

### What is the TransTasman Angus Cattle Evaluation?

The TransTasman Angus Cattle Evaluation is the genetic evaluation program adopted by Angus Australia for Angus and Angus influenced beef cattle. The TransTasman Angus Cattle Evaluation uses Best Linear Unbiased Prediction (BLUP) technology to produce Estimated Breeding Values (EBVs) of recorded cattle for a range of important production traits (e.g. weight, carcase, fertility).

The TransTasman Angus Cattle Evaluation is an international genetic evaluation and includes pedigree, performance and genomic information from the Angus Australia and Angus New Zealand databases, along with selected information from the American and Canadian Angus Associations.

The TransTasman Angus Cattle Evaluation utilises a range of genetic evaluation software, including the internationally recognised BLUPF90 family of programs, and BREEDPLAN<sup>®</sup> beef genetic evaluation analytical software, as developed by the Animal Genetics and Breeding Unit (AGBU), a joint institute of NSW Agriculture and the University of New England, and Meat and Livestock Australia Limited (MLA).

### What is an EBV?

An animal's breeding value can be defined as its genetic merit for each trait. While it is not possible to determine an animal's true breeding value, it is possible to estimate it. These estimates of an animal's true breeding value are called EBVs (Estimated Breeding Values).

EBVs are expressed as the difference between an individual animal's genetics and a historical genetic level (i.e. group of animals) within the TACE genetic evaluation, and are reported in the units in which the measurements are taken.

### Using EBVs to Compare the Genetics of Two Animals

TACE EBVs can be used to estimate the expected difference in the genetics of two animals, with the expected difference equating to half the difference in the EBVs of the animals, all other things being equal (e.g. they are joined to the same animal/s).

For example, a bull with a 200 Day Growth EBV of +60 would be expected to produce progeny that are, on average, 10 kg heavier at 200 days of age than a bull with a 200 Day Growth EBV of +40 kg (i.e. 20 kg difference between the sire's EBVs, then halved as the sire only contributes half the genetics). Or similarly, a bull with an IMF EBV of +3.0 would be expected to produce progeny with on average, 1% more intramuscular fat in a 400 kg carcase than a bull with a IMF EBV of +1.0 (i.e. 2% difference between the sire's EBVs, then halved as the sire only contributes half the genetics).

# Using EBVs to Benchmark an Animal's Genetics with the Breed

EBVs can also be used to benchmark an animal's genetics relative to the genetics of other Angus or Angus infused animals recorded with Angus Australia.

To benchmark an animal's genetics relative to other Angus animals, an animal's EBV can be compared to the EBV reference tables, which provide:

- the breed average EBV
- the percentile bands table

The current breed average EBV is listed on the bottom of each page in this publication, while the current EBV reference tables are included at the end of these introductory notes. For easy reference, the percentile band in which an animal's EBV ranks is also published in association with the EBV.

#### **Considering Accuracy**

An accuracy value is published with each EBV, and is usually displayed as a percentage value immediately below the EBV.

The accuracy value provides an indication of the reliability of the EBV in estimating the animal's genetics (or true breeding value), and is an indication of the amount of information that has been used in the calculation of the EBV.

EBVs with accuracy values below 50% should be considered as preliminary or of low accuracy, 50-74% as of medium accuracy, 75-90% of medium to high accuracy, and 90% or greater as high accuracy.

### Description of TACE EBVs

EBVs are calculated for a range of traits within TACE, covering calving ease, growth, fertility, maternal performance, carcase merit, feed efficiency and structural soundness. A description of each EBV included in this publication is provided on the following page.

## UNDERSTANDING ESTIMATED BREEDING VALUES (EBVS) 📟

CEDir     99     Genetic differences in the ability of a sire's calves to be born unassisted from 2 year old helfers.     Higher EWs indicate fewere calving difficulties in 2 year old helfers.       VEX.     Genetic differences in the ability of a sire's daughters to calve unassisted of concentron to the birth of the calf.     Lower EBVs indicate fewere calving difficulties in 2 year of concentron to the birth of the calf.       UPUE     90     Genetic differences between animals in the length of time from the dat of concentron to the birth of the calf.     Lower EBVs indicate header live wight.       UPUE     90     Genetic differences between animals in live weight at 200 days of age birth.     Higher EBVs indicate header live weight.       UPUE     90     Genetic differences between animals in live weight at 200 days of age birth.     Higher EBVs indicate header live weight.       MIN     10     Genetic differences between animals in live weight at 200 days of age birth.     Higher EBVs indicate header live weight.       MIN     10     Genetic differences between animals in live weight at 200 days of age birth.     Higher EBVs indicate header live weight.       MIN     10     Genetic differences between animals in live weight at 200 days of age breed (i.v. wheth the female birthodced to bable) until susseauch at 300 days.     Higher EBVs indicate header live weight.       MIN     10     Genetic differences between animals in live w					
BW     kg     Genetic differences between animals in alw weight at birth.     Genetic differences between animals in live weight at 200 days of age due to genetics for growth.     Higher EBVs indicate heavier live weight.       4000     kg     Genetic differences between animals in live weight at 200 days of age due to genetics for growth.     Higher EBVs indicate heavier live weight.       4000     kg     Genetic differences between animals in live weight at 200 days of age due weight.     Higher EBVs indicate heavier live weight.       4000     kg     Genetic differences between animals in live weight at 200 days of age due to the maternal controlution of its dam.     Higher EBVs indicate heavier live weight.       4000     denetic differences between animals in live weight at 200 days of age due to the maternal controlution of its dam.     Higher EBVs indicate heavier live weight.       55     cm     Genetic differences between animals in scrotal circumference at 400 days of age.     Nigher EBVs indicate larger eve muscle area.       6404     Cm <sup>2</sup> Genetic differences between animals in the standard carcase weight at 750 days of age.     Higher EBVs indicate larger eve muscle area.       7004     Rib Fat     m     Genetic differences between animals in the standard carcase weight at 750 days of age.     Higher EBVs indicate larger eve muscle area.       7004     Genetic differences between animals in thot standard	Calving Ease	CEDir	%		calving difficulties in 2 year
BW     kg     Genetic differences between animals in alw weight at birth.     Genetic differences between animals in live weight at 200 days of age due to genetics for growth.     Higher EBVs indicate heavier live weight.       4000     kg     Genetic differences between animals in live weight at 200 days of age due to genetics for growth.     Higher EBVs indicate heavier live weight.       4000     kg     Genetic differences between animals in live weight at 200 days of age due weight.     Higher EBVs indicate heavier live weight.       4000     kg     Genetic differences between animals in live weight at 200 days of age due to the maternal controlution of its dam.     Higher EBVs indicate heavier live weight.       4000     denetic differences between animals in live weight at 200 days of age due to the maternal controlution of its dam.     Higher EBVs indicate heavier live weight.       55     cm     Genetic differences between animals in scrotal circumference at 400 days of age.     Nigher EBVs indicate larger eve muscle area.       6404     Cm <sup>2</sup> Genetic differences between animals in the standard carcase weight at 750 days of age.     Higher EBVs indicate larger eve muscle area.       7004     Rib Fat     m     Genetic differences between animals in the standard carcase weight at 750 days of age.     Higher EBVs indicate larger eve muscle area.       7004     Genetic differences between animals in thot standard		CEDtrs	%		calving difficulties in 2 year
