

## ***South African Simbra Selection Indexes***

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

- ❑ Self Replacing Feedlot Index
- ❑ Namibian Self Replacing Grass Fed Index
- ❑ Self Replacing Weaner Index

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

**Self Replacing Feedlot Index** - The Simbra Self Replacing Feedlot Index estimates genetic differences between animals in net profitability per cow joined for a herd that keeps replacement females and requires a moderate emphasis on calving ease. Progeny age at turnoff is 11 months after 120 days of extra feed. Steers are around 410 kg live weight (205 kg carcass) with 5 mm external fat. Significant emphasis is placed on calving ease, 400 day weight, days to calving, carcass yield and more moderate mature cow weight.

**Namibian Self Replacing Grass Fed Index** – The Simbra Namibian Self Replacing Grass Fed Index estimates the genetic differences between animals in net profitability per cow joined for a herd that keeps replacement females and requires a moderate emphasis on calving ease. Progeny age at turnoff is 28 months off pasture. Steers are around 470 kg live weight (244 kg carcass) with 3 mm external fat. Significant emphasis is placed on calving ease, 600 day weight, carcass yield and moderating mature cow weight. The index is equally applicable to South African grass-fed production systems.

**Self Replacing Weaner Index** – The Simbra Self Replacing Weaner Index estimates the genetic differences between animals in net profitability per cow joined for a herd that retains replacement females while excess progeny are sold at weaning to the Feedlot sector. Use this index in conjunction with the feedlot index to maximise selection pressure on your replacement females while targeting the feedlot sector endpoint for excess progeny. Significant emphasis is placed on calving ease, 200 day weight, days to calving and carcass yield while moderating mature cow weight.

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).

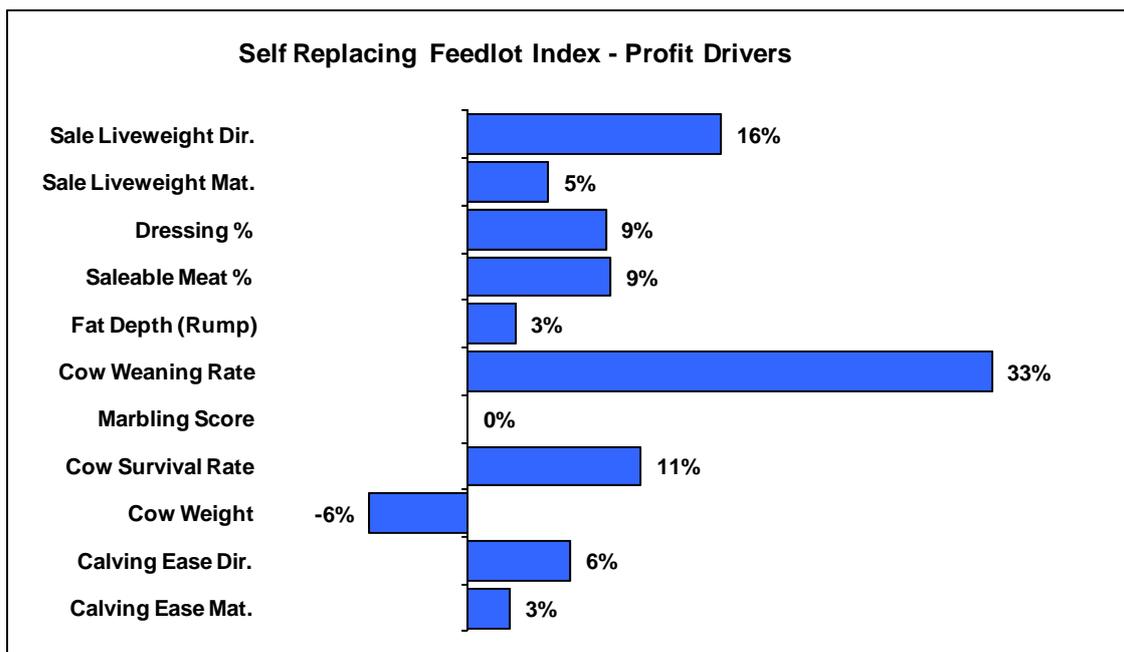
All selection index values have been derived using BreedObject technology. More detailed information regarding each selection index is provided on the following pages.

*If you have any further queries regarding South African Simbra Selection Indexes, please do not hesitate to contact staff at the Simbra Cattle Breeders Society*

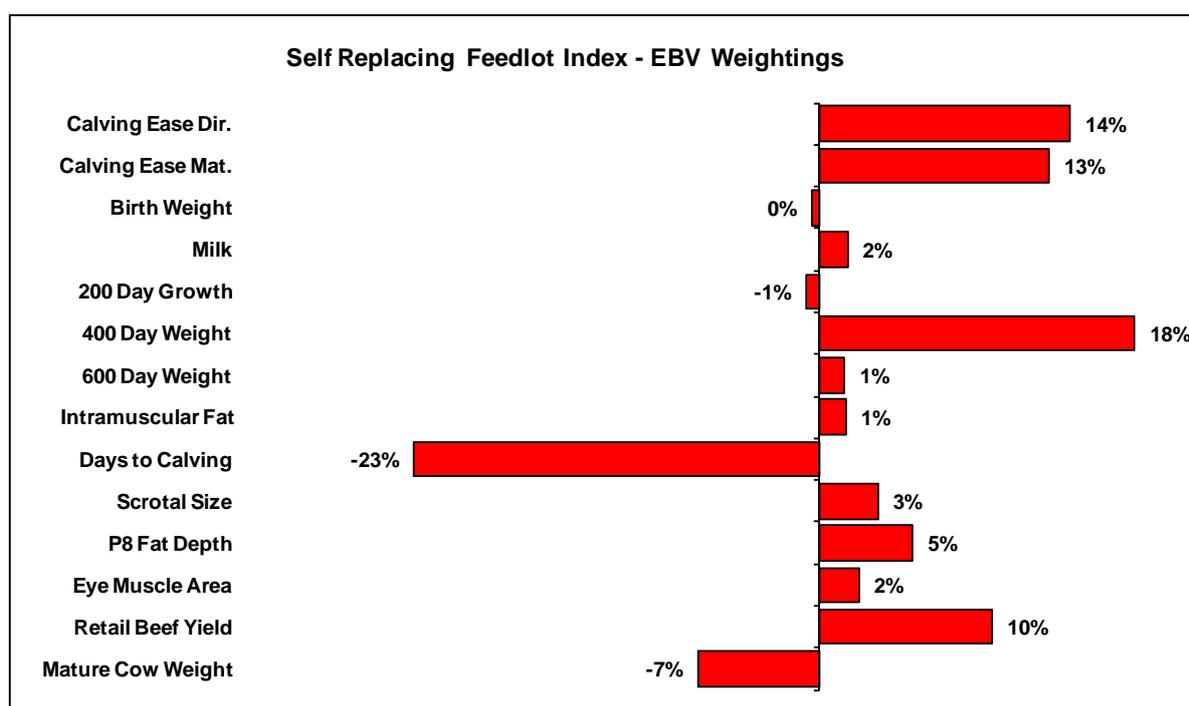
## ***Simbra Self Replacing Feedlot Index***

The Simbra Self Replacing Feedlot Index estimates genetic differences between animals in net profitability per cow joined for a herd that keeps replacement females and requires a moderate emphasis on calving ease. Progeny age at turnoff is 11 months after 120 days of extra feed. Steers are around 410 kg live weight (205 kg carcase) with 5 mm external fat. Significant emphasis is placed on calving ease, 400 day weight, days to calving, carcase yield and more moderate mature cow weight.

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 the production system and market.

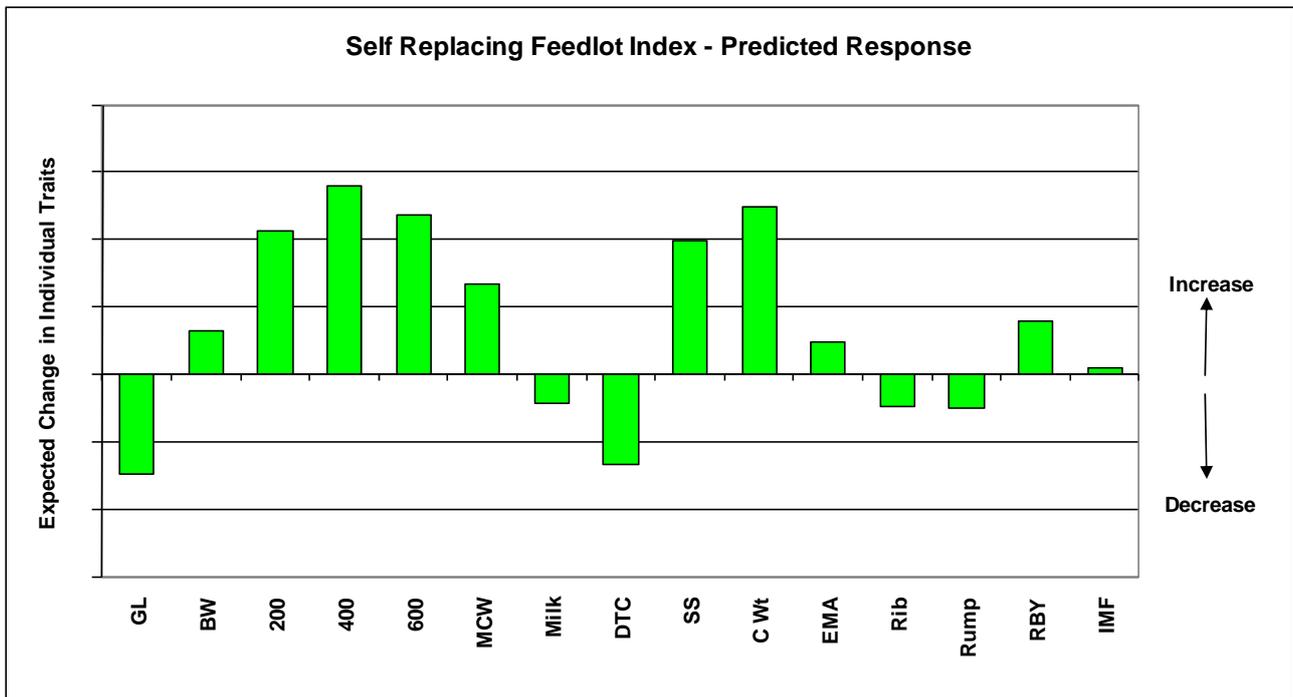


Considering the genetic relationship between the key profit drivers and the EBVs that are available, this transposes to the following EBV emphases. The sign indicates the direction of the emphasis. For example, greater 400 Day Weight EBVs and shorter Days to Calving EBVs are favoured.



While the graphs on the previous page show the different profit drivers and emphases that have been placed on each EBV within the Self Replacing 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 Weight 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.

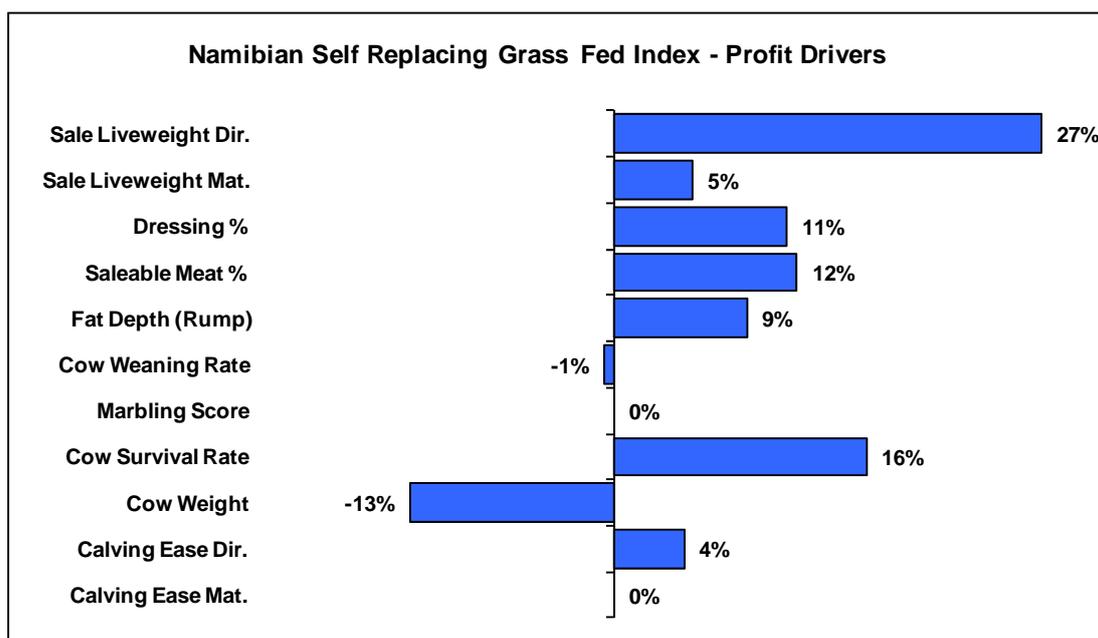
The following bar graph provides an indication of the relative change that would be expected in each individual trait if producers select animals using the Self Replacing Feedlot Selection Index. The graph reflects the relative change if the Simbra Published Sires (at the 2011 Southern African Simbra 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.



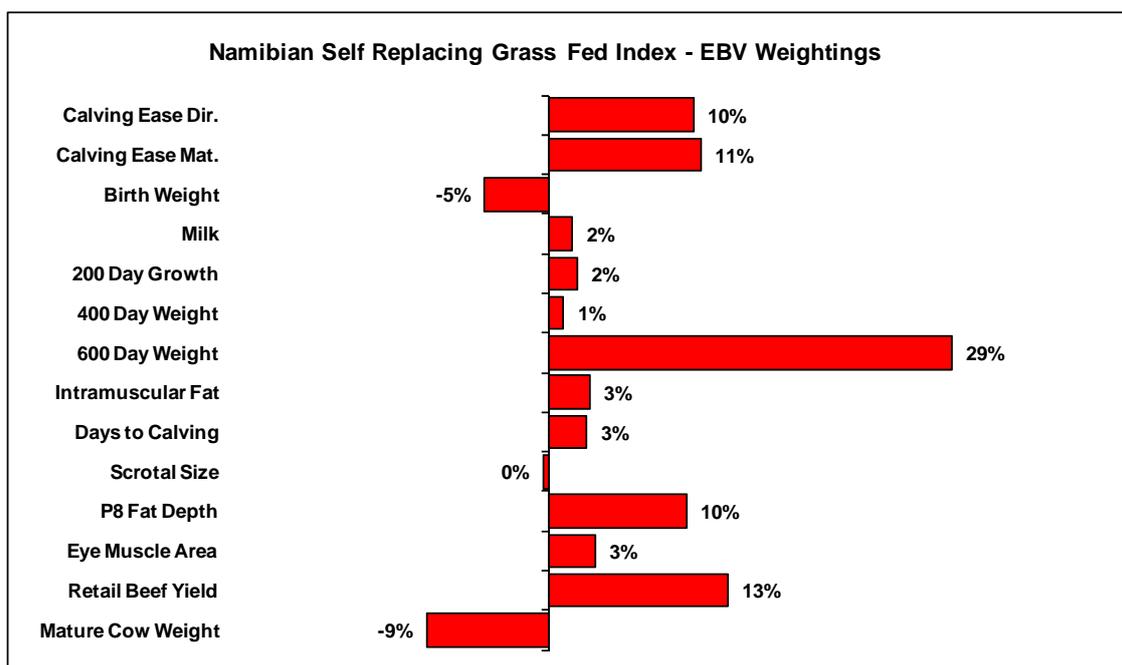
## ***Simbra Namibian Self Replacing Grass Fed Index***

The Simbra Namibian Self Replacing Grass Fed Index estimates the genetic differences between animals in net profitability per cow joined for a herd that keeps replacement females and requires a moderate emphasis on calving ease. Progeny age at turnoff is 28 months off pasture. Steers are around 470 kg live weight (244 kg carcase) with 3 mm external fat. Significant emphasis is placed on calving ease, 600 day weight, carcase yield and moderating mature cow weight. The index is equally applicable to South African grass-fed production systems.

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.

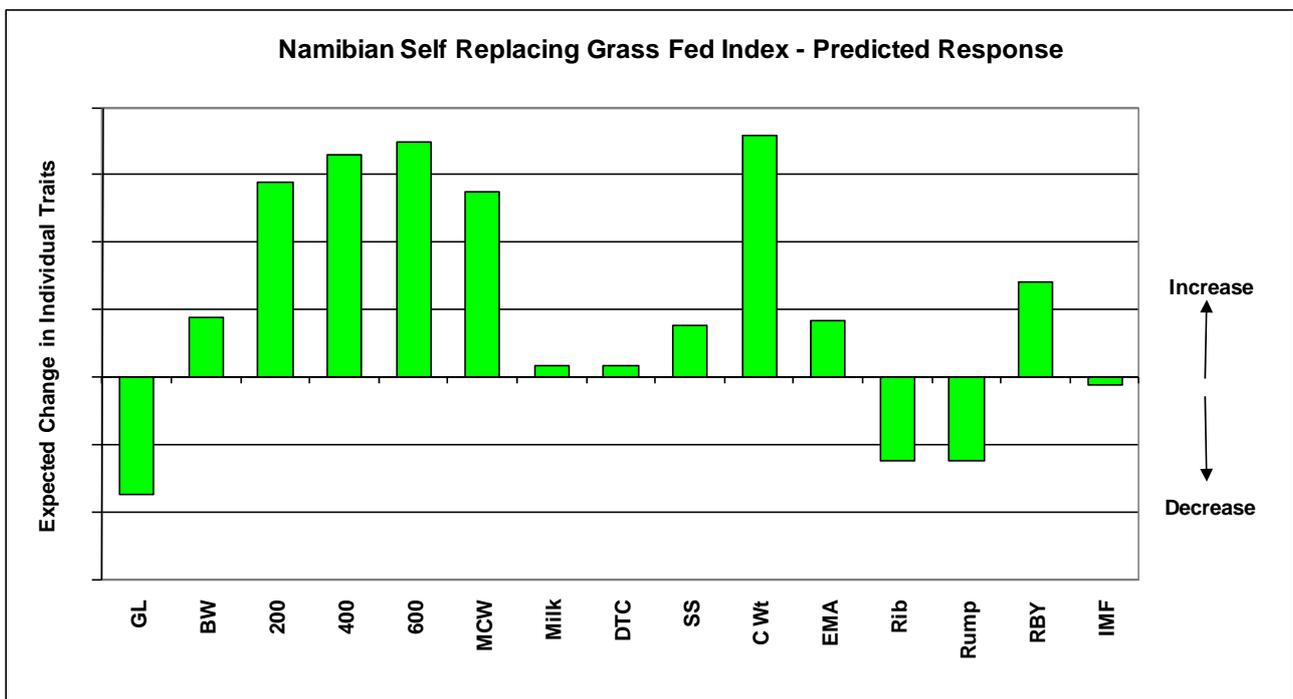


Considering the genetic relationship between the key profit drivers and the EBVs that are available, this transposes to the following EBV emphases. The sign indicates the direction of the emphasis. For example, greater 600 Day Weight EBVs and smaller Birth Weight EBVs are favoured.



While the graphs on the previous page show the different profit drivers and emphases that have been placed on each EBV within the Namibian Self Replacing Grass Fed 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 only a slight weighting on 400 Day Weight in this selection index, it would be expected that growth to 400 days would increase considerably as there is a large weighting on 600 Day Weight.

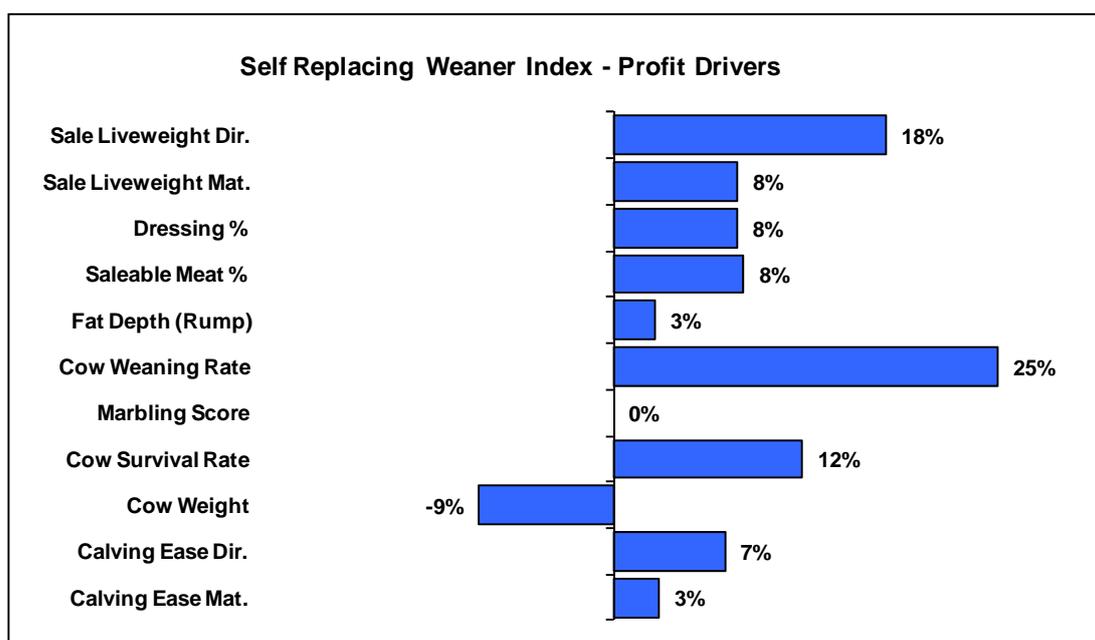
The following bar graph provides an indication of the relative change that would be expected in each individual trait if producers select animals using the Namibian Self Replacing Grass Fed Selection Index. The graph reflects the relative change if the Simbra Published Sires (at the 2011 Southern African Simbra 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.



