herd targeting steers for export markets. Steers are assumed to be pasture grown & finished at around 500 kg live weight or 250 kg carcase weight at 30 months. The index also has moderate emphasis on calving ease and maternal traits. Replacement cows are generally sourced from within the herd and daughters are largely retained in the industry for breeding. The index is also suited to using Brahman sires over mixed breed cows.

Brahman Wean Index – Estimates genetic differences between animals in net profitability per cow joined for an example self replacing commercial herd producing weaners for sale at about 7 months of age off pasture. The index has emphasis on calving ease and maternal traits while acknowledging that these animals will be grown on to be finished and slaughtered at an older age. This index is suited to select sires and dams where more emphasis on cow traits is required. However, you are strongly encouraged to consider selecting replacement animals using both the Brahman Wean Index as well as a later finishing index (Brahman Rangeland Grazing or Brahman Feedlot) at the same time.

Brahman Feedlot Index – Estimates genetic differences between animals in net profitability per cow joined for an example self replacing commercial herd targeting steers to turn off at 12 months of age. There is some emphasis on calving ease and maternal traits while finishing steers at around 400 kg live weight (230 kg carcase weight) after 120 days on feed. This index is also suitable to using Brahman sires over mixed breed cows.

All selection indexes are reported as an EBV, in units of net profit per cow mated (Rand) for a given production/market scenario. They reflect both the short term profit generated by a sire through the sale of his progeny, and the longer term profit generated by his daughters in a self replacing cow herd (where applicable).
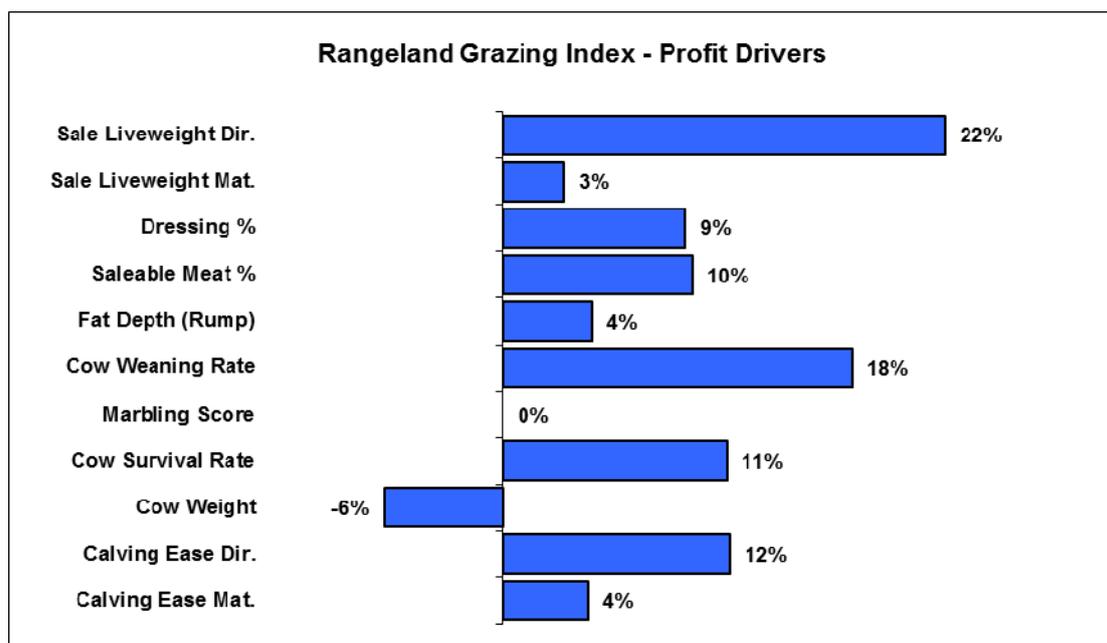
All selection index values have been derived using BreedObject technology. More detailed information regarding each selection index is provided on the following pages.