Protect     Server and the server animals in live weight at DNL.     Dith weight.       Protect     Server (differences between animals in live weight at 200 days of age.     Higher EBVs indicate heavier live weight.       Protect     Server (differences between animals in live weight at 000 days of age.     Higher EBVs indicate heavier live weight.       Milk     Kg     Genetic differences between animals in live weight at 000 days of age.     Higher EBVs indicate heavier live weight.       Milk     Kg     Genetic differences between animals in live weight at 200 days of age.     Higher EBVs indicate heavier live weight.       Milk     Kg     Genetic differences between animals in live weight at 200 days of age.     Higher EBVs indicate heavier live weight.       Milk     Kg     Genetic differences between animals in strotal circumference.     Lower EBVs indicate heavier live weight at 200 days of age.       Ss     cm     Genetic differences between animals in storatal circumference.     Lower EBVs indicate heavier live weight.       sys of age.     Genetic differences between animals in that depth at the 12/13h in sin the depth at the 12/13h in at 00 kg carcase.     Higher EBVs indicate larger ever musica and 400 kg carcase.       FBA     mm     Genetic differences between animals in fat depth at the 12/13h in sin the 12/13h in sin that 200 kg carcase.     Higher EBVs indicate heavier inter		GL	days		
Day     K9     due to genetics for growth.     Intervention of the second of the		BW	kg	Genetic differences between animals in calf weight at birth.	
Day     Kg     Genetic differences between animals in live weight at 400 days of age.     How weight.       MCW     kg     Genetic differences between animals in live weight at 600 days of age.     Higher EBVs indicate heavier live weight.       MLW     kg     Genetic differences between animals in live weight at 200 days of age.     Higher EBVs indicate heavier live weight.       MIK     kg     Genetic differences between animals in her weight at 200 days of age.     Higher EBVs indicate heavier live weight.       MIK     kg     Genetic differences between animals in her weight at 200 days of age.     Higher EBVs indicate heavier live weight.       SS     cm     Genetic differences between animals in scrotal circumference 4400     Higher EBVs indicate larger scrotal circumference.       FMA     cm     Genetic differences between animals in hot standard carcase weight at 750     Higher EBVs indicate larger eye muscle area.       FMA     cm     Genetic differences between animals in fat depth at the 12/13H     Higher EBVs indicate larger eye muscle area.       FMA     cm     Genetic differences between animals in fat depth at the 12/13H rib ster     Higher EBVs indicate larger eye muscle area.       FMA     cm     Genetic differences between animals in fat depth at the 12/13H rib ster     Higher EBVs indicate more fat.	Growth		kg		-
MCW     kg     Genetic differences between animals in live weight of cows at 5 years of mature weight.     Higher EBVs indicate heavier mature weight.       MIK     kg     Genetic differences between animals in twe weight at 200 days of age.     Higher EBVs indicate heavier weight.     Higher EBVs indicate heavier inve weight.     Higher EBVs indicate shorter twe weight.       SS     cm     Genetic differences between animals in thetime from the start of the joinin period (i.e. when the female is introduced to a buil) until subsequent adving.     Lower EBVs indicate larger scratal circumference.       Genetic differences between animals in hot standard carcase weight at 750 days of age.     Genetic differences between animals in tay muscle area at the 12/13th this te in a 400 kg carcase.     Higher EBVs indicate larger eve muscle area.       Rbh Fat     mm     Genetic differences between animals in fat depth at the 12/13th this tit in a 400 kg carcase.     Higher EBVs indicate more fat.     Higher EBVs indicate more fat.       MF     %     Genetic differences between animals in fat depth at the P8 rump site in a 400 kg carcase.     Higher EBVs indicate more fat.       MF     %     Genetic differences between animals in feed intake at a standard weight in a 400 kg carcase.     Higher EBVs indicate more fat.       MF     %     Genetic differences between animals in temperament.     Lower EBVs indicate heavier tweight. <td< th=""><th></th><th>kg</th><th>Genetic differences between animals in live weight at 400 days of age.</th><th></th></td<>			kg	Genetic differences between animals in live weight at 400 days of age.	
MCW     kg     Genetic differences between animals in live weight of cows at 5 years of mature weight.     Higher EBVs indicate heavier mature weight.       MIK     kg     Genetic differences between animals in twe weight at 200 days of age.     Higher EBVs indicate heavier weight.     Higher EBVs indicate heavier inve weight.     Higher EBVs indicate shorter twe weight.       SS     cm     Genetic differences between animals in thetime from the start of the joinin period (i.e. when the female is introduced to a buil) until subsequent adving.     Lower EBVs indicate larger scratal circumference.       Genetic differences between animals in hot standard carcase weight at 750 days of age.     Genetic differences between animals in tay muscle area at the 12/13th this te in a 400 kg carcase.     Higher EBVs indicate larger eve muscle area.       Rbh Fat     mm     Genetic differences between animals in fat depth at the 12/13th this tit in a 400 kg carcase.     Higher EBVs indicate more fat.     Higher EBVs indicate more fat.       MF     %     Genetic differences between animals in fat depth at the P8 rump site in a 400 kg carcase.     Higher EBVs indicate more fat.       MF     %     Genetic differences between animals in feed intake at a standard weight in a 400 kg carcase.     Higher EBVs indicate more fat.       MF     %     Genetic differences between animals in temperament.     Lower EBVs indicate heavier tweight. <td< th=""><th></th><th>kg</th><th>Genetic differences between animals in live weight at 600 days of age.</th><th></th></td<>			kg	Genetic differences between animals in live weight at 600 days of age.	
