

## ***Australian Angus Selection Indexes***

There are four standard selection indexes calculated for Australian Angus animals. These are:

- ❑ Long Fed / CAAB Index
- ❑ Heavy Grass Fed Steer Index
- ❑ Short Fed Domestic Index
- ❑ Terminal Index

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

**Long Fed / CAAB Index** - Estimates the genetic differences between animals in net profitability per cow joined for an example high fertility self replacing commercial Angus herd in temperate Australia targeting pasture grown steers with a 270 day feedlot finishing period for the high quality, high marbled Japanese export market. Steers are assumed marketed at 740 kg live weight (420 kg HSCW and 25 mm P8 fat depth) at 26 months of age. Significant emphasis is placed on marbling and 600 day growth.

**Heavy Grass Fed Steer Index** - Estimates the genetic differences between animals in net profitability per cow joined for an example self replacing commercial Angus herd in temperate Australia that sells heavy grass fed steers for markets like the EU and light grass fed Jap Ox. Steers are assumed marketed at 600 kg live weight (330 kg HSCW and 15 mm P8 fat depth) at 22 months of age. Emphasis is placed on growth and carcass yield while maintaining fertility and marbling.

**Short Fed Domestic Index** – Estimates the genetic differences between animals in net profitability per cow joined for an example high fertility self replacing commercial Angus herd selling feeder steers and heifers for the short fed domestic feedlot trade. Steers are assumed marketed at 445 kg live weight (245 kg HSCW and 10 mm P8 fat depth) at 15 months of age. Emphasis is placed on growth to 400 days and high carcass yield while maintaining fertility and marbling.

**Terminal Index** – Estimates the genetic differences between animals in net profitability for an example commercial crossbred herd where no animals are kept for breeding. For example using Angus bulls over tropical cows targeting pasture grown steers and heifers with a 100 day feedlot finishing period. Progeny are assumed marketed at 600 kg live weight (325 kg HSCW and 17 mm P8 fat depth) at 23 months of age. Emphasis is on growth and carcass yield with no weighting placed on calving ease, female fertility or milk.

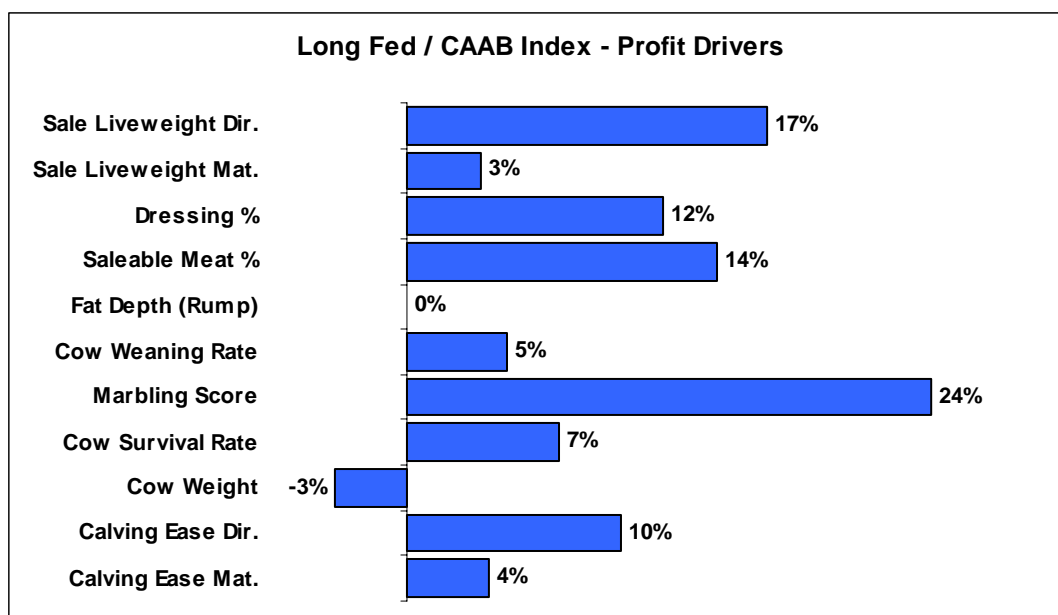
All selection indexes are reported as an EBV, in units of net profit per cow mated (\$) for a given production/market scenario. They reflect both the short term profit generated by a sire through the sale of his progeny, and the longer term profit generated by his daughters in a self replacing cow herd (where applicable).

All selection index values have been derived using BreedObject technology. More detailed information regarding each selection index is available on the following pages or by contacting staff at BREEDPLAN.

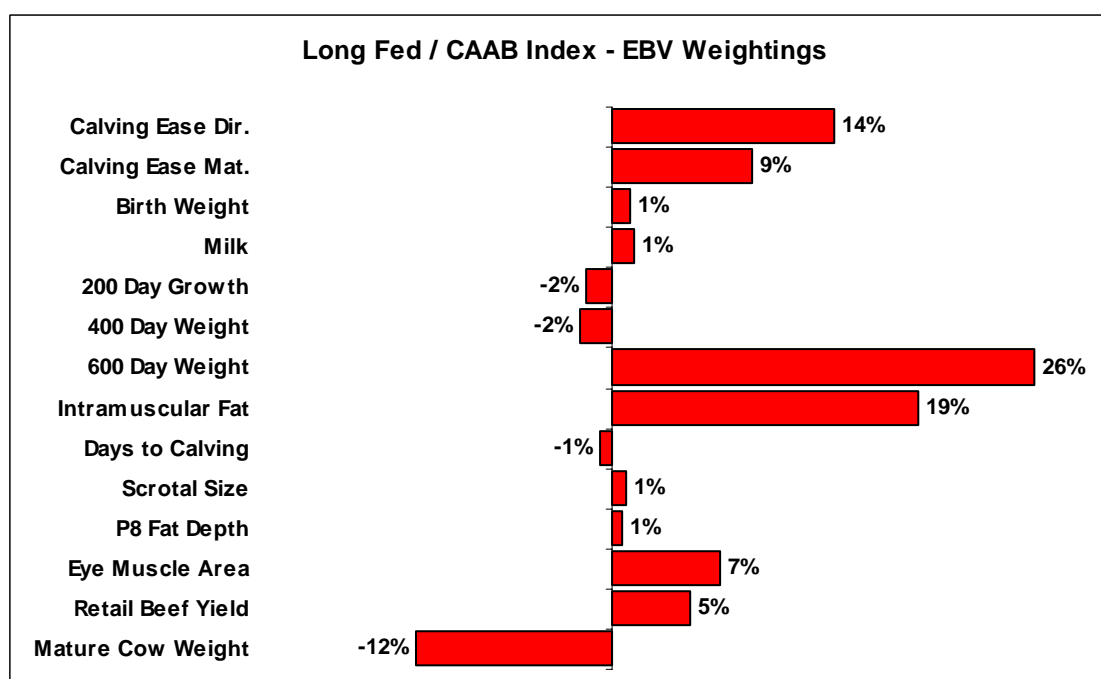
## **Angus Long Fed / CAAB Index**

The Angus Long Fed / CAAB Index estimates the genetic differences between animals in net profitability per cow joined for an example high fertility self replacing commercial Angus herd in temperate Australia targeting pasture grown steers with a 270 day feedlot finishing period for the high quality, high marbled Japanese export market. Steers are assumed marketed at 740 kg live weight (420 kg HSCW and 25 mm P8 fat depth) at 26 months of age. Significant emphasis is placed on marbling and 600 day growth.

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 long fed export market.