If you have any further queries regarding South African Brahman Selection Indexes, please do not hesitate to contact staff at the Brahman Cattle Breeders Society.
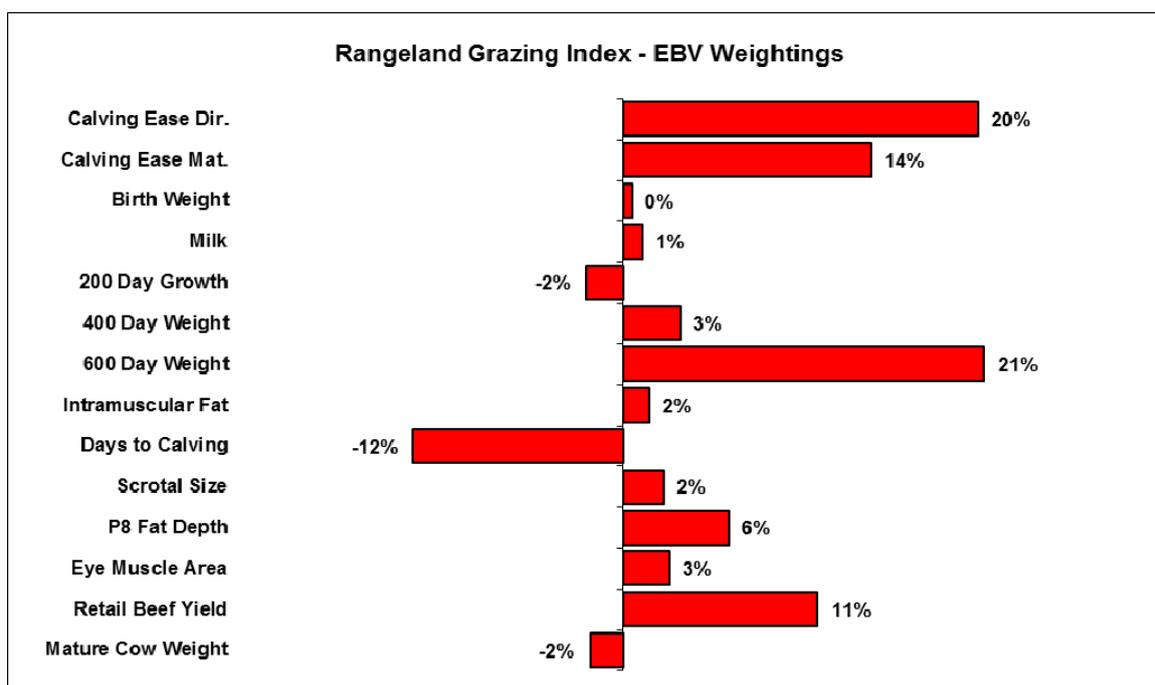
Brahman Rangeland Grazing Index

The Brahman Rangeland Grazing Index estimates the genetic differences between animals in net profitability per cow joined for an example commercial herd targeting steers for export markets. Steers are assumed to be pasture grown & finished at around 500 kg live weight or 250 kg carcase weight at 30 months. The index also has moderate emphasis on calving ease and maternal traits. Replacement cows are generally sourced from within the herd and daughters are largely retained in the industry for breeding. The index is also suited to using Brahman sires over mixed breed cows.

The following bar graph shows the key economic traits that are important in this selection index. The different trait emphases reflect the underlying profit drivers in a commercial operation targeting this production system and market.

Rangeland Grazing Index - Profit Drivers

| Trait	Value
Sale Liveweight Dir.	22%
Sale Liveweight Mat.	3%
Dressing %	9%
Saleable Meat %	10%
Fat Depth (Rump)	4%
Cow Weaning Rate	18%
Marbling Score	0%
Cow Survival Rate	11%
Cow Weight	-6%
Calving Ease Dir.	12%
Calving Ease Mat.	4%

Considering the genetic relationship between the key profit drivers and the EBVs that are available, this transposes to the following EBV emphases. The sign indicates the direction of the emphasis. For example, greater 600 Day Weight EBVs and shorter Days to Calving EBVs are favoured.

Rangeland Grazing Index - EBV Weightings

Trait	Value
Calving Ease Dir.	20%
Calving Ease Mat.	14%
Birth Weight	0%
Milk	1%
200 Day Growth	-2%
400 Day Weight	3%
600 Day Weight	21%
Intramuscular Fat	2%
Days to Calving	-12%
Scrotal Size	2%
P8 Fat Depth	6%
Eye Muscle Area	3%
Retail Beef Yield	11%
Mature Cow Weight	-2%

While the graphs on the previous page show the different profit drivers and emphases that have been placed on each EBV within the Brahman Rangeland Grazing Selection Index, they do not illustrate the likely change that will occur to each individual trait if producers select animals using this selection index. The response to selection will also be influenced by such factors as the genetic relationship between traits and the animals that are available for selection. For example, while there is a slight negative weighting on 200 Day Growth in this selection index, it would be expected that growth to 200 days would increase considerably as there is a large weighting on 600 Day Weight.
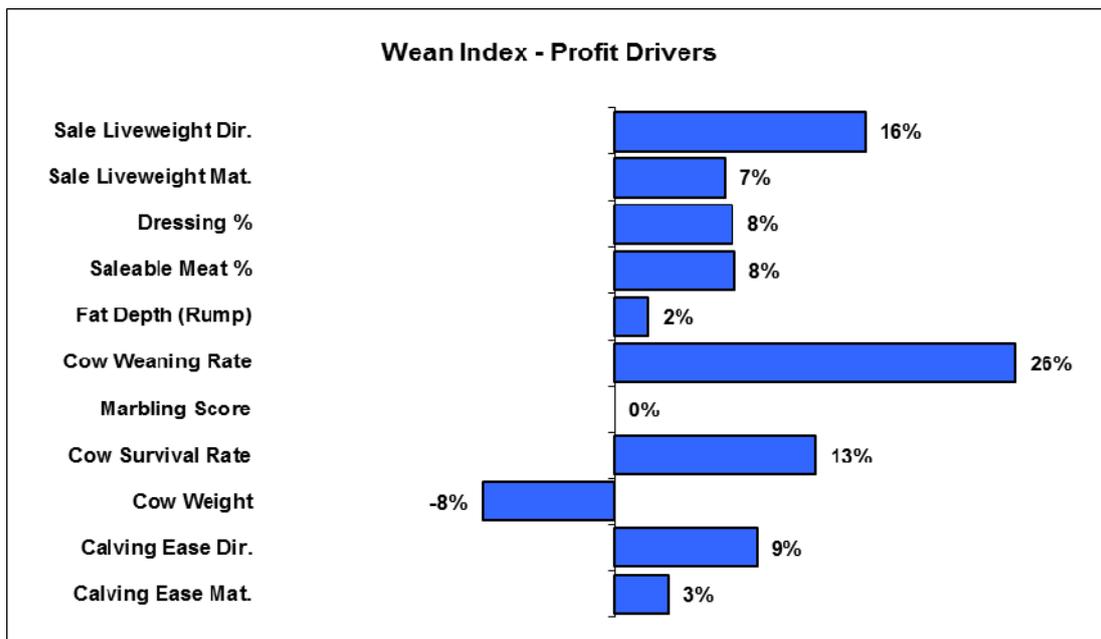
The following bar graph provides an indication of the relative change that would be expected in each individual trait if producers select animals using the Brahman Rangeland Grazing Selection Index. The graph reflects the relative change if the Brahman Sires (at the March 2013 South African Brahman GROUP BREEDPLAN analysis) were ranked on this selection index and the Top 10% selected for use within a breeding program. The response to selection may differ if a different group of animals were available for selection.
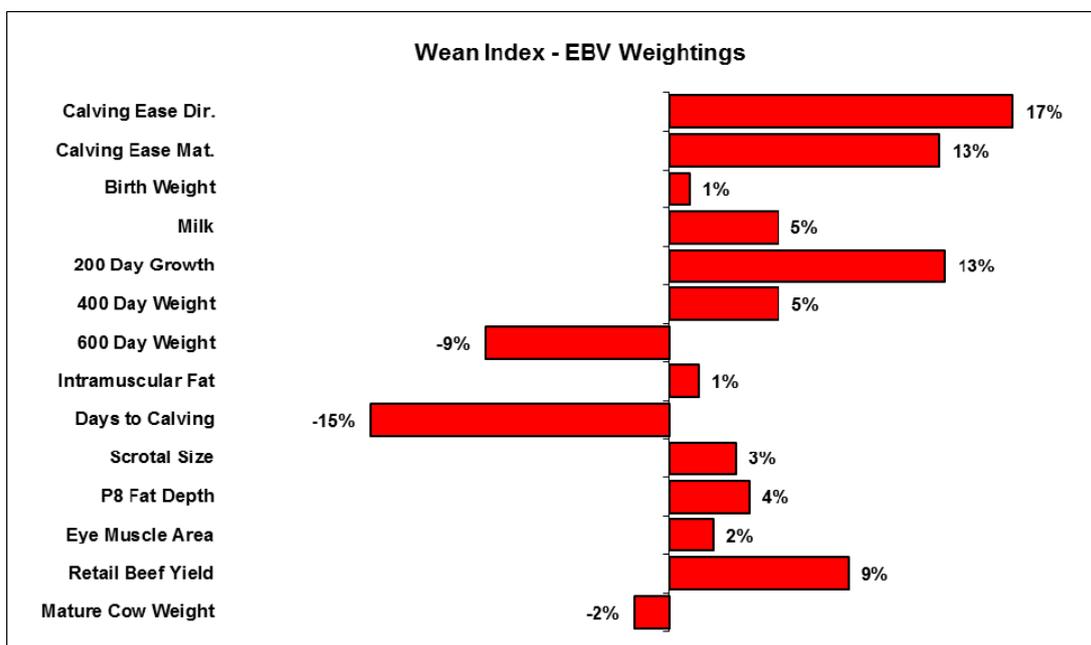

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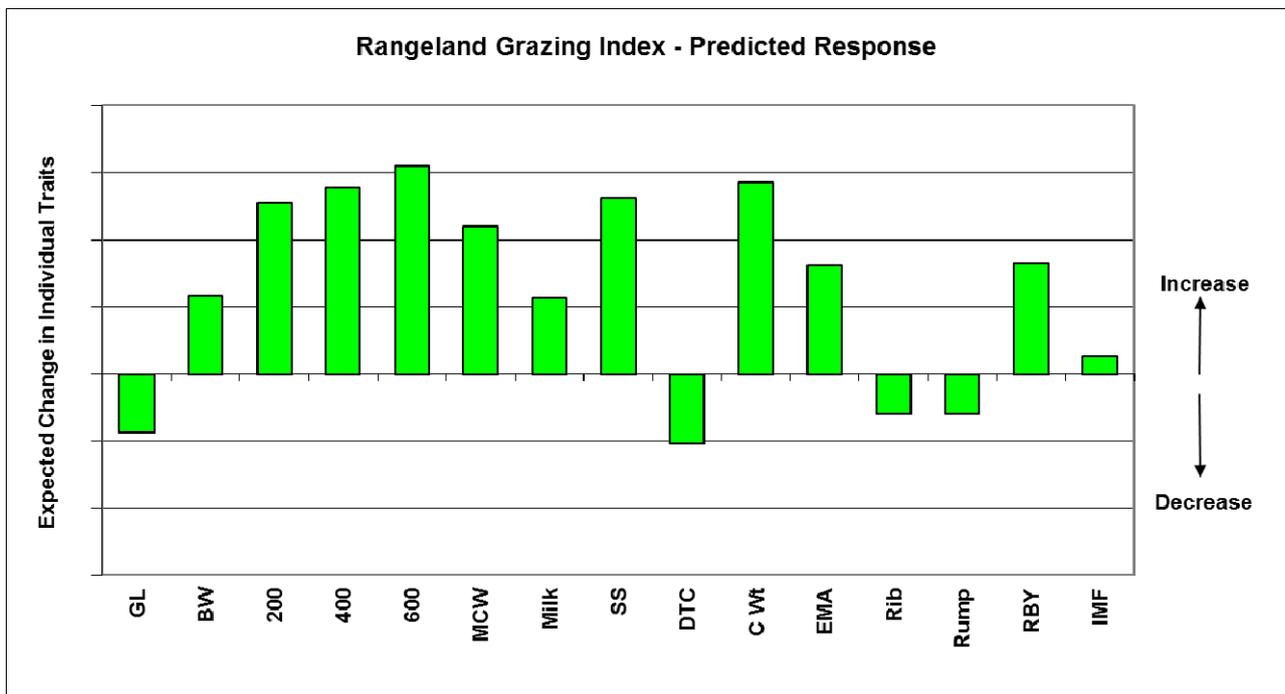
Brahman Wean Index

The Brahman Wean Index estimates genetic differences between animals in net profitability per cow joined for an example self replacing commercial herd producing weaners for sale at about 7 months of age off pasture. The index has emphasis on calving ease and maternal traits while acknowledging that these animals will be grown on to be finished and slaughtered at an older age. This index is suited to select sires and dams where more emphasis on cow traits is required. However, you are strongly encouraged to consider selecting replacement animals using both the Brahman Wean Index as well as a later finishing index (Brahman Rangeland Grazing or Brahman Feedlot) at the same time.

