

New Zealand Hereford Selection Indexes

There are currently four different selection indexes calculated for New Zealand Hereford animals. These are:

- ❑ Hereford Prime Index
- ❑ Export Index
- ❑ Dairy Maternal Index
- ❑ Dairy Terminal Index

Each selection index describes a different production/market scenario and relates to a typical commercial herd in New Zealand that is targeting the following specifications.

Hereford Prime Index - Estimates the genetic differences between animals in net profitability per cow joined for an example commercial self replacing herd where Hereford bulls are joined to either Hereford or British breed females targeting the production of grass finished steers for the Hereford Prime program. Steers are assumed marketed at 510 kg live weight (275 kg carcass weight and 10 mm fat depth) at 20 months of age. Daughters are retained for breeding.

Export Index - Estimates the genetic differences between animals in net profitability per cow joined for an example commercial self replacing Hereford herd targeting the production of grass finished steers for the export trade. Steers are assumed marketed at 600 kg live weight (330 kg carcass weight and 10 mm fat depth) at 20 months of age. Daughters are retained for breeding.

Dairy Maternal Index – Estimates the genetic differences between animals in net profitability per cow joined for an example commercial dairy herd targeting the production of dairy beef progeny. All steers are assumed marketed at 500 kg live weight (260 kg carcass weight and 6 mm fat depth) at 20 months of age. The Hereford Dairy cross heifer progeny are particularly sought after as beef breeding cows and consequently, maternal traits are of importance.

Dairy Terminal Index - Estimates the genetic differences between animals in net profitability per cow joined for an example commercial dairy herd targeting the production of dairy beef progeny where all progeny are slaughtered. Steers are assumed marketed at 500 kg live weight (260 kg carcass weight and 6 mm fat depth) at 18 months of age.

All selection indexes are reported as an EBV, in units of relative earning capacity (\$) 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).

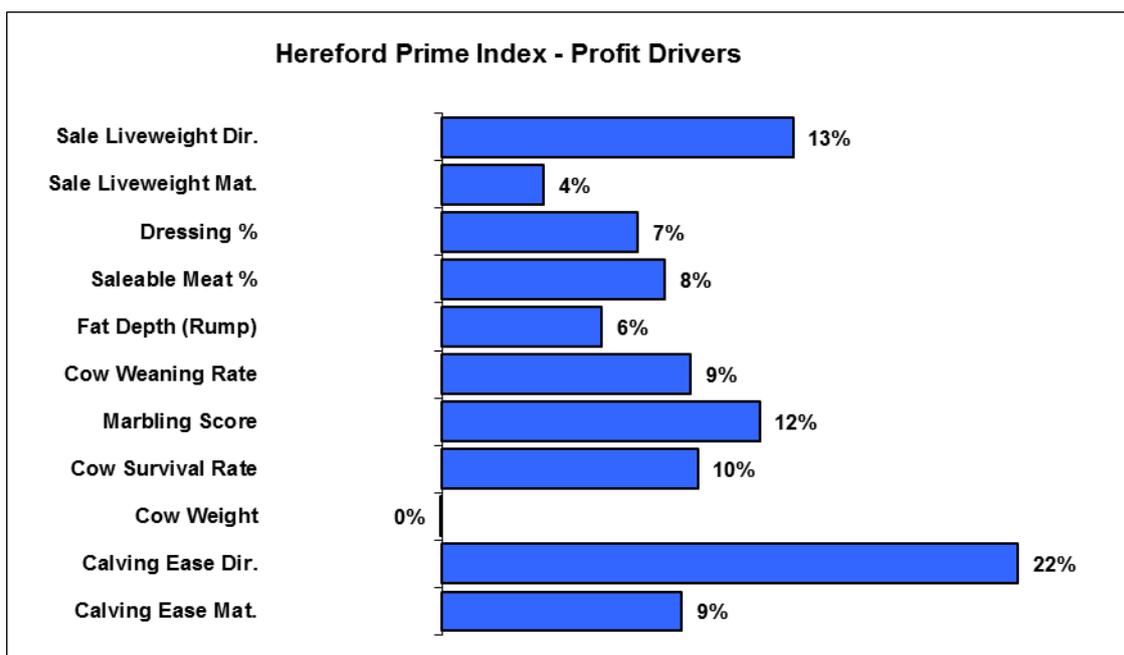
All selection index values have been derived using BreedObject technology. More detailed information regarding each selection index is provided on the following pages.

