

# Ayrshire Production conversions

## April 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

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

### 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**)

				<b>a</b>		<b>b</b>		
RDC	milk	GBR	=	-68.01	+	0.491	*	AUS
RDC	fat	GBR	=	1.49	+	0.47	*	AUS
RDC	pro	GBR	=	-0.08	+	0.465	*	AUS
RDC	milk	GBR	=	-148.34	+	0.479	*	CAM
RDC	fat	GBR	=	-7.8	+	0.308	*	CAM
RDC	pro	GBR	=	-3.62	+	0.526	*	CAM
RDC	milk	GBR	=	217.92	+	0.299	*	CAN
RDC	fat	GBR	=	7.93	+	0.245	*	CAN
RDC	pro	GBR	=	5.85	+	0.247	*	CAN
RDC	milk	GBR	=	337.27	+	0.32	*	DEU
RDC	fat	GBR	=	16.91	+	0.28	*	DEU
RDC	pro	GBR	=	13.01	+	0.281	*	DEU
RDC	milk	GBR	=	-1607.64	+	19.613	*	DFS
RDC	fat	GBR	=	-44.46	+	0.615	*	DFS
RDC	pro	GBR	=	-31.07	+	0.472	*	DFS

RDC	milk	GBR	=	336.01	+	0.367	*	EST
RDC	fat	GBR	=	11.43	+	0.335	*	EST
RDC	pro	GBR	=	11.7	+	0.314	*	EST
RDC	milk	GBR	=	226.29	+	1.153	*	IRL
RDC	fat	GBR	=	6.36	+	0.915	*	IRL
RDC	pro	GBR	=	8.06	+	0.979	*	IRL
RDC	milk	GBR	=	-105.6	+	0.507	*	LTU
RDC	fat	GBR	=	0.94	+	0.35	*	LTU
RDC	pro	GBR	=	0.46	+	0.434	*	LTU
RDC	milk	GBR	=	201.46	+	0.637	*	LVA
RDC	fat	GBR	=	6.94	+	0.537	*	LVA
RDC	pro	GBR	=	6.85	+	0.589	*	LVA
RDC	milk	GBR	=	683.29	+	0.283	*	NLD
RDC	fat	GBR	=	25.19	+	0.258	*	NLD
RDC	pro	GBR	=	22.81	+	0.222	*	NLD
RDC	milk	GBR	=	-1284.34	+	15.785	*	NOR
RDC	fat	GBR	=	-38.84	+	0.489	*	NOR
RDC	pro	GBR	=	-30.89	+	0.433	*	NOR
RDC	milk	GBR	=	-32.69	+	0.522	*	NZL
RDC	fat	GBR	=	8.88	+	0.403	*	NZL
RDC	pro	GBR	=	4.5	+	0.443	*	NZL
RDC	milk	GBR	=	57.31	+	0.328	*	USA
RDC	fat	GBR	=	0.5	+	0.313	*	USA
RDC	pro	GBR	=	0.68	+	0.308	*	USA
RDC	milk	GBR	=	-16.21	+	0.3	*	ZAF
RDC	fat	GBR	=	-0.61	+	0.276	*	ZAF
RDC	pro	GBR	=	0.57	+	0.262	*	ZAF

### Calculating percentage PTAs

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

$$\text{PTA Fat \%} = \frac{(\text{PTA fat (kg)} \times 100) - (\text{PTA milk (kg)} \times 4.14)}{(\text{PTA milk (kg)} + 6128)}$$

$$\text{PTA Prot \%} = \frac{(\text{PTA prot (kg)} \times 100) - (\text{PTA milk (kg)} \times 3.32)}{(\text{PTA milk (kg)} + 6128)}$$