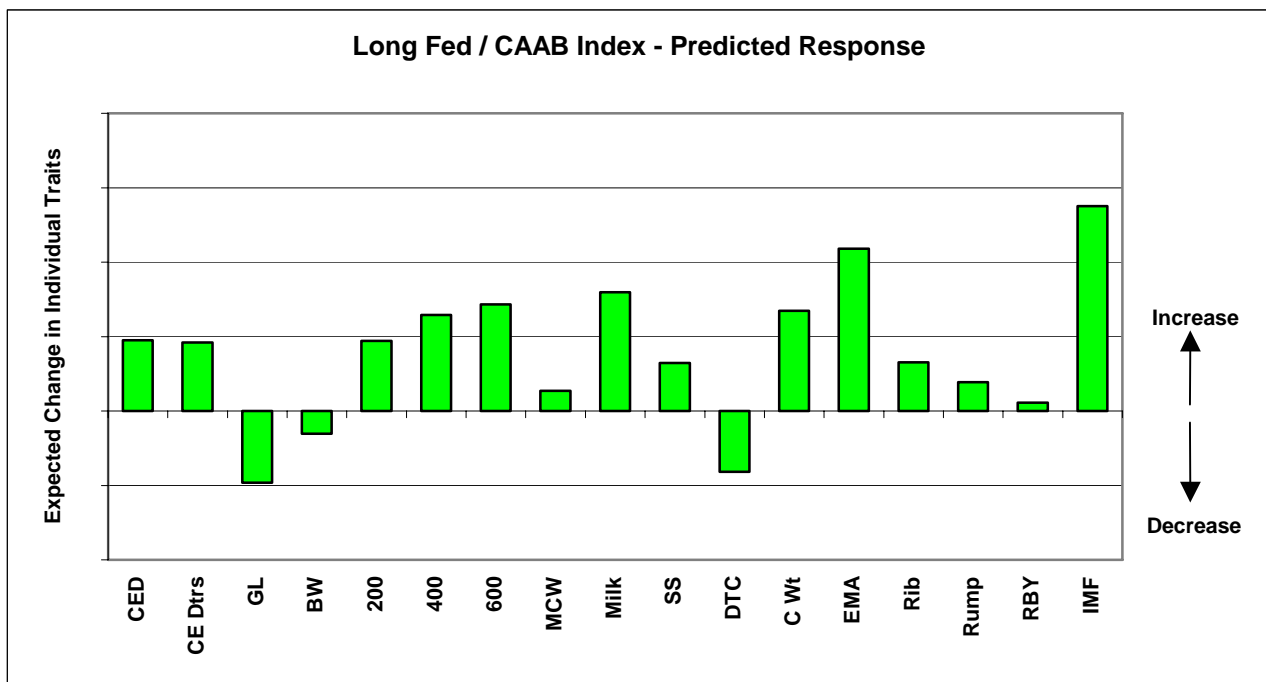


Considering the genetic relationship between the key profit drivers and the EBVs that are available, this transposes to the following EBV emphases. The sign indicates the direction of the emphasis. For example, greater 600 Day Weight EBVs and shorter Days to Calving EBVs are favoured.



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

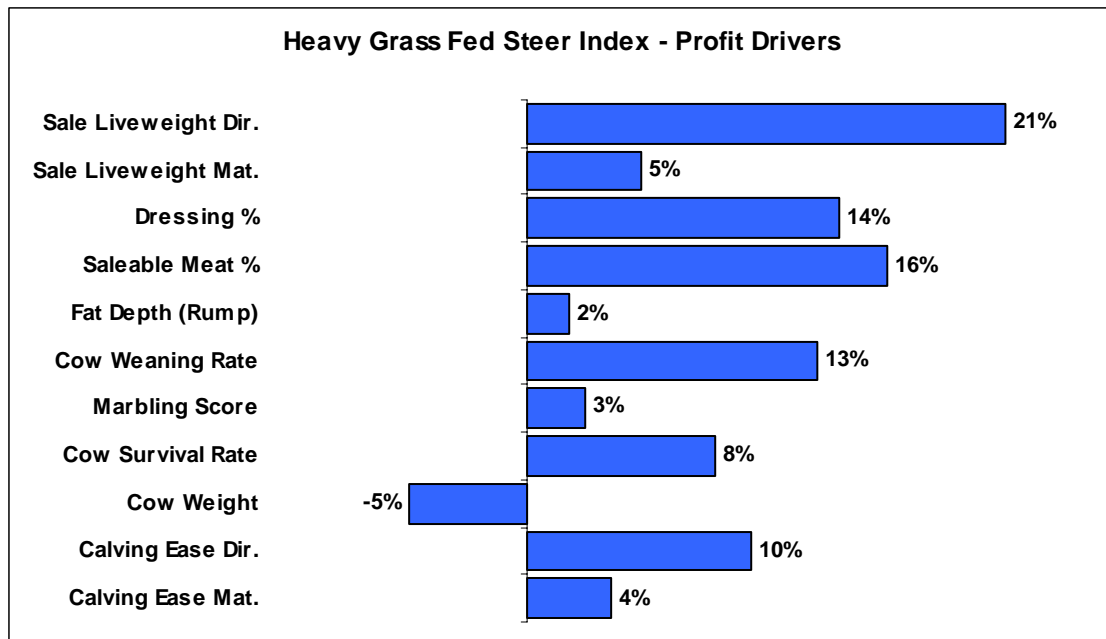
The following bar graph provides an indication of the relative change that would be expected in each individual trait if producers select animals using the Long Fed / CAAB Selection Index. The graph reflects the relative change if the Angus Published Sires (at the January 2009 Angus GROUP BREEDPLAN analysis) 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.



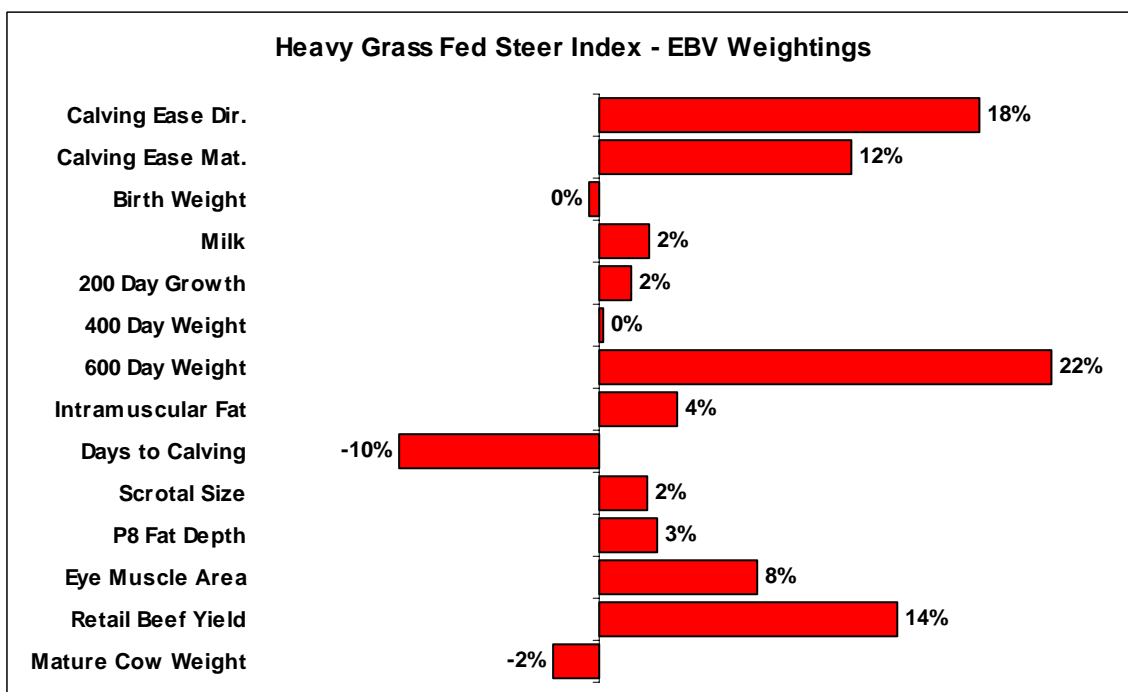
## **Angus Heavy Grass Fed Steer Index**

The Angus Heavy Grass Fed Steer Index estimates the genetic differences between animals in net profitability per cow joined for an example self replacing commercial Angus herd in temperate Australia that sells heavy grass fed steers for markets like the EU and light grass fed Jap Ox. Steers are assumed marketed at 600 kg live weight (330 kg HSCW and 15 mm P8 fat depth) at 22 months of age. Emphasis is placed on growth and carcass yield while maintaining fertility and marbling.

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 of heavy grass finished steers.

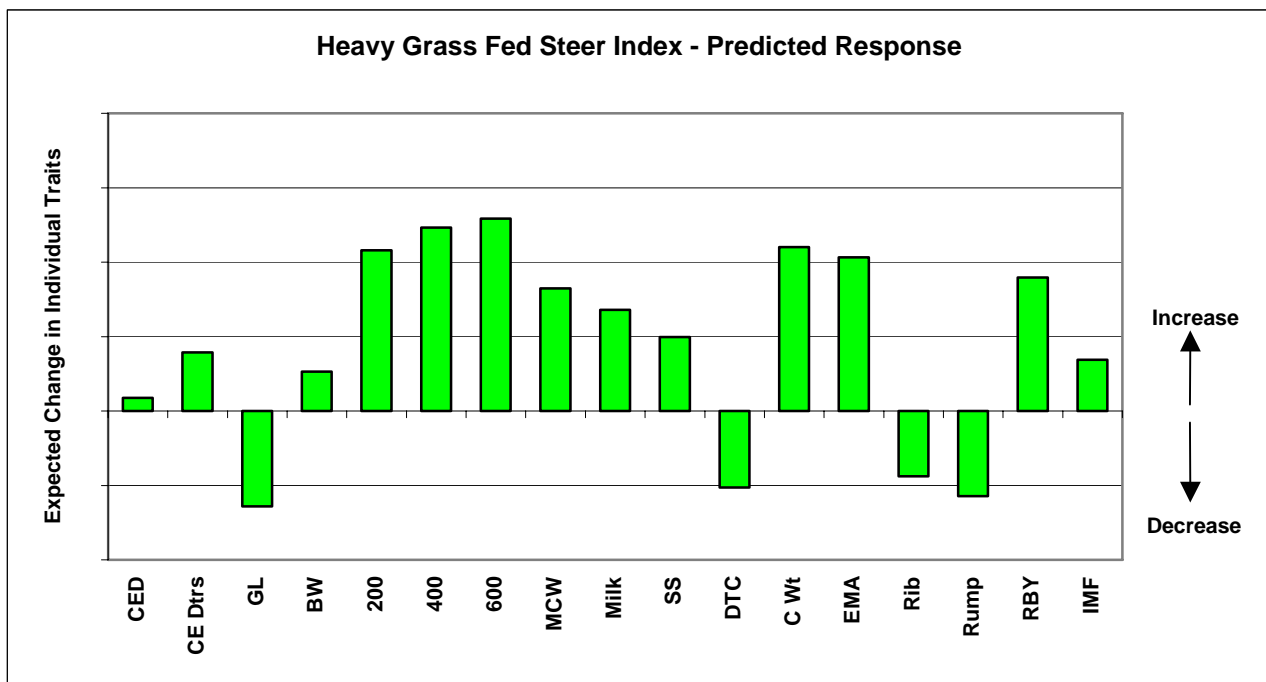


Considering the genetic relationship between the key profit drivers and the EBVs that are available, this transposes to the following EBV emphases. The sign indicates the direction of the emphasis. For example, greater 600 Day Weight EBVs and shorter Days to Calving EBVs are favoured.



While the graphs on the previous page show the different profit drivers and emphases that have been placed on each EBV within the Heavy Grass Fed Steer 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 no direct weighting on 400 Day Weight in this selection index, it would be expected that growth to 400 days would increase as there is a large weighting on 600 Day Weight.

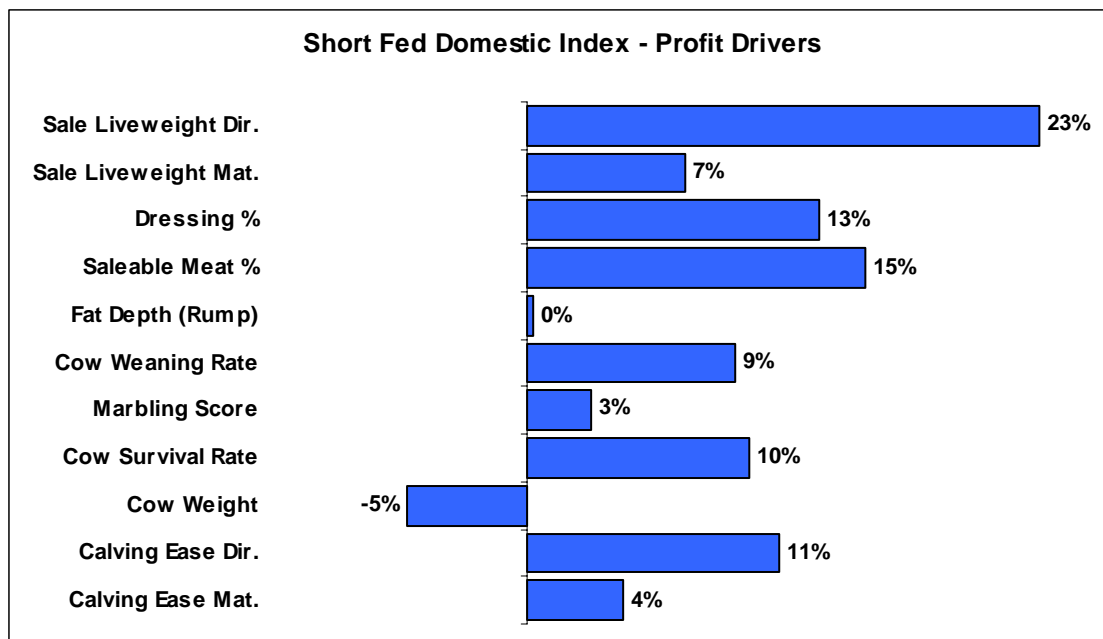
The following bar graph provides an indication of the relative change that would be expected in each individual trait if producers select animals using the Heavy Grass Fed Steer Selection Index. The graph reflects the relative change if the Angus Published Sires (at the January 2009 Angus GROUP BREEDPLAN 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.