If you have any further queries regarding New Zealand Hereford Selection Indexes, please do not hesitate to contact staff at the New Zealand Hereford Association.

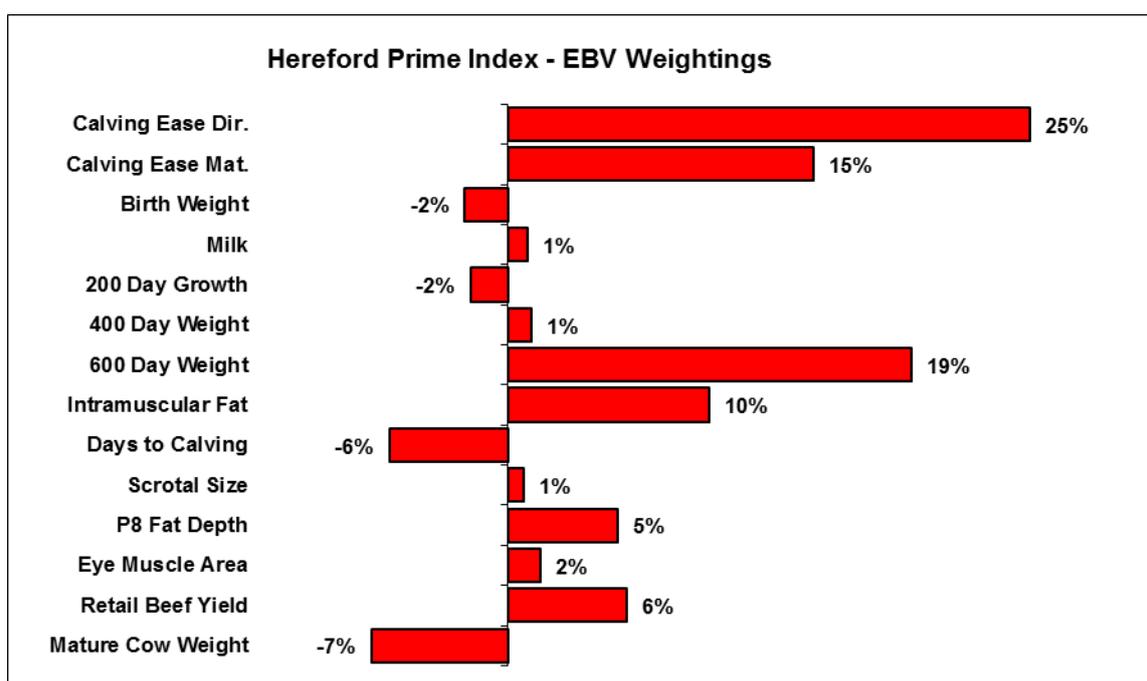
Hereford Prime Index

The Hereford Prime Index estimates the genetic differences between animals in net profitability per cow joined for an example commercial self replacing herd where Hereford bulls are joined to either Hereford or British breed females targeting the production of grass finished steers for the Hereford Prime program. Steers are assumed marketed at 510 kg live weight (275 kg carcass weight and 10 mm fat depth) at 20 months of age. Daughters are retained for breeding.

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 Hereford Prime program.

