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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
JER	AUS	392.50	1.2970	9.000	1.6610	9.600	1.3470	0.5041
JER	CHE	-13.16	1.5647	21.690	1.4815	8.009	1.4715	0.7056
JER	DEU	179.61	1.0870	19.818	1.1193	10.429	1.0796	0.7569
JER	DFS	-5789.50	59.0430	-156.000	2.1030	-139.800	1.6310	0.8281
JER	GBR	-330.80	2.9540	2.400	2.2590	-8.500	2.8240	0.6889
JER	IRL	524.50	2.2470	-18.400	3.5610	6.800	1.7700	0.5625
JER	ITA	70.21	0.9690	12.319	0.9106	6.551	0.8264	0.7225
JER	NLD	2235.13	0.8641	41.290	0.9402	56.868	0.8546	0.7744
JER	NZL	550.20	1.4750	15.600	1.3330	15.800	1.3700	0.4761
JER	USA	611.70	0.8630	15.300	0.9710	16.500	0.9020	0.7921
JER	ZAF	188.60	1.4970	3.200	1.6250	4.600	1.4650	0.6724

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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
JER	AUS	98.200	-19.7690	0.7744
JER	CHE	56.661	0.4554	0.7921
JER	DFS	60.900	0.4420	0.8100
JER	GBR	100.575	-0.5015	0.8281
JER	NLD	-45.959	1.5143	0.8100
JER	NZL	99.300	-13.9990	0.7744
JER	USA	186.800	-28.7960	0.7921
JER	ZAF	100.700	-0.2760	0.7744

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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			
JER CONFORMATION		AUS GENERAL APPEARANCE		-6.174	4.4274	0.32
JER FEET AND LEGS		AUS OVERALL FEET & LEG		-41.618	0.3678	

JER MAMMARY SYSTEM	AUS OVERALL UDDER SCORE	-3.601	4.8298
JER STATURE	AUS STATURE	-4.586	10.6715
JER CHEST WIDTH	AUS CHEST WIDTH	1.504	16.5448
JER BODY DEPTH	AUS BODY DEPTH	1.893	11.6010
JER PIN WIDTH	AUS PIN WIDTH	0.033	16.0807
JER RUMP ANGLE	AUS RUMP ANGLE	0.278	13.1619
JER FOOT ANGLE	AUS FOOT ANGLE	-2.930	14.2328
JER REAR LEGS SIDE VIEW	AUS REAR LEG SET	2.592	22.2238
JER REAR LEG REAR VIEW	AUS REAR LEG REAR VIEW	-4.819	10.7277
JER UDDER DEPTH	AUS UDDER DEPTH	-4.920	12.7889
JER MEDIAN SUSPENSORY	AUS MEDIAN SUSPENSORY	0.047	13.1109
JER FORE ATTACHMENT	AUS FORE UDDER	-3.786	10.2431
JER FRONT TEAT PLACEMENT	AUS FRONT TEAT PLACEMENT	-0.734	11.9074
JER TEAT LENGTH	AUS TEAT LENGTH	-0.784	16.4334
JER REAR ATTACHMENT HEIGHT	AUS REAR UDDER HEIGHT	-4.043	15.4370
JER REAR TEAT PLACEMENT	AUS REAR TEAT PLACEMENT	0.151	15.8713
JER ANGULARITY	AUS ANGULARITY	-3.025	11.3277

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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=CHE

	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
JER CONFORMATION	CHE CONFORMATION	-75.153	0.7231	0.79		
JER FEET AND LEGS	CHE OVERALL FEET & LEG	-52.759	0.5012			
JER MAMMARY SYSTEM	CHE OVERALL UDDER SCORE	-56.346	0.5508			
JER STATURE	CHE STATURE	-58.226	0.5543			
JER CHEST WIDTH	CHE CHEST WIDTH	-51.129	0.5099			
JER BODY DEPTH	CHE BODY DEPTH	-36.598	0.3637			
JER PIN WIDTH	CHE RUMP WIDTH	-51.152	0.4903			
JER RUMP ANGLE	CHE RUMP ANGLE	-40.199	0.4261			
JER FOOT ANGLE	CHE FOOT ANGLE	-37.377	0.3547			
JER REAR LEGS SIDE VIEW	CHE REAR LEG SET	-55.366	0.5730			
JER REAR LEG REAR VIEW	CHE REAR LEG REAR VIEW	-44.129	0.4082			
JER UDDER DEPTH	CHE UDDER DEPTH	-52.778	0.5366			
JER MEDIAN SUSPENSORY	CHE MEDIAN SUSPENSORY	-58.672	0.5792			
JER FORE ATTACHMENT	CHE FORE UDDER	-47.554	0.4624			
JER TEAT PLACEMENT	CHE FRONT TEAT PLACEMENT	-58.900	0.5796			
JER TEAT LENGTH	CHE TEAT LENGTH	-46.047	0.4527			
JER REAR ATTACHMENT HEIGHT	CHE REAR UDDER HEIGHT	-52.587	0.5113			
JER REAR TEAT PLACEMENT	CHE REAR TEAT PLACEMENT	-54.485	0.5358			
JER ANGULARITY	CHE ANGULARITY	59.144	-0.6177			

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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=DFS

	c	c	f			
	a	o	o	a	b	t
b	n	u	r	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
JER CONFORMATION	DFS CONFORMATION			-36.636	0.3167	0.58
JER FEET AND LEGS	DFS OVERALL FEET & LEG			-36.085	0.3336	
JER MAMMARY SYSTEM	DFS OVERALL UDDER SCORE			-42.626	0.3944	
JER STATURE	DFS STATURE			-55.858	0.5184	
JER CHEST WIDTH	DFS CHEST WIDTH			-37.505	0.3568	
JER BODY DEPTH	DFS BODY DEPTH			-37.459	0.3473	
JER PIN WIDTH	DFS RUMP WIDTH			-55.381	0.4948	
JER RUMP ANGLE	DFS RUMP ANGLE			-46.572	0.4784	
JER FOOT ANGLE	DFS FOOT ANGLE			-40.246	0.3954	
JER REAR LEGS SIDE VIEW	DFS REAR LEG SET			-41.394	0.4418	
JER REAR LEG REAR VIEW	DFS REAR LEG REAR VIEW			-41.310	0.3667	
JER UDDER DEPTH	DFS UDDER DEPTH			-38.690	0.3903	
JER MEDIAN SