



FULLBLOOD TERMINAL \$INDEX

The Wagyu Fullblood Terminal Index has an increased weighting to the Marble Score EBV and can be used to select bulls for the production of profitable slaughter animals where no progeny are retained for breeding.

The Fullblood Terminal Index (FTI) is one of four Wagyu selection indexes, which are calculated for animals within the Wagyu BREEDPLAN analysis:

- Wagyu Breeder \$Index
- Self-replacing Breed \$Index
- Fullblood Terminal \$Index
- F1 Terminal \$Index

WHAT IS A BREEDOBJECT \$INDEX?

A BreedObject \$Index is designed to give a comparison between animals within the Index based on profitability of their progeny within the commercial supply chain for the defined production system.



CALCULATION OF INDEX VALUES

Fullblood Terminal Index values are derived using BreedObject technology, as developed by the Animal Genetics & Breeding Unit (AGBU) in Armidale, NSW. Fullblood Terminal Index values are reported as Estimated Breeding Values (EBVs), in units of net profit per cow joined (\$) for this defined production system and market scenario.

THE PRODUCTION SYSTEM

The Fullblood Terminal Index estimates the genetic differences between animals in net profitability per cow joined in a commercial Fullblood or Purebred herd in which all progeny are sold as feeders for feedlot finishing.

Steers are assumed to be slaughtered at 32 months after 550 days of feedlot finishing targeting 435kg carcasses.

Heifers are slaughtered at 29 months after 450 days of feedlot finishing targeting 385kg carcasses. No heifers are retained for breeding and therefore maternal traits are not of importance in this \$Index. There is a significant premium for carcasses that exhibit superior marbling. Table 1 describes the targeted production system in more detail.

Criteria	Value
Weaning Rate	85%
Feedlot entry weight - Steers	330 kg
- Heifers	270 kg
Days on feed - Steers	550 days
- Heifers	450 days
Slaughter age - Steers	32 months
- Heifers	29 months
Carcase weight - Steers	435 kg
- Heifers	385 kg
Carcase price @MS5 - Steers	\$8.25/kg
- Heifers	\$8.25/kg
Marbling premium	~\$1.00/MS

Table 1 Production System for Fullblood Terminal Index



BREEDING OBJECTIVE

The key production trait driving the Fullblood Terminal Index is marbling, with some emphasis on sale weight, yield and feed efficiency as shown in Figure 1, reflecting the underlying profit drivers in a commercial operation targeting this production system.

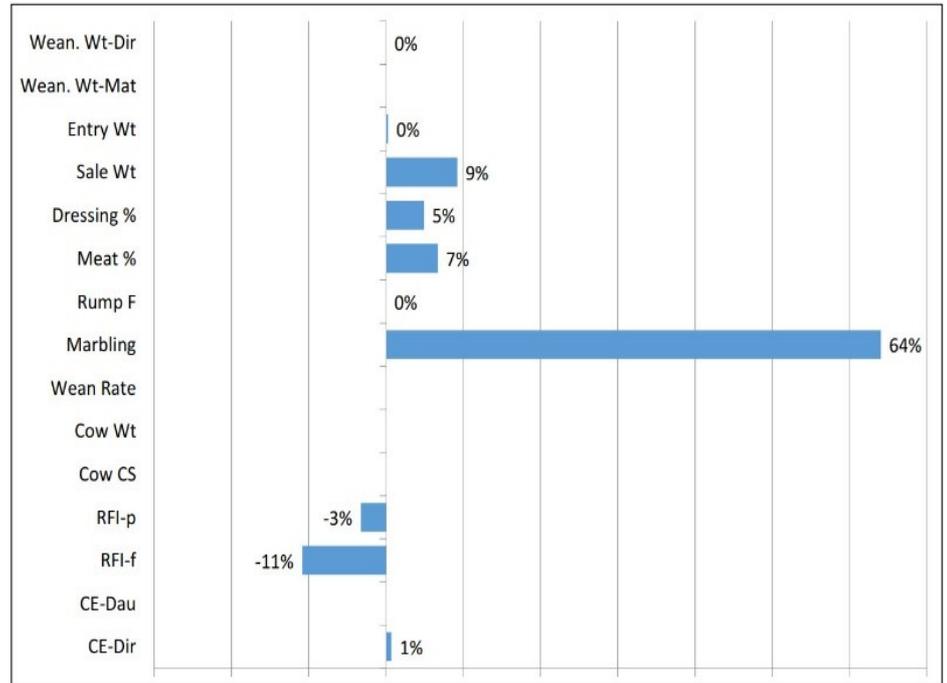


Figure 1 Emphasis placed on key production traits

SELECTION TRAITS

The genetic relationship between the breeding objective and selection traits highlights the emphasis that is placed on EBVs in calculating the FTI as illustrated in Figure 2. EBVs with a positive bias are favoured – for example higher Marble Score, Eye Muscle Area, 200, 400 and 600 Day Weight EBVs.