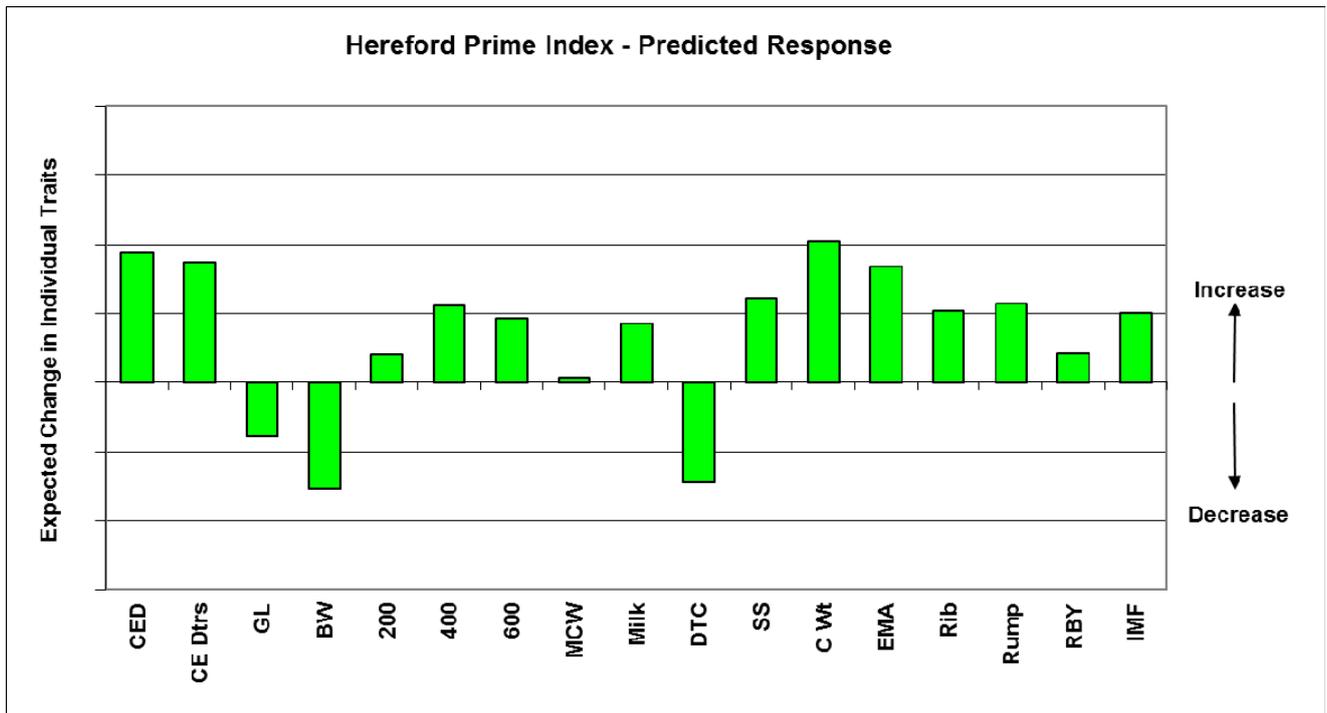


Considering the genetic relationship between the key profit drivers and the EBVs that are available, this transposes to the following EBV emphases. The sign indicates the direction of the emphasis. For example, greater 600 Day Weight EBVs and shorter Days to Calving EBVs are favoured.



While the graphs on the previous page show the different profit drivers and emphases that have been placed on each EBV within the Hereford Prime 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 as there is a large weighting on 600 Day Weight.

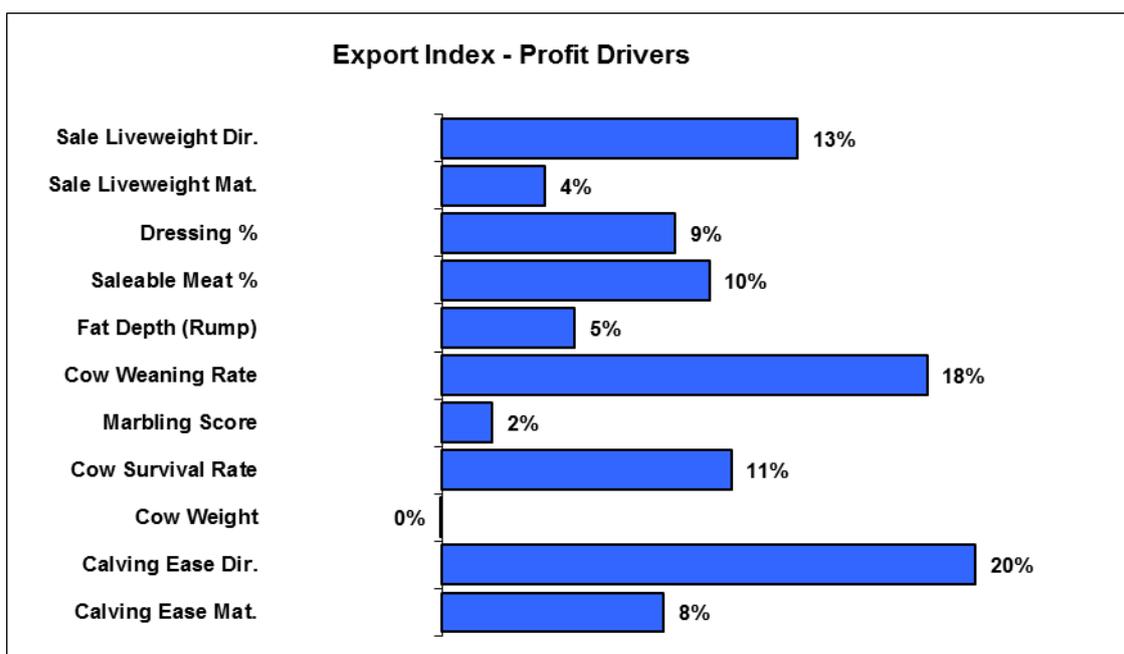
The following bar graph provides an indication of the relative change that would be expected in each individual trait if producers select animals using the Hereford Prime Selection Index. The graph reflects the relative change if the Hereford Published Sires (at the October 2011 New Zealand Hereford 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.



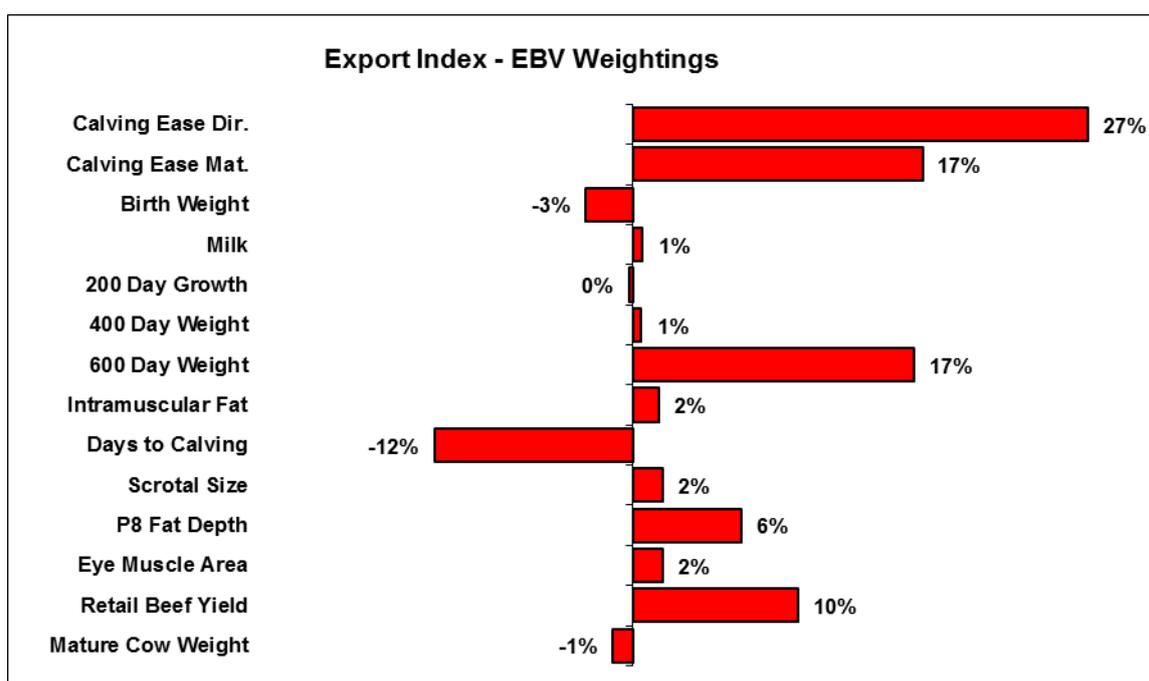
Hereford Export Index

The Hereford Export estimates the genetic differences between animals in net profitability per cow joined for an example commercial self replacing Hereford herd targeting the production of grass finished steers for the export trade. Steers are assumed marketed at 600 kg live weight (330 kg carcass weight and 10 mm fat depth) at 20 months of age. Daughters are retained for breeding.

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 export trade.