MileKitGue to the maternal contribution of its dam.live weight.DicdaysGenetic differences between animals in the time from the start of the joning Lower EBVs indicate shorter time to calving.Lower EBVs indicate shorter time to calving.SiscmGenetic differences between animals in scrotal circumference at 400 days of age.University of the time from the start of the joning Lower EBVs indicate haver carcase weight at 750 Higher EBVs indicate haver carcase weight at 750Higher EBVs indicate haver carcase weight at 750 Higher EBVs indicate haver carcase weight at 040 kg carcase.PBI PBFatmmGenetic differences between animals in fat depth at the 12/13th rib site at 400 kg carcase.PBI 		MCW	kg		-
Utc     days     period (i.e. when the female is introduced to a bully until subsequent calving.     time to calving.       SS     cm     denote differences between animals in scrotal circumference at 400     Higher EBVs indicate larger scrotal circumference.       EMA     cm <sup>2</sup> Genetic differences between animals in hot standard carcase weight at 750     Higher EBVs indicate larger eve muscle area at the 12/13h this list in a 400 kg carcase.     Higher EBVs indicate larger eve muscle area at the 12/13h this list in a 400 kg carcase.       PB Fat     mm     Genetic differences between animals in fat depth at the 12/13h this list in a 400 kg carcase.     Higher EBVs indicate larger eve muscle area.       PB Fat     mm     Genetic differences between animals in fat depth at the PB rump site in a 400 kg carcase.     Higher EBVs indicate more fat.       MFIF     %     Genetic differences between animals in intramuscular fat (marbling) at the 12/13h trib site in a 400 kg carcase.     Higher EBVs indicate more fat.       MFIF     %     Genetic differences between animals in termperament.     Lower EBVs indicate more fat.       MFIF     %     Genetic differences between animals in termperament.     Lower EBVs indicate more feed efficiency.       Moduli     %     Genetic differences between animals in temperament.     Lower EBVs indicate more desirable foat angle.		Milk	kg		-
Output     Days of age.     Scrotal circumference.       0 days of age.     Scrotal circumference.     Scrotal circumference.       0 days of age.     Genetic differences between animals in hot standard carcase weight at 750 diarcase.     Higher EBVs indicate heavier carcase weight.       0 days of age.     Genetic differences between animals in eye muscle area at the 12/13th rib stel in a 400 kg carcase.     Higher EBVs indicate heavier carcase weight.       0 days of age.     Genetic differences between animals in fat depth at the 12/13th rib stel in a 400 kg carcase.     Higher EBVs indicate more fat.       0 days of age.     Genetic differences between animals in boned out saleable meat from a 400 kg carcase.     Higher EBVs indicate more fat.       0 days of age.     Genetic differences between animals in hotend out saleable meat from a 400 kg carcase.     Higher EBVs indicate more fat.       0 day     Genetic differences between animals in toma animals in feed intake at a standard weight and rate of weight gain when animals are in a feedlot finishing phase.     Lower EBVs indicate more feed efficiency.       0 day     Genetic differences between animals in temperament.     Higher EBVs indicate more feed efficiency.       0 day     Genetic differences between animals in temperament.     Lower EBVs indicate more feed efficiency.       0 day     Genetic differences in toan angle (strength of pastern, depth of heel).	Fertility	DtC	days		
Verture     Kg     days of age.     carcase weight.       EMA     cm <sup>2</sup> Genetic differences between animals in eye muscle area at the 12/13th     Higher EBVs indicate larger eye muscle area.       Rib Fat     mm     Genetic differences between animals in fat depth at the 12/13th rib site in a 400 kg carcase.     Higher EBVs indicate more fat.       PB Fat     mm     Genetic differences between animals in fat depth at the P8 rump site in 400 kg carcase.     Higher EBVs indicate more fat.       RBY     %     Genetic differences between animals in boned out saleable meat from a 400 kg carcase.     Higher EBVs indicate more fat.       IMF     %     Genetic differences between animals in intramuscular fat (marbling) vield.     Higher EBVs indicate more fat.       IMF     %     Genetic differences between animals in feed intake at a standard weight cower EBVs indicate more feed efficiency.       Doc     %     Genetic differences between animals in temperament.     Higher EBVs indicate more feed efficiency.       Claw     Set     score     Genetic differences hetween animals in net profitability per cow joined in a typical commercial self replacing herd using Angus bulls. This selection indexes indicate more desirable foot angle.       Lower EBVs indicate more desirable foot angle.     Lower EBVs indicate more desirable foot angle.       Claw		SS	cm		
