

Converting Evaluation Results between Holstein and Friesian Genetic Bases

Background

This document is provided to enable genetic evaluation “proofs” and breeding values created from a Holstein genetic base to be converted to a Friesian base and vice versa. It applies to any Holstein-Friesian proofs produced since the major 5-yearly base change in January 2010. These factors are used by Holstein-UK to calculate Friesian proofs from the original genetic evaluations made on a Holstein base.

Type Merit (TM) is a measure of a bull's potential to transmit his genetic merit for type to his progeny. It is calculated from his heifer daughter classifications and those of other ancestors and is expressed as a standard deviation from the mean (average) on a scale of approx. -3 to +3.

Conversion Formula – for TYPE or Conformation Traits

To convert from a Holstein to a Friesian proof:

$$([\text{Proof on Holstein Base}] \text{ multiplied by } \mathbf{B}) + \mathbf{A} = [\text{Proof on Friesian base}]$$

In the reverse direction, to work out the equivalent Holstein figures from a Friesian proof:

$$([\text{Proof on Friesian base}] / \mathbf{B}) - (\mathbf{A} / \mathbf{B}) = [\text{Proof on Holstein Base}]$$

Where “A” and “B” for each trait are taken from the table below:

Trait	Abbreviation	A	B
Type Merit (overall conformation)	TM	2.814	1.148
Mammary composite	MAM	2.782	1.030
Legs and Feet composite	L&F	1.545	1.137
Stature	STA	3.815	0.990
Chest Width	CW	-1.363	1.013
Body Depth	BD	2.257	0.926
Angularity	ANG	4.253	0.930
Rump Angle	RA	-0.147	0.992
Rump Width	RW	0.414	1.053
Rear legs Side view	RLS	0.383	0.960
Foot Angle	FA	-0.214	0.992
Fore Udder Attachment	FUA	1.166	0.926
Rear Udder Height	RUH	2.601	0.965
Udder Support (Median Ligament)	US	2.377	1.035
Udder Depth	UD	1.138	1.045
Front Teat Placement	FTP	1.262	0.944
Teat Length	TL	0.915	0.985
Rear Teat Placement	RTP	1.262	0.944
Teat Position side view	TPS	1.349	0.856
Temperament	Tem	1.105	0.893
Ease Of Milking	EoM	0.859	1.212
Locomotion	Loc	0.271	1.070
Condition Score	CS	-3.492	0.934

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