AHDB

BrownSwiss Fitness conversions

December 2024

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

Approximate UK PTA = a + (b * 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.

Somatic Cell Count (SCC)

The foreign SCC reliability must therefore be multiplied by 0.90 (i.e. **UK reliability = 0.90 * Foreign reliability**)

		a		b		
GBR	=	162	+	-1.613	*	CAN
GBR	=	100.57	+	-1.007	*	CHE
GBR	=	90.19	+	-0.907	*	DEA
GBR	=	-2.01	+	-10.747	*	FRA
GBR	=	71.89	+	-0.688	*	ITA
GBR	=	284.59	+	-2.919	*	NLD
GBR	=	8.18	+	25.635	*	NZL
GBR	=	94.09	+	-0.901	*	SVN
GBR	=	-148.48	+	50.165	*	USA

Mastitis

The foreign Mastitis reliability must therefore be multiplied by 0.75 (i.e. **UK reliability = 0.75 * Foreign reliability**)

		a		b		
GBR	=	29.51	+	-0.295	*	CAN
GBR	=	15.52	+	-0.155	*	CHE
GBR	=	14.42	+	-0.145	*	DEA
GBR	=	-0.14	+	-1.973	*	FRA

```
GBR  =      11.08   +      -0.107  *  ITA
GBR  =      46.69   +      -0.464  *  NLD
GBR  =       1.27   +       4.095  *  NZL
GBR  =      16.77   +      -0.161  *  SVN
GBR  =      -0.02   +       -0.64  *  USA
```

Lifespan (LS)

The foreign LS reliability must therefore be multiplied by 0.70 (i.e. **UK reliability = 0.70 * Foreign reliability**)

```
                a               b
GBR  =  (   -3.05   +       0.03   *  CAN  )  *  305
GBR  =  (   -1.87   +      0.018   *  CHE  )  *  305
GBR  =  (    -1.6   +      0.017   *  DEA  )  *  305
GBR  =  (    0.03   +      0.199   *  FRA  )  *  305
GBR  =  (   -1.35   +      0.014   *  ITA  )  *  305
GBR  =  (     0.1   +      0.001   *  NLD  )  *  305
GBR  =  (   -0.84   +      0.008   *  SVN  )  *  305
GBR  =  (   -0.03   +      0.094   *  USA  )  *  305
```

Fertility Index (FI)

The foreign FI reliability must therefore be multiplied by 0.60 (i.e. **UK reliability = 0.60 * Foreign reliability**)

```
GBR  =  -102.2   +    0.5887  *  CAN CI trait  +    0.4042  *  CAN NR trait
GBR  =   -32.9   +         0  *  CHE CI trait  +     0.332  *  CHE NR trait
GBR  =     -51   +    0.2739  *  DEA CI trait  +    0.2598  *  DEA NR trait
GBR  =     0.7   +         0  *  FRA CI trait  +    3.2045  *  FRA NR trait
GBR  =   -36.1   +    0.2186  *  ITA CI trait  +    0.1588  *  ITA NR trait
GBR  =  -219.3   +    1.4464  *  NLD CI trait  +    0.7217  *  NLD NR trait
GBR  =     3.9   +    41.286  *  NZL CI trait  +         0  *  NZL NR trait
GBR  =     -24   +    0.2468  *  SVN CI trait  +         0  *  SVN NR trait
GBR  =    -2.1   +    1.7238  *  USA CI trait  +    0.6929  *  USA NR trait
```