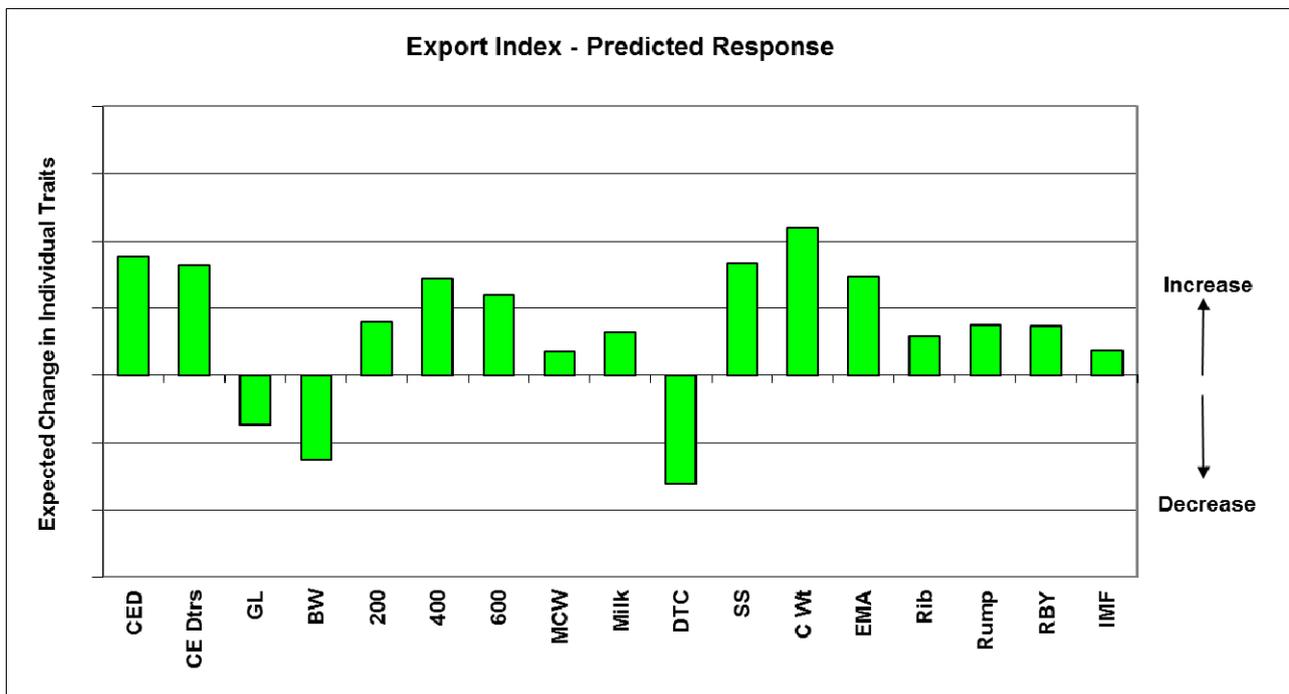


Considering the genetic relationship between the key profit drivers and the EBVs that are available, this transposes to the following EBV emphases. The sign indicates the direction of the emphasis. For example, greater 600 Day Weight EBVs and shorter Days to Calving EBVs are favoured.



While the graphs on the previous page show the different profit drivers and emphases that have been placed on each EBV within the Export 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 no direct weighting on 200 Day Weight in this selection index, it would be expected that growth to 200 days would increase as there is a large weighting on 600 Day Weight.

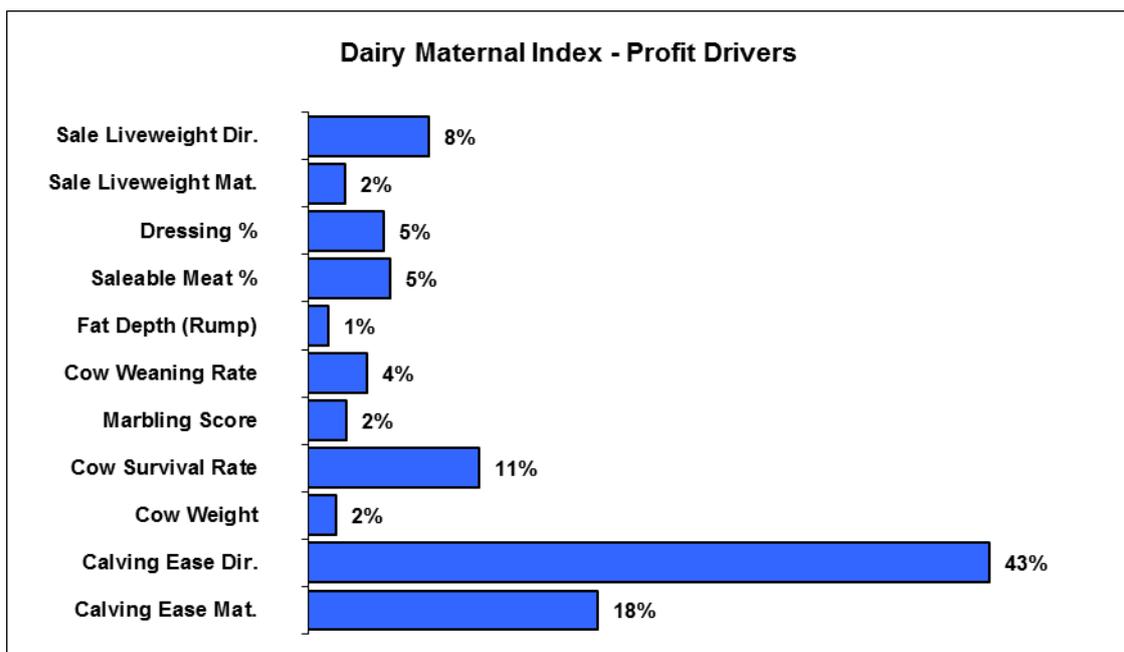
The following bar graph provides an indication of the relative change that would be expected in each individual trait if producers select animals using the Export Selection Index. The graph reflects the relative change if the Hereford Published Sires (at the October 2011 New Zealand Hereford GROUP BREEDPLAN 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.