EMA     Cm <sup>-</sup> rib site in a 400 kg carcase.     eye muscle area.       PB Fat     mm     Genetic differences between animals in fat depth at the 12/13th rib site a 400 kg carcase.     Higher EBVs indicate more fat.       PB Fat     mm     Genetic differences between animals in fat depth at the P8 rump site in a 400 kg carcase.     Higher EBVs indicate more fat.       RBY     %     Genetic differences between animals in boned out saleable meat from a 400 kg carcase.     Higher EBVs indicate more intramuscular fat.       IMF     %     Genetic differences between animals in intramuscular fat (marbling) at the 12/13th rib site in a 400 kg carcase.     Higher EBVs indicate more intramuscular fat.       Obj     %     Genetic differences between animals in feed intake at a standard weight and rate of weight gain when animals in feed intake at a standard weight and rate of weight gain when animals in temperament.     Hower EBVs indicate more feed efficiency.       Obj     %     Genetic differences between animals in temperament.     Lower EBVs indicate more desirable foot angle.       Claw     score     Genetic differences in claw set structure (shape and evenness of claws).     Lower EBVs indicate more desirable foot angle.       SA     S     S     Genetic differences between animals in net profitability per cow joined in a typical commercial self replacing herd using Angus bulis. This selection index is not spe	Carcase	сwт	kg		-
Note     Note     Number of the second secon		EMA	cm <sup>2</sup>		
RBY % Genetic differences between animals in boned out saleable meat from a Vield. Higher EBVs indicate higher yield.   NHF % Genetic differences between animals in intramuscular fat (marbling) at the 12/13th rib site in a 400 kg carcase. Higher EBVs indicate more intramuscular fat.   Doc % Genetic differences between animals in feed intake at a standard weight daw of vield tag an when animals are in a feedlot finishing phase. Higher EBVs indicate more feed efficiency.   Poot % Genetic differences between animals in temperament. Lower EBVs indicate more desirable foot angle.   Claw score Genetic differences in foot angle (strength of pastern, depth of heel). Lower EBVs indicate more desirable foot angle.   Claw score Genetic differences in claw set structure (shape and evenness of claws). Lower EBVs indicate more desirable foot angle.   SA S Genetic differences between animals in net profitability per cow joined in a typical commercial self replacing herd using Angus bulls. This selection indexes index is not specific to a particular market end-point, but identifies animals indicate greater profitability. Higher selection indexes indicate greater profitability.   SA-L S The SA-L index is subject to a particular market end-point, but identifies animals indicate greater profitability. Higher selection indexes indicate greater profitability.   While the SA aims to maintain the profitability per cow joined in a typical commercial self replacing herd using Angus bulls. This selection index		Rib Fat	mm		
KBY     %     400 kg carcase.     yield.       IMF     %     Genetic differences between animals in intramuscular fat (marbling) at the 12/13th rib site in a 400 kg carcase.     Higher EBVs indicate more intramuscular fat.       MFI-F     kg/ day     Genetic differences between animals in feed intake at a standard weight dain rate of weight gain when animals are in a feedlot finishing phase.     Lower EBVs indicate more feed efficiency.       Doc     %     Genetic differences between animals in temperament.     Higher EBVs indicate more feed efficiency.       Image: Doc     %     Genetic differences in foot angle (strength of pastern, depth of heel).     Lower EBVs indicate more desirable foot angle.       Claw Set     score     Genetic differences in claw set structure (shape and evenness of claws).     Lower EBVs indicate more desirable claw structure.       SA     \$     Genetic differences between animals in net profitability per cow joined in a typical commercial self replacing herd using Angus bulls. This selection index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial.     Higher selection indexes indicate greater profitability.       SA-L     \$     Sent feelacing, grass and grain finishing beef production systems.     Higher selection indexes indicate greater profitability.       While the SA-L index is similar to the SA index but is modelled o		P8 Fat	mm		-
