

Understanding Intramuscular Fat EBVs

Calving Ease Dir (%)	Calving Ease Dtrs (%)	Gestation Length (days)	Birth Wt. (kg)	200 Day Wt. (kg)	400 Day Wt. (kg)	600 Day Wt. (kg)	Mat. Cow Wt. (kg)	Milk Yield (kg)	Scrotal Size	Days to Calving	Carcass Wt.	Eye Muscle Area	Rib Fat	Rump Fat	Retail Beef Yield (%)	IMF (%)	NFI-P (kg/day)	NFI-F (kg/day)	Docility	Angus Breeding Index	Domestic Index	Heavy Grain Index	Heavy Grass Index
+4.6 99%	+6.1 97%	-5.2 99%	+2.1 99%	+28 99%	+55 99%	+68 99%	+67 99%	9							-0.7 98%	+1.3 98%	+0.35 96%	+1.05 96%	+25 9				
+3.2 98%	+2.0 96%	-9.8 99%	+2.2 99%	+40 99%	+74 99%	+99 99%	+80 98%	9							+0.2 97%	+2.7 97%	+0.03 93%	-0.13 93%					
+0.7 98%	-2.9 96%	-0.3 99%	+3.1 99%	+29 99%	+63 99%	+82 99%	+60 99%	9							-1.1 98%	+3.6 98%	+0.81 95%	+1.36 95%					
+1.0 98%	+1.3 94%	-5.0 99%	+3.6 99%	+39 99%	+79 99%	+104 99%	+76 99%	99							+0.4 96%	+4.0 97%	+0.38 92%	+0.28 92%					
+5.9 98%	+6.2 93%	-9.9 99%	+3.2 99%	+51 99%	+93 99%	+123 99%	+142 99%	+10 98%	+2.4 99%	-12.0 92%	+74 98%	+5.0 97%	-0.2 97%	+0.7 98%	-0.5 96%	+3.2 97%	+0.24 91%	+0.45 91%	99%	+5.164	+5.132	+5.134	+5.144
+3.3			+4.7	+5			+127			7	+6	+4		4	+1.0				+7				

IMF EBVs are estimates of genetic differences between animals in intramuscular fat (marbling) at the 12/13th rib site in a 400 kg carcasse.

Higher IMF EBVs indicate the animal is expected to produce progeny with a higher percentage of intramuscular fat (marbling) in a 400 kg carcasse.

Intramuscular Fat (IMF) EBVs are estimates of genetic differences between animals in intramuscular fat (marbling) at the 12/13th rib site in a 400 kg carcasse.

IMF EBVs are calculated by measuring intramuscular fat in the longissimus dorsi between the 12th and 13th rib via either live animal ultrasound scanning or direct measurement of carcasses in the abattoir, and/ or genomic information where available. IMF EBVs are expressed in percentage units.

Higher IMF EBVs indicate the animal is expected to produce progeny with a higher percentage of intramuscular fat (marbling) in a 400 kg carcasse.

Using IMF Fat EBVs to Compare the Genetics of Two Animals

IMF EBVs can be used to estimate the expected difference in percentage of intramuscular fat of progeny from two animals, with the expected difference equating to half the difference in the IMF EBV of the animals, all other things being equal (e.g. they are joined to the same animal/s).

For example, a bull with an IMF EBV of +3.0 would be expected to produce calves with on average, 1% more intramuscular fat in a 400 kg carcasse 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 IMF EBVs to Benchmark an Animal's Genetics with the Breed

Similarly, IMF EBVs can be used to benchmark an animal's genetics for intramuscular fat relative to other Angus animals in Australia and New Zealand.

To benchmark an animal's genetics relative to other Angus animals, an animal's IMF EBV can be compared to:

- the breed average EBV
- the percentile table

The current breed average and percentile table for IMF can be found on the Angus Australia website, or they are normally listed in most BREEDPLAN reports, sale and semen catalogues.

Considering Accuracy

An accuracy value is published in association with each IMF EBV, which 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 for IMF (or true breeding value), and is an indication of the amount of information that has been used in the calculation of the EBV.

IMF 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.

For further information, please contact staff at:

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