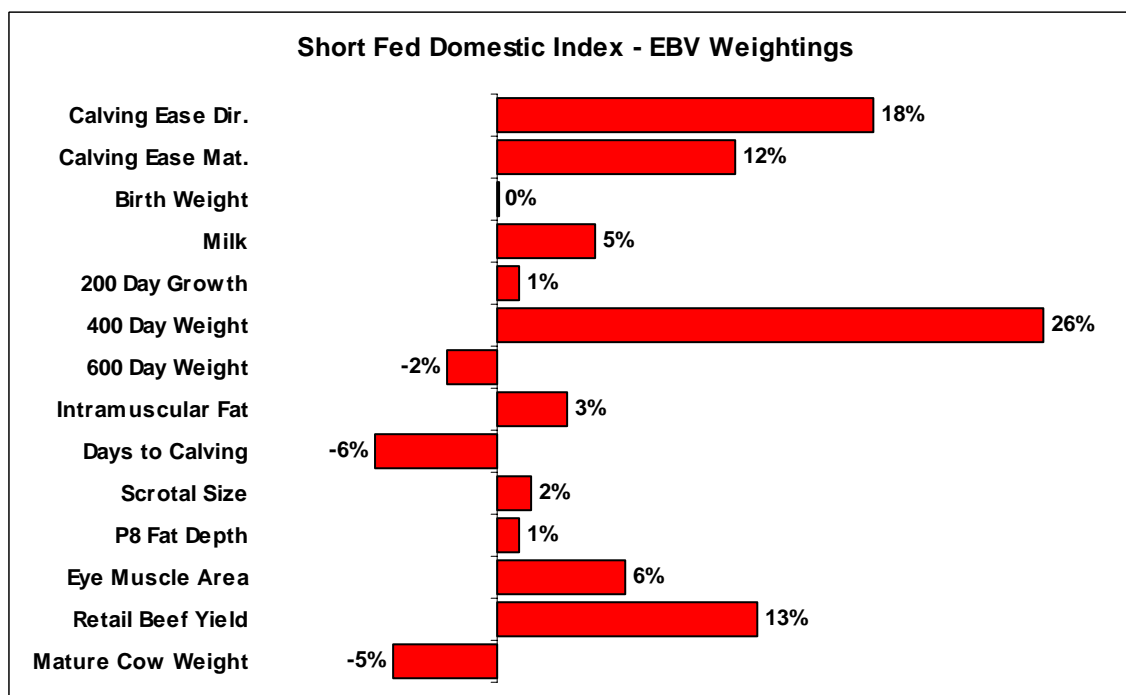
## **Angus Short Fed Domestic Index**

The Angus Short Fed Domestic Index estimates the genetic differences between animals in net profitability per cow joined for an example high fertility self replacing commercial Angus herd selling feeder steers and heifers for the short fed domestic feedlot trade. Steers are assumed marketed at 445 kg live weight (245 kg HSCW and 10 mm P8 fat depth) at 15 months of age. Emphasis is placed on growth to 400 days and high carcass yield while maintaining fertility and marbling.

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 short fed domestic markets.

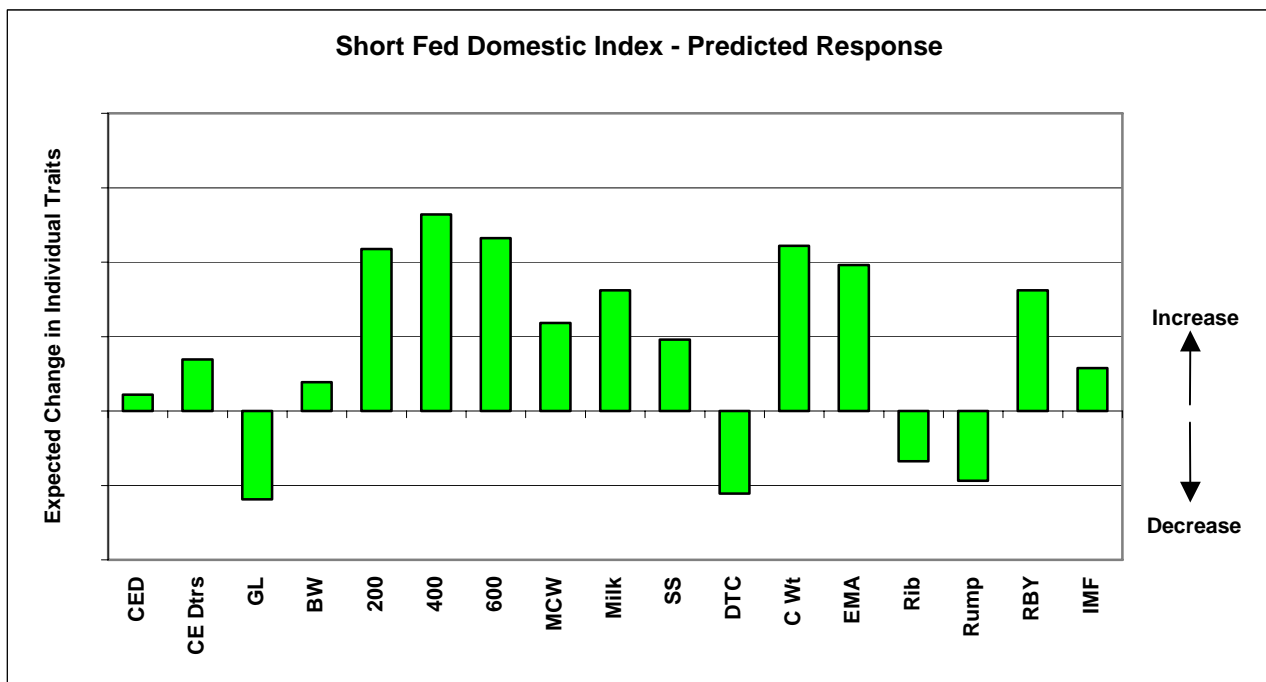


Considering the genetic relationship between the key profit drivers and the EBVs that are available, this transposes to the following EBV emphases. The sign indicates the direction of the emphasis. For example, greater 400 Day Weight EBVs and shorter Days to Calving EBVs are favoured.



While the graphs on the previous page show the different profit drivers and emphases that have been placed on each EBV within the Short Fed Domestic 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 200 Day Weight in this selection index, it would be expected that growth to 200 days would increase quite significantly as there is a large weighting on 400 Day Weight.

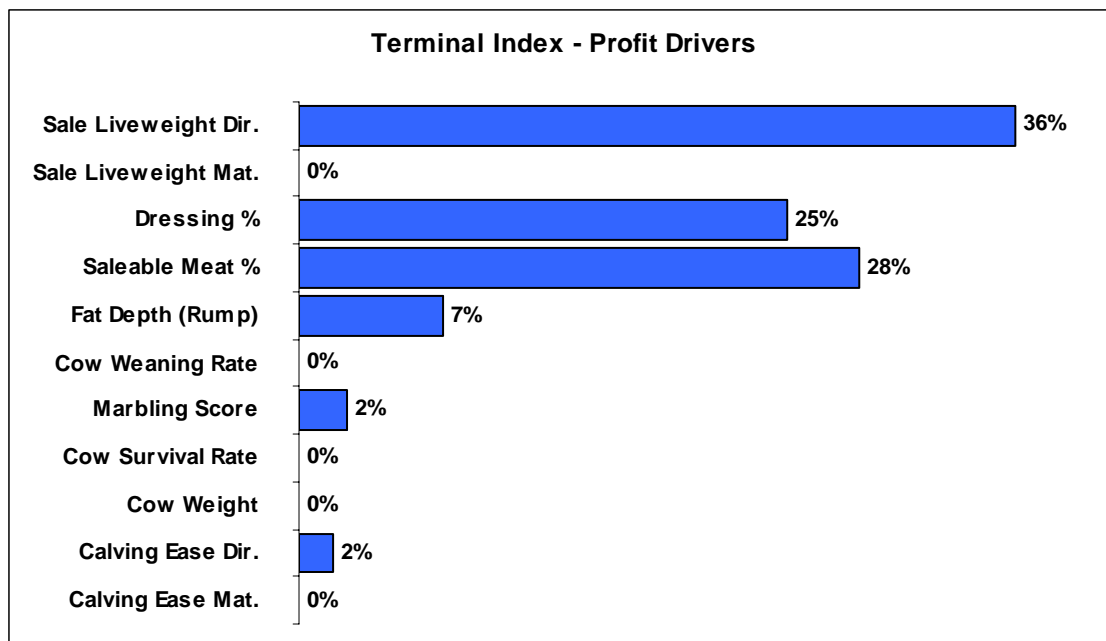
The following bar graph provides an indication of the relative change that would be expected in each individual trait if producers select animals using the Short Fed Domestic Selection Index. The graph reflects the relative change if the Angus Published Sires (at the January 2009 Angus GROUP BREEDPLAN 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.



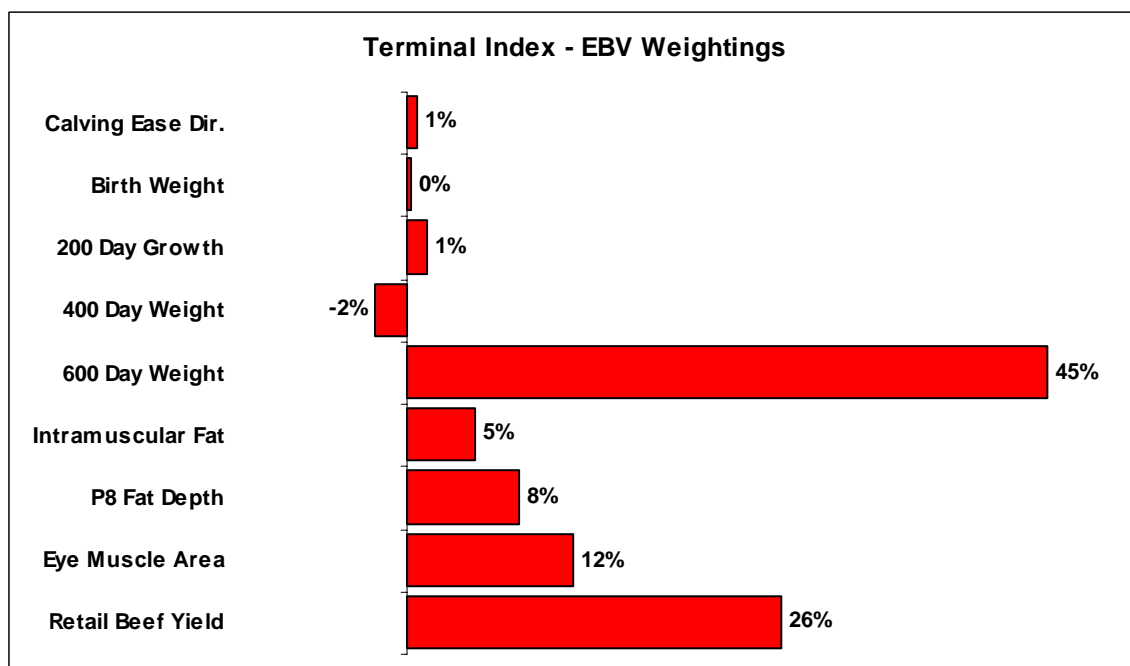
## **Angus Terminal Index**

The Angus Terminal Index estimates the genetic differences between animals in net profitability for an example commercial crossbred herd where no animals are kept for breeding. For example using Angus bulls over tropical cows targeting pasture grown steers and heifers with a 100 day feedlot finishing period. Progeny are assumed marketed at 600 kg live weight (325 kg HSCW and 17 mm P8 fat depth) at 23 months of age. Emphasis is on growth and carcase yield with no weighting placed on calving ease, female fertility or milk.

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 herd crossbreeding, where all progeny are assumed to be for slaughter.



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.



While the graphs on the previous page show the different profit drivers and emphases that have been placed on each EBV within the Terminal 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 400 Day Weight in this selection index, it would be expected that growth to 400 days would increase 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 Terminal Selection Index. The graph reflects the relative change if the Angus Published Sires (at the January 2009 Angus 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.