If IF     70     the 12/13th rib site in a 400 kg carcase.     intramuscular fat.       VP001     NFI-F     kg/ day     Genetic differences between animals in feed intake at a standard weight and rate of weight gain when animals are in a feedlot finishing phase.     Lower EBVs indicate more feed efficiency.       Doc     %     Genetic differences between animals in temperament.     Higher EBVs indicate better temperament.       Foot Angle     score     Genetic differences in foot angle (strength of pastern, depth of heel).     Lower EBVs indicate more desirable foot angle.       Claw Set     score     Genetic differences between animals in net profitability per cow joined in a typical commercial self replacing herd using Angus bulls. This selection index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial self replacing, grass and grain finishing beef production systems.     Higher selection indexes index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial, self replacing, grass and grain finishing beef production systems.     Higher selection indexes index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial, self replacing, grass and grain finishing beef production systems.     Higher selection indexes index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial, self re		RBY	%		
NPT-Pdayand rate of weight gain when animals are in a feedlot finishing phase.feed efficiency.Doc%Genetic differences between animals in temperament.Higher EBVs indicate better temperament.Poot AnglescoreGenetic differences in foot angle (strength of pastern, depth of heel).Lower EBVs indicate more desirable foot angle.Claw SetscoreGenetic differences in claw set structure (shape and evenness of claws).Lower EBVs indicate more desirable foot angle.SA\$Genetic differences between animals in net profitability per cow joined in a typical commercial self replacing herd using Angus bulls. This selection index is not specific to a particular market end-point, but identifies animals is self replacing, grass and grain finishing beef production systems.Higher selection indexes indicate greater profitability.SA-L\$SGenetic differences between animals in net profitability in the majority of commercial, self replacing, grass and grain finishing beef production systems.Higher selection indexes indicate greater profitability.SA-L\$\$Sha-L index is similar to the \$A index but is modelled on a production system where feed is surplus to requirements for the majority of the year, or the cost of supplying additional feed when animal feed requirements increase is low. While the \$A aims to maintain mature cow weight as there is minimal cost incured if the feed maintenance requirements of the female breedingHigher selection indexes indicate greater profitability.		IMF	%		
Foot AngleScoreGenetic differences in foot angle (strength of pastern, depth of heel).Lower EBVs indicate more desirable foot angle.Claw SetscoreGenetic differences in claw set structure (shape and evenness of claws). Set index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability per cow joined in a typical commercial self replacing herd using Angus bulls. This selection index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability per cow joined in a typical commercial self replacing herd using Angus bulls. This selection index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability per cow joined in a typical commercial self replacing herd using Angus bulls. This selection index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability per cow joined in a typical commercial self replacing herd using Angus bulls. This selection index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial, self replacing, grass and grain finishing beef production systems.Higher selection indexes indicate greater profitability.SA-L\$SThe \$A-L index is similar to the \$A index but is modelled on a production system where feed is surplus to requirements for the majority of the year or the cost of supplying additional feed when animal feed requirements increase is low.Higher selection indexes indicate greater profitability.While the \$A aims to maintain mature cow weight as there is minimal cost incurred if the feed maintenance requirements of the femal		NFI-F	-		
SA\$Genetic differences between animals in net profitability per cow joined in a typical commercial self replacing herd using Angus bulls. This selection index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial, self replacing, grass and grain finishing beef production systems.Higher selection indexes indicate greater profitability.SA-L\$Genetic differences between animals in net profitability per cow joined in a typical commercial self replacing herd using Angus bulls. This selection index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial, self replacing, grass and grain finishing beef production systems.Higher selection indexes indicate greater profitability.SA-L\$SGenetic differences between animals in net profitability in the majority of commercial, self replacing, grass and grain finishing beef production systems.Higher selection indexes index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial, self replacing, grass and grain finishing beef production systems.Higher selection indexes indicate greater profitability.SA-L\$SWhile the \$A-L index is similar to the \$A index but is modelled on a production system where feed is surplus to requirements for the majority of the year, or the cost of supplying additional feed when animal feed requirements increase is low.Higher selection indexes indicate greater profitability.While the \$A aims to maintain mature cow weight as there is minimal cost incurred if the feed maintenance requirements		Doc	%	Genetic differences between animals in temperament.	