The following bar graph shows the key economic traits that are important in this selection index. The different trait emphases reflect the underlying profit drivers in a commercial operation targeting this production system and market.

Wean Index - Profit Drivers

| Trait	Value
Sale Liveweight Dir.	16%
Sale Liveweight Mat.	7%
Dressing %	8%
Saleable Meat %	8%
Fat Depth (Rump)	2%
Cow Weaning Rate	26%
Marbling Score	0%
Cow Survival Rate	13%
Cow Weight	-8%
Calving Ease Dir.	9%
Calving Ease Mat.	3%

Considering the genetic relationship between the key profit drivers and the EBVs that are available, this transposes to the following EBV emphases. The sign indicates the direction of the emphasis. For example, greater 200 Day Growth EBVs and shorter Days to Calving EBVs are favoured.

Wean Index - EBV Weightings

Trait	Value
Calving Ease Dir.	17%
Calving Ease Mat.	13%
Birth Weight	1%
Milk	5%
200 Day Growth	13%
400 Day Weight	5%
600 Day Weight	-9%
Intramuscular Fat	1%
Days to Calving	-15%
Scrotal Size	3%
P8 Fat Depth	4%
Eye Muscle Area	2%
Retail Beef Yield	9%
Mature Cow Weight	-2%

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While the graphs on the previous page show the different profit drivers and emphases that have been placed on each EBV within the Brahman Wean Selection Index, they do not illustrate the likely change that will occur to each individual trait if producers select animals using this selection index. The response to selection will also be influenced by such factors as the genetic relationship between traits and the animals that are available for selection. For example, while there is a negative weighting on 600 Day Weight in this selection index, it would be expected that growth to 600 days would increase considerably as there is a large weighting on 200 Day Growth.
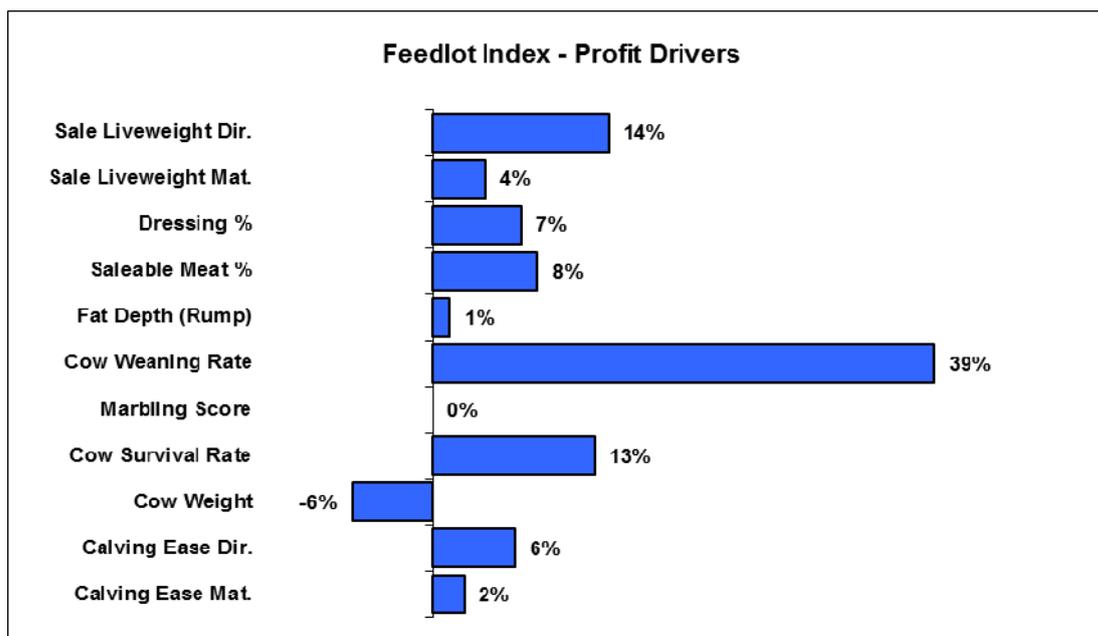
The following bar graph provides an indication of the relative change that would be expected in each individual trait if producers select animals using the Brahman Wean Index. The graph reflects the relative change if the Brahman Sires (at the March 2013 South African Brahman GROUP BREEDPLAN analysis) were ranked on this selection index and the Top 10% selected for use within a breeding program. The response to selection may differ if a different group of animals were available for selection.
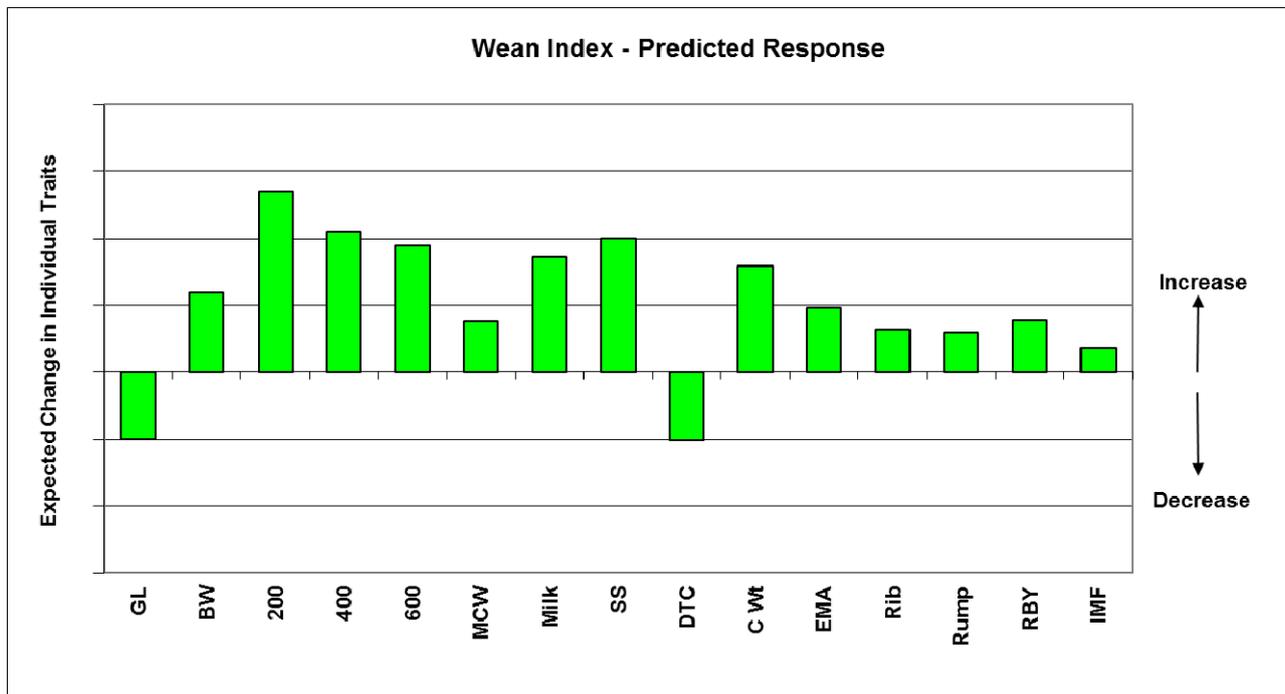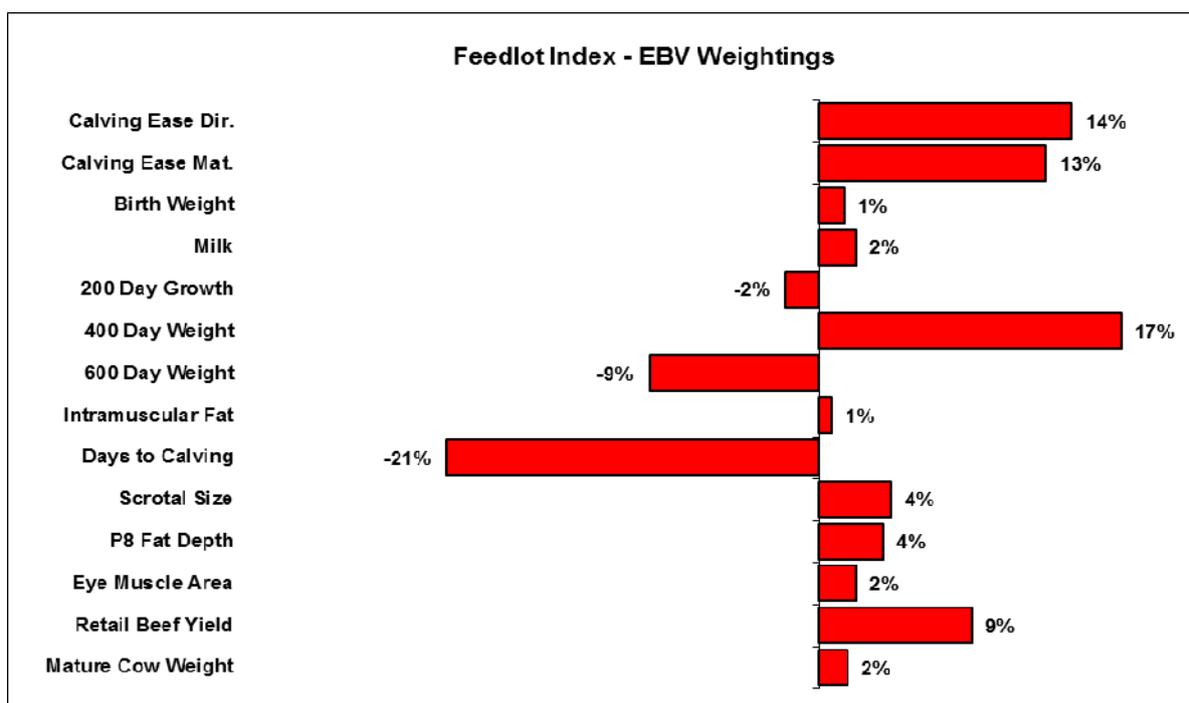
Brahman Feedlot Index