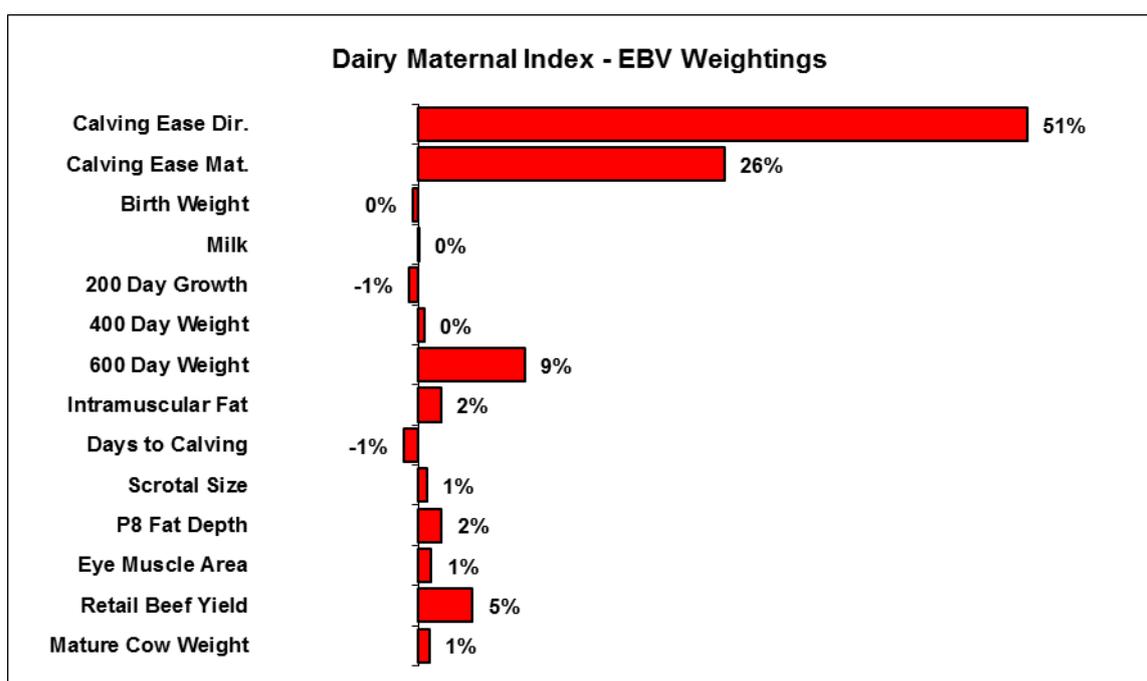
Hereford Dairy Maternal Index

The Hereford Dairy Maternal Index estimates the genetic differences between animals in net profitability per cow joined for an example commercial dairy herd targeting the production of dairy beef progeny. All steers are assumed marketed at 500 kg live weight (260 kg carcass weight and 6 mm fat depth) at 20 months of age. The Hereford Dairy cross heifer progeny are particularly sought after as beef breeding cows and consequently, maternal traits are of importance.

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 dairy beef progeny.

