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 Conversion Factors For Production Traits. Source: INTERBULL 1908
 Converted Canadian Proof = A + (B* Foreign Proof)
 Converted Proof Reliability = PCORR2*Foreign Reliability

breed	country2	amilk	bmilk	afat	bfat	aprot	bprot	pcorr2
GUE	AUS	-173.210	1.2747	-10.031	1.3279	-2.435	1.2181	0.5041
GUE	GBR	-381.200	2.8780	-6.200	2.2620	-8.900	2.7300	0.7225
GUE	NZL	877.088	1.6606	35.374	1.3378	35.634	1.5031	0.4900
GUE	USA	95.700	1.0260	-4.900	1.1480	2.200	1.1140	0.8281

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 Conversion Factors For SCS Traits. Source: INTERBULL 1908
 Converted Canadian Proof = A + (B* Foreign Proof)
 Converted Proof Reliability = SCORR2*Foreign Reliability

breed	country2	a	b	scorr2
GUE	AUS	99.699	-19.2784	0.7744
GUE	GBR	101.900	-0.3810	0.7921
GUE	NZL	103.225	-8.2523	0.7569
GUE	USA	161.000	-20.2300	0.7921

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 Conversion Factors For Type. Source = INTERBULL MACE 1908
 Converted Canadian Proof = A + (B* Foreign Proof)
 Converted Proof Reliability = TCORR2*Foreign Reliability

country2=AUS

	c	c	f			
	a	o	o		a	b
	n	u	r		v	v
b	t	n	t		a	a
r	r	t	r		l	l
e	a	r	a		u	u
e	i	y	i		e	e
d	t	2	t			
GUE CONFORMATION		AUS CONFORMATION		1.8285	9.7938	0.35
GUE FEET AND LEGS		AUS OVERALL FEET & LEG		-44.5409	0.4541	
GUE MAMMARY SYSTEM		AUS OVERALL UDDER SCORE		1.8369	9.9416	
GUE STATURE		AUS STATURE		-2.1263	6.6852	
GUE CHEST WIDTH		AUS CHEST WIDTH		-0.9321	12.9734	
GUE BODY DEPTH		AUS BODY DEPTH		0.1940	12.3612	
GUE PIN WIDTH		AUS RUMP WIDTH		-0.0879	9.4652	
GUE RUMP ANGLE		AUS RUMP ANGLE		-0.2027	7.7293	
GUE FOOT ANGLE		AUS FOOT ANGLE		1.3679	14.7654	
GUE REAR LEGS SIDE VIEW		AUS REAR LEG SET		-2.4055	17.5470	
GUE REAR LEG REAR VIEW		AUS REAR LEG REAR VIEW		0.2330	10.4199	
GUE UDDER DEPTH		AUS UDDER DEPTH		0.7577	10.5644	
GUE MEDIAN SUSPENSORY		AUS MEDIAN SUSPENSORY		1.9448	15.9600	

GUE FORE ATTACHMENT	AUS FORE UDDER	0.4668	12.4967
GUE TEAT PLACEMENT	AUS FRONT TEAT PLACEMENT	0.0290	12.5225
GUE TEAT LENGTH	AUS TEAT LENGTH	1.3615	5.5149
GUE REAR ATTACHMENT HEIGHT	AUS REAR UDDER HEIGHT	-1.9370	12.6391
GUE REAR TEAT PLACEMENT	AUS REAR TEAT PLACEMENT	-0.0143	10.4456
GUE ANGULARITY	AUS ANGULARITY	0.2243	12.3200

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country2=GBR

	c	c	f			
	a	o	o			
	n	u	r	a	b	t
b	t	n	t	v	v	c
r	r	t	r	a	a	o
e	a	r	a	l	l	r
e	i	y	i	u	u	r
d	t	2	t	e	e	2

GUE FEET AND LEGS	GBR OVERALL FEET & LEG	0.7464	3.9025
GUE MAMMARY SYSTEM	GBR OVERALL UDDER SCORE	-1.6025	4.8392
GUE STATURE	GBR STATURE	-6.6985	5.4974
GUE CHEST WIDTH	GBR CHEST WIDTH	-0.5077	3.9364
GUE BODY DEPTH	GBR BODY DEPTH	-2.7290	4.1383
GUE PIN WIDTH	GBR RUMP WIDTH	-1.9749	4.4596
GUE RUMP ANGLE	GBR RUMP ANGLE	0.1928	3.8309
GUE FOOT ANGLE	GBR FOOT ANGLE	0.3822	3.8734
GUE REAR LEGS SIDE VIEW	GBR REAR LEG SET	-0.6383	3.6553
GUE UDDER DEPTH	GBR UDDER DEPTH	-0.9390	3.8004
GUE MEDIAN SUSPENSORY	GBR MEDIAN SUSPENSORY	-2.6101	3.7750
GUE FORE ATTACHMENT	GBR FORE UDDER	-0.4726	4.4883
GUE TEAT PLACEMENT	GBR FRONT TEAT PLACEMENT	-1.3725	4.3782
GUE TEAT LENGTH	GBR TEAT LENGTH	-1.4155	2.5013
GUE REAR ATTACHMENT HEIGHT	GBR REAR UDDER HEIGHT	-3.9667	3.0456
GUE ANGULARITY	GBR ANGULARITY	-5.5912	4.8474