The Brahman Feedlot Index estimates genetic differences between animals in net profitability per cow joined for an example self replacing commercial herd targeting steers to turn off at 12 months of age. There is some emphasis on calving ease and maternal traits while finishing steers at around 400 kg live weight (230 kg carcase weight) after 120 days on feed. This index is also suitable to using Brahman sires over mixed breed cows.

The following bar graph shows the key economic traits that are important in this selection index. The different trait emphases reflect the underlying profit drivers in a commercial operation targeting this production system and market.

Feedlot Index - Profit Drivers

Trait	Value
Sale Liveweight Dir.	14%
Sale Liveweight Mat.	4%
Dressing %	7%
Saleable Meat %	8%
Fat Depth (Rump)	1%
Cow Weaning Rate	39%
Marbling Score	0%
Cow Survival Rate	13%
Cow Weight	-6%
Calving Ease Dir.	6%
Calving Ease Mat.	2%

Considering the genetic relationship between the key profit drivers and the EBVs that are available, this transposes to the following EBV emphases. The sign indicates the direction of the emphasis. For example, greater 200 Day Growth EBVs and shorter Days to Calving EBVs are favoured.

Feedlot Index - EBV Weightings

Trait	Value
Calving Ease Dir.	14%
Calving Ease Mat.	13%
Birth Weight	1%
Milk	2%
200 Day Growth	-2%
400 Day Weight	17%
600 Day Weight	-9%
Intramuscular Fat	1%
Days to Calving	-21%
Scrotal Size	4%
P8 Fat Depth	4%
Eye Muscle Area	2%
Retail Beef Yield	9%
Mature Cow Weight	2%

While the graphs on the previous page show the different profit drivers and emphases that have been placed on each EBV within the Brahman Feedlot Selection Index, they do not illustrate the likely change that will occur to each individual trait if producers select animals using this selection index. The response to selection will also be influenced by such factors as the genetic relationship between traits and the animals that are available for selection. For example, while there is a slight negative weighting on 200 Day Growth in this selection index, it would be expected that growth to 200 days would increase considerably as there is a large weighting on 400 Day Weight.

The following bar graph provides an indication of the relative change that would be expected in each individual trait if producers select animals using the Brahman Feedlot Selection Index. The graph reflects the relative change if the Brahman Sires (at the March 2013 South African Brahman GROUP BREEDPLAN analysis) were ranked on this selection index and the Top 10% selected for use within a breeding program. The response to selection may differ if a different group of animals were available for selection.