

## MURRAY GREY EBV's Explained

BREEDPLAN EBVs and selection indexes remove the effects of non-genetic factors (e.g. feeding regimes, animal age) from what is seen and measured to provide the best measure of an animal's genetic merit. BREEDPLAN information should always be used in conjunction with other selection criteria, including visual assessment.

### A BEST PRACTICE GUIDE TO SELECTING YOUR NEXT NEW ZEALAND MURRAY GREY SIRE

A BREEDPLAN Guide to Interpreting EBVs helps producers understand how to assess and compare the genetic merit of animals. Each EBV is reported in the units in which the measurements are taken (e.g. Weight EBVs are reported in kilograms). Please note that *only EBVs produced in the same BREEDPLAN analysis can be directly compared.*

When interpreting BREEDPLAN EBVs, producers may:

#### 1. Compare to the level of genetic merit within the current population.

Comparing against the current levels of genetic merit (*breed average and/or percentile bands*) allows you to understand where an animal ranks within the evaluated population. *EBV percentile graphs* can be found online for each animal and provide a visual representation of where an animal ranks for each trait.

#### 2. Compare expected difference in progeny performance.

Comparing the expected difference in outcome if two (or more) different sires are used in a herd gives you an understanding of what these EBVs mean in real terms.

#### 3. Consider EBV accuracy.

As a general rule, animals should be compared on EBVs regardless of accuracy. Most rising two year old bulls will have similar EBV accuracy levels; however, there may be some variation (particularly at multi-vendor sales) due to levels of performance recording and/or progeny if the bull was used as a yearling.

The searchable version of this catalogue can be found online at the Murray Grey NZ website: <https://www.murraygreys.co.nz> or at Pivot Design: [www.pivotdesign.co.nz/catalogues](http://www.pivotdesign.co.nz/catalogues)

### NEW ZEALAND MURRAY GREY BREEDPLAN

The New Zealand Murray Grey Beef Cattle Society publishes the following BREEDPLAN EBVs:

**Calving Ease Direct (%):** Higher (or more positive) CEDir EBVs indicate that two year old heifers will have less difficulty when calving this sire's progeny.

**Calving Ease Daughters (%):** Higher (or more positive) CEDtr EBVs indicate easier calving of this sire's daughters at two years of age.

**Gestation Length (days):** Bulls with lower (or more negative) GL EBVs are expected to produce progeny with shorter gestation lengths. Such progeny are also expected to be easier calving.

**Birth Weight (kg):** Bulls with lower, less positive BWt EBVs are expected to produce progeny that are lighter at birth, with an associated lower risk of calving difficulty. This EBV is particularly important when selecting sires where there is an increased risk of calving difficulty (e.g. heifers, cross-breeding).

**200, 400 & 600 Day Weight EBVs (kg):** Bulls with larger (or more positive) Weight EBVs are expected to produce progeny that grow faster to 200, 400 & 600 days of age, respectively. The Weight EBV of particular importance will depend on the target market e.g. vealer (200 D), yearling (400 D) or heavy steer (600 D).

**Mature Cow Weight (kg):** Bulls with larger (or more positive) MCW EBVs are expected to produce daughters with higher mature cow weights and increased feed requirements. More moderate MCW EBVs are generally more favourable in self-replacing or maternal production systems.

**Milk (kg):** Bulls with higher (or more positive) Milk EBVs are expected to produce daughters with more maternal ability leading to higher 200 day weights in their progeny. Selection for moderate Milk EBVs may be preferable in harsher environments as cows with higher Milk EBVs can have impaired fertility and decreased survival under such conditions.

**Scrotal Size (cm):** Bulls with larger (or more positive) SS EBVs indicate better semen quality and quantity. Daughters are expected to be more fertile and reach puberty at an earlier age.

**Days to Calving (days):** Bulls with lower (or more negative) DTC EBVs are expected to produce daughters that are more fertile and have a shorter interval from bull-in date to calving.

**Carcass Weight (kg):** Bulls with larger (or more positive) CWt EBVs are expected to produce progeny with heavier carcass weights.

**Eye Muscle Area (sq. cm):** Bulls with a higher (or more positive) EMA EBV are expected to produce progeny with better muscling.

**Rib and Rump Fat EBVs (mm):** Bulls with higher (or more positive) Rib & Rump Fat EBVs are expected to produce fatter progeny, relative

to carcass weight. The desire for more or less fat will depend on the finishing ability of your animals.

**Retail Beef Yield (%):** Bulls with higher (or more positive) RBV EBVs are expected to produce progeny with higher yielding carcasses.

**Intramuscular Fat (%):** Bulls with higher (or more positive) IMF EBVs are expected to produce progeny with more marbling and better grading scores (e.g. MSA).



For more information on **using and understanding BREEDPLAN information, including the BREEDPLAN Guides**, scan the QR code.

<https://breedplan.une.edu.au/media/dtqpdm34/using-and-understanding-breedplan-ebvs.pdf>

### ***Selection Indexes***

The New Zealand Murray Grey Beef Cattle Society Inc. currently reports one selection index. This is the: **Dairy Index**. Each selection index is reported in units of net profitability per cow mated (\$). Scan the QR code below for more details.



**More information on the Dairy Index can be found here:**

<https://breedplan.une.edu.au/media/vb2lhvd0/using-new-zealand-murray-grey-selection-index.pdf>