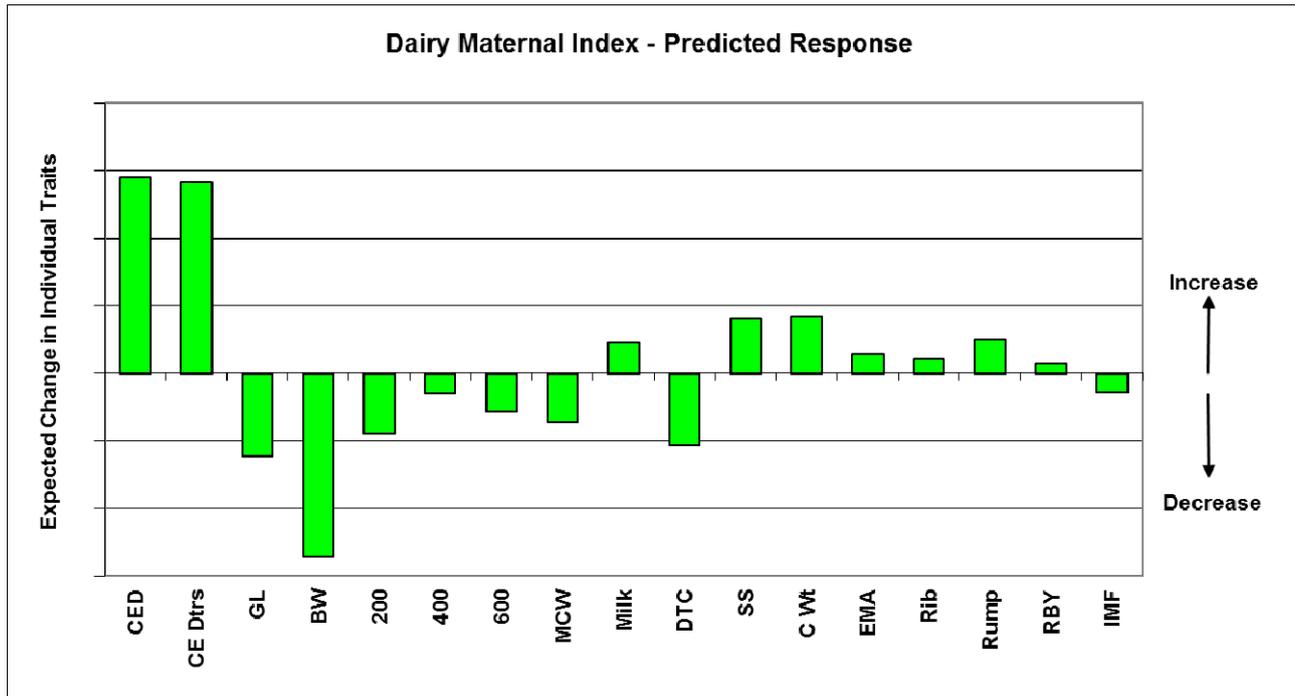


Considering the genetic relationship between the key profit drivers and the EBVs that are available, this transposes to the following EBV emphases. The sign indicates the direction of the emphasis.



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

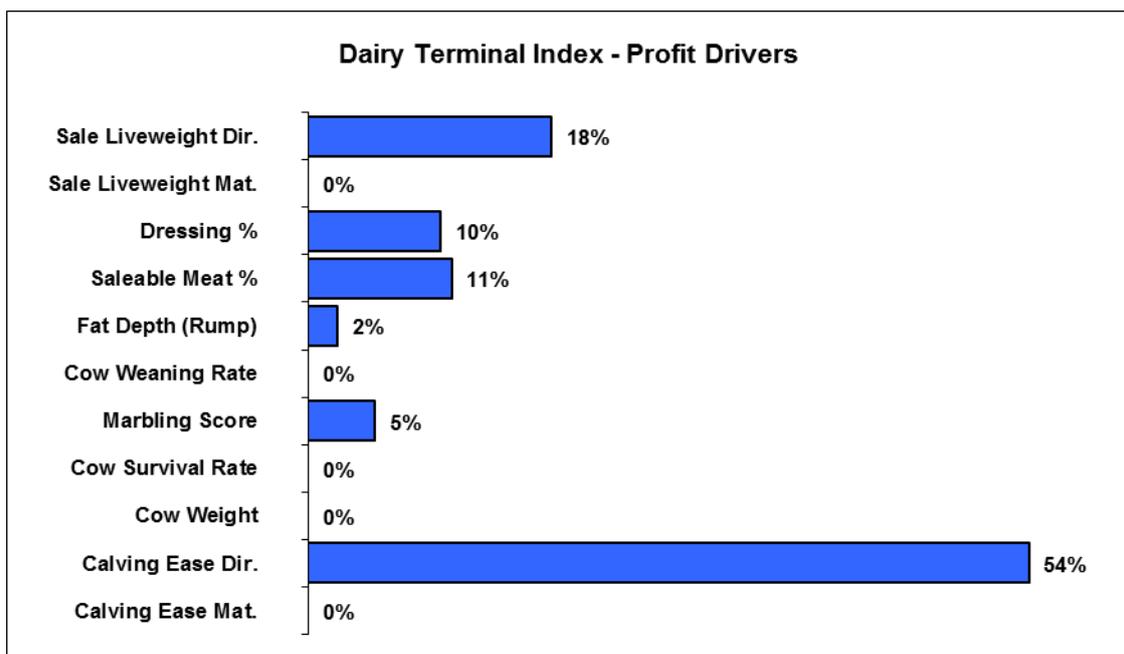
The following bar graph provides an indication of the relative change that would be expected in each individual trait if producers select animals using the Dairy Maternal Selection Index. The graph reflects the relative change if the Hereford Published Sires (at the October 2011 New Zealand Hereford 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.



