

Brown Swiss Production conversions

December 2023

When to use these formulas

These conversions should only be used for converting cow evaluations and bulls which do not have an Interbull evaluation. Please check with AHDB Dairy if in doubt.

The formulae provide a guide only to the expected evaluations of the relevant bull or cow in the UK.

How to convert a foreign proof using figures in the table below

$$\text{Approximate UK PTA} = a + (b * \text{Foreign proof})$$

How to adjust the converted reliability

To take into account the loss of accuracy when converting a foreign proof into a UK equivalent, Interbull guidelines recommend that the foreign reliabilities should be adjusted by the squared correlations between the foreign and UK genetic evaluations.

When converting the foreign production proofs to UK equivalents, the foreign production reliability must therefore be multiplied by 0.8 (i.e. **UK reliability = 0.8 * Foreign reliability**)

				a		b		
BSW	milk	GBR	=	-31.48	+	0.525	*	AUS
BSW	fat	GBR	=	-1.41	+	0.447	*	AUS
BSW	pro	GBR	=	-1.82	+	0.45	*	AUS
BSW	milk	GBR	=	22.36	+	0.369	*	CAN
BSW	fat	GBR	=	0.9	+	0.312	*	CAN
BSW	pro	GBR	=	-0.38	+	0.296	*	CAN
BSW	milk	GBR	=	0.54	+	0.475	*	CHE
BSW	fat	GBR	=	-0.48	+	0.405	*	CHE
BSW	pro	GBR	=	-0.3	+	0.399	*	CHE
BSW	milk	GBR	=	138.12	+	0.515	*	DEA
BSW	fat	GBR	=	5.84	+	0.491	*	DEA
BSW	pro	GBR	=	3.92	+	0.452	*	DEA
BSW	milk	GBR	=	78.03	+	0.409	*	FRA
BSW	fat	GBR	=	3.01	+	0.347	*	FRA
BSW	pro	GBR	=	2.36	+	0.361	*	FRA

BSW	milk	GBR	=	-147.98	+	0.394	*	ITA
BSW	fat	GBR	=	-3.5	+	0.37	*	ITA
BSW	pro	GBR	=	-4.12	+	0.319	*	ITA
BSW	milk	GBR	=	585.55	+	0.366	*	NLD
BSW	fat	GBR	=	19.16	+	0.337	*	NLD
BSW	pro	GBR	=	15.4	+	0.316	*	NLD
BSW	milk	GBR	=	6.36	+	0.446	*	NZL
BSW	fat	GBR	=	6.8	+	0.335	*	NZL
BSW	pro	GBR	=	0.88	+	0.341	*	NZL
BSW	milk	GBR	=	-2791.85	+	25.118	*	SVN
BSW	fat	GBR	=	-91.66	+	0.826	*	SVN
BSW	pro	GBR	=	-81.03	+	0.72	*	SVN
BSW	milk	GBR	=	-11.73	+	0.375	*	USA
BSW	fat	GBR	=	-0.34	+	0.358	*	USA
BSW	pro	GBR	=	-1.97	+	0.356	*	USA

Calculating percentage PTAs

Apply the following formula using the converted yield PTAs to obtain estimates for the percentage PTAs.

$$\text{PTA Fat \%} = \frac{(\text{PTA fat (kg)} \times 100) - (\text{PTA milk (kg)} \times 4.13)}{(\text{PTA milk (kg)} + 6561)}$$

$$\text{PTA Prot \%} = \frac{(\text{PTA prot (kg)} \times 100) - (\text{PTA milk (kg)} \times 3.49)}{(\text{PTA milk (kg)} + 6561)}$$