SA\$Genetic differences between animals in net profitability per cow joined in a typical commercial self replacing herd using Angus bulls. This selection index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial, self replacing, grass and grain finishing beef production systems.Higher selection indexes indicate greater profitability.SA-L\$Genetic differences between animals in net profitability per cow joined in a typical commercial self replacing herd using Angus bulls. This selection index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial, self replacing, grass and grain finishing beef production systems.Higher selection indexes indicate greater profitability.SA-L\$SGenetic differences between animals in net profitability in the majority of commercial, self replacing, grass and grain finishing beef production systems.Higher selection indexes index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial, self replacing, grass and grain finishing beef production systems.Higher selection indexes indicate greater profitability.SA-L\$SWhile the \$A-L index is similar to the \$A index but is modelled on a production system where feed is surplus to requirements for the majority of the year, or the cost of supplying additional feed when animal feed requirements increase is low.Higher selection indexes indicate greater profitability.While the \$A aims to maintain mature cow weight as there is minimal cost incurred if the feed maintenance requirements			score	Genetic differences in foot angle (strength of pastern, depth of heel).	
SA\$a typical commercial self replacing herd using Angus bulls. This selection index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial, self replacing, grass and grain finishing beef production systems.Higher selection indexes indicate greater profitability.SA-L\$Genetic differences between animals in net profitability per cow joined in a typical commercial self replacing herd using Angus bulls. This selection index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial, self replacing, grass and grain finishing beef production systems.Higher selection indexesSA-L\$Sarchi a typical commercial self replacing herd using Angus bulls. This selection index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial, self replacing, grass and grain finishing beef production systems.Higher selection indexesSA-L\$The \$A-L index is similar to the \$A index but is modelled on a production system where feed is surplus to requirements for the majority of the year or the cost of supplying additional feed when animal feed requirements increase is low.Higher selection indexes indicate greater profitability.While the \$A aims to maintain mature cow weight, the \$A-L does not aim to limit the increase in mature cow weight as there is minimal cost incurred if the feed maintenance requirements of the female breedingHigher selection indexes	Strue		score	Genetic differences in claw set structure (shape and evenness of claws).	
SA-L\$a typical commercial self replacing herd using Angus bulls. This selection index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial, self replacing, grass and grain finishing beef production systems.Higher selection indexes index is similar to the \$A index but is modelled on a production system where feed is surplus to requirements for the majority of the year, or the cost of supplying additional feed when animal feed requirements increase is low.Higher selection indexes indicate greater profitability.While the \$A aims to maintain mature cow weight, the \$A-L does not aim to limit the increase in mature cow weight as there is minimal cost incurred if the feed maintenance requirements of the female breedingHigher selection indexes indicate greater profitability.	Selection Index	\$A	\$	a typical commercial self replacing herd using Angus bulls. This selection index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial,	
		\$A-L	\$	a typical commercial self replacing herd using Angus bulls. This selection index is not specific to a particular market end-point, but identifies animals that will improve overall net profitability in the majority of commercial, self replacing, grass and grain finishing beef production systems. The \$A-L index is similar to the \$A index but is modelled on a production system where feed is surplus to requirements for the majority of the year, or the cost of supplying additional feed when animal feed requirements increase is low. While the \$A aims to maintain mature cow weight, the \$A-L does not aim to limit the increase in mature cow weight as there is minimal cost	