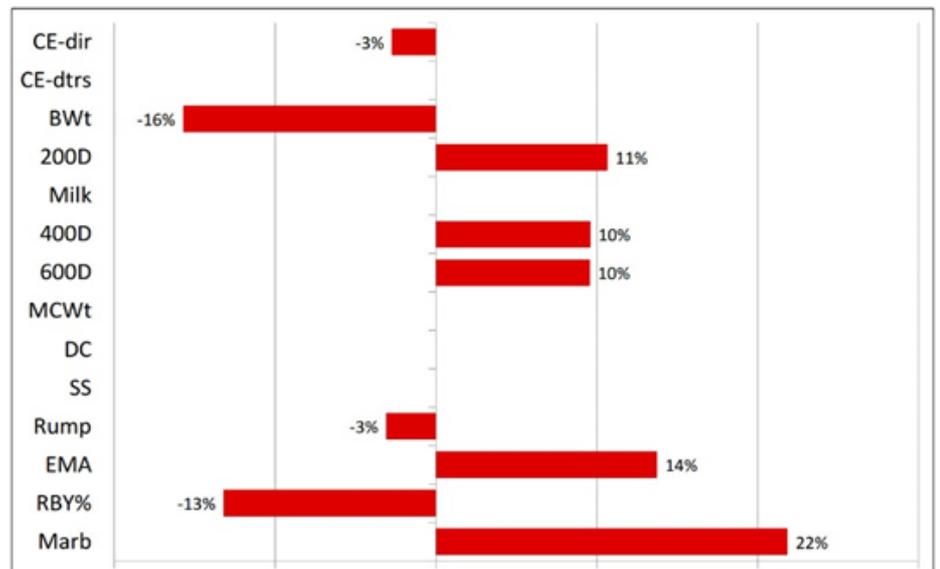


Figure 2 Emphasis placed on EBVs

INDICATIVE RESPONSE TO SELECTION

While the graphs of Figure 1 and 2 show the emphasis that have been placed on the production traits and each EBV within the Wagyu Fullblood Terminal Index, they do not illustrate the likely change that will occur to each individual EBV if producers select high ranking animals (average of the top 10%) using this \$Index.

Table 2 and Figure 3 provide an indication of the relative change that would be expected in each individual trait by selecting animals in the top 10% of the Fullblood Terminal Index.

The indicative response reflects the change if the Wagyu Published Sires (at the June 2020 Wagyu GROUP BREEDPLAN analysis) which were ranked on this selection index and the average of the Top 10% were selected for use within a breeding program.

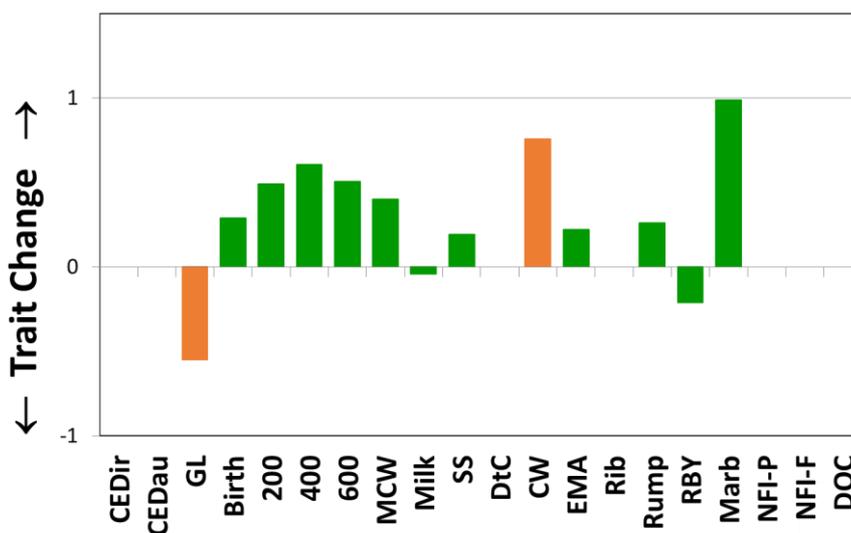


Figure 3 Indicative response to genetic selection in genetic std deviations

The response shown in Figure 4 will differ if a different group of animals was available for selection and/or a different selection intensity was applied.

POINTS TO CONSIDER WHEN USING THE FULLBLOOD TERMINAL INDEX

The Wagyu Fullblood Terminal Index places high pressure on marbling and moderate pressure on growth rate to support carcase weight.

Table 2 Indicative EBV response to selection

Trait	Change
Gestation Length	-0.72 days
Birth Weight	+0.6 kg
200 Day Weight	+4 kg
400 Day Weight	+9 kg
600 Day Weight	+12 kg
Mature Cow Weight	+9 kg
Milk	-.2 kg
Scrotal Size	+0.2 cm
Carcase Weight	+15 kg
Eye Muscle Area	+0.6 cm ²
Rump Fat	+0.6 mm
Retail Beef Yield	-0.2 %
Marble Score	+0.73 MS