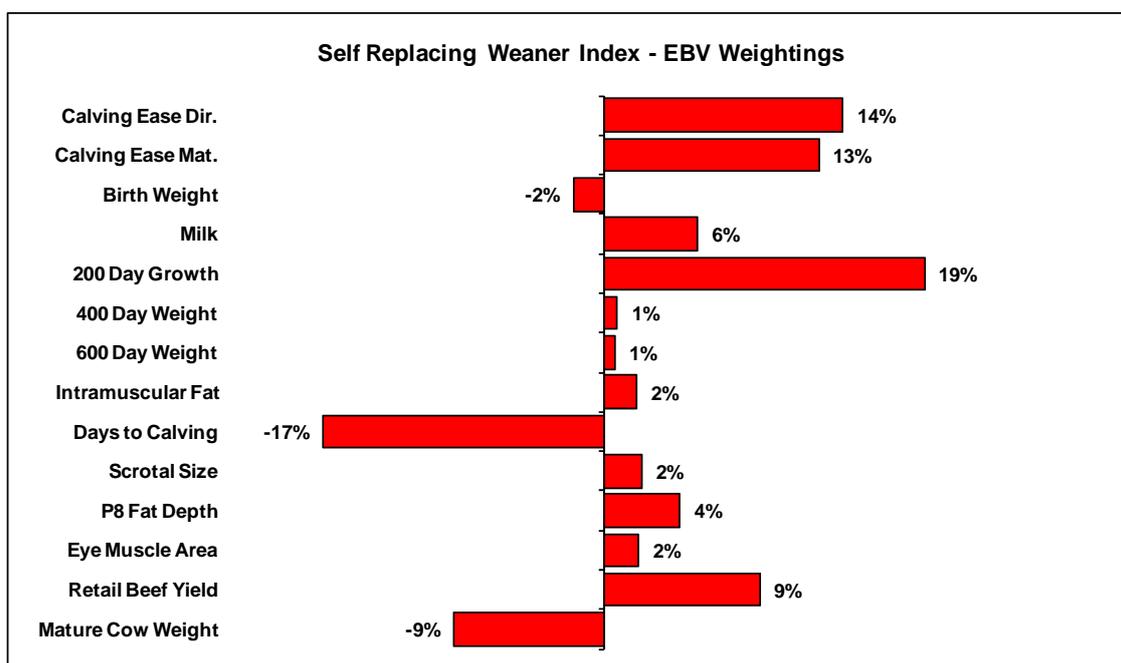
## ***Simbra Self Replacing Weaner Index***

The Simbra Self Replacing Weaner Index estimates the genetic differences between animals in net profitability per cow joined for a herd that retains replacement females while excess progeny are sold at weaning to the Feedlot sector. Use this index in conjunction with the feedlot index to maximise selection pressure on your replacement females while targeting the feedlot sector endpoint for excess progeny. Significant emphasis is placed on calving ease, 200 day weight, days to calving and carcass yield while moderating mature cow weight.

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.



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 Weight EBVs and shorter Days to Calving EBVs are favoured.



While the graphs on the previous page show the different profit drivers and emphases that have been placed on each EBV within the Self Replacing Weaner 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 only a slight weighting on 400 Day Weight in this selection index, it would be expected that growth to 400 days would increase considerably as there is a large weighting on 200 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 Self Replacing Weaner Selection Index. The graph reflects the relative change if the Simbra Published Sires (at the 2011 Southern African Simbra 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.