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Conversion Factors For Type. Source = INTERBULL MACE 1908
Converted Canadian Proof = A + (B* Foreign Proof)
Converted Proof Reliability = TCORR2*Foreign Reliability

country2=USA

	c	c	f			
	a	o	o			
	n	u	r	a	b	t
b	t	n	t	v	v	c
r	r	t	r	a	a	o
e	a	r	a	l	l	r
e	i	y	i	u	u	r
d	t	2	t	e	e	2

GUE CONFORMATION	USA PTA TYPE (FINAL SCORE)	1.2559	5.8575	0.66
GUE FEET AND LEGS	USA OVERALL FEET & LEG	1.1030	5.0232	
GUE MAMMARY SYSTEM	USA OVERALL UDDER SCORE	1.1253	9.8977	
GUE STATURE	USA STATURE	0.0710	2.4648	
GUE CHEST WIDTH	USA STRENGTH	1.2748	4.8138	
GUE BODY DEPTH	USA BODY DEPTH	0.9807	3.3448	
GUE PIN WIDTH	USA THURL WIDTH	0.8545	4.4391	
GUE RUMP ANGLE	USA RUMP ANGLE	0.3139	3.8408	
GUE FOOT ANGLE	USA FOOT ANGLE	1.1829	8.1584	
GUE REAR LEGS SIDE VIEW	USA REAR LEGS - SIDE VIEW	-1.1153	7.6944	
GUE REAR LEG REAR VIEW	USA REAR LEG REAR VIEW	0.0177	8.9735	
GUE UDDER DEPTH	USA UDDER DEPTH	0.7219	3.7017	
GUE MEDIAN SUSPENSORY	USA UDDER CLEFT	-0.8690	5.2294	
GUE FORE ATTACHMENT	USA FORE UDDER ATTACHMENT	1.1735	4.1980	
GUE FRONT TEAT PLACEMENT	USA FRONT TEAT PLACEMENT	-0.0673	3.8372	
GUE TEAT LENGTH	USA TEAT LENGTH	-0.5350	3.0690	
GUE REAR ATTACHMENT HEIGHT	USA REAR UDDER HEIGHT	-0.7617	3.6288	
GUE REAR TEAT PLACEMENT	USA REAR TEAT PLACEMENT	0.4457	3.7287	
GUE ANGULARITY	USA DAIRY FORM	0.4406	3.7588	

CALCULATION OF FAT% AND PROTEIN% FOR AUGUST 2019

BREED	BMILK	BFAT	BPRT
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AYS	7814	325	264
BSW	8650	366	305
CN	6147	264	217
GUE	6749	313	231
JER	6737	343	259
HOL	10399	407	336
MS	6588	262	220

$$EBVFAT\% = 200 * [(BFAT + EBVFAT * 0.5) / (BMILK + EBVMILK * 0.5) - (BFAT / BMILK)]$$

$$EBVPROT\% = 200 * [(BPRT + EBVPRT * 0.5) / (BMILK + EBVMILK * 0.5) - (BPRT / BMILK)]$$

EXAMPLE:

A HOLSTEIN bull has EBV MILK=+1000, EBVFAT=+50, EBVPROT=+40

$$\begin{aligned}
 EBVFAT\% &= 200 * [(407 + 50 * 0.5) / (10399 + 1000 * 0.5) - (407 / 1E4)] \\
 &= 200 * [(407 + 25) / (10399 + 500) - (0.03914)] \\
 &= 200 * [0.03964 - 0.03914] \\
 &= 200 * 0.00050 \\
 &= 0.10
 \end{aligned}$$

$$\begin{aligned}
 EBVPROT\% &= 200 * [(336 + 40 * 0.5) / (10399 + 1000 * 0.5) - (336 / 1E4)] \\
 &= 200 * [(336 + 20) / (10399 + 500) - (0.03231)] \\
 &= 200 * [0.03266 - 0.03231] \\
 &= 200 * 0.00035 \\
 &= 0.07
 \end{aligned}$$