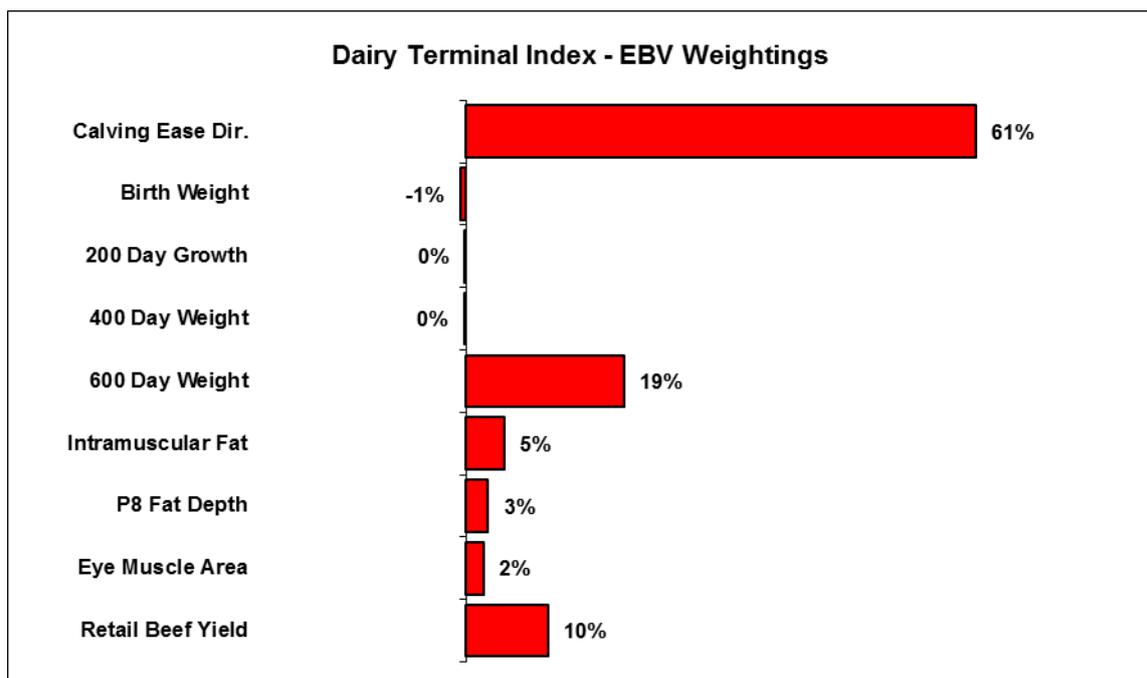
Hereford Dairy Terminal Index

The Hereford Dairy Terminal Index estimates the genetic differences between animals in net profitability per cow joined for an example commercial dairy herd targeting the production of dairy beef progeny where all progeny are slaughtered. Steers are assumed marketed at 500 kg live weight (260 kg carcass weight and 6 mm fat depth) at 18 months of age.

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 dairy beef progeny.



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 Dairy Terminal 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.

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 Dairy Terminal Selection Index. The graph reflects the relative change if the Hereford Published Sires (at the October 2011 New Zealand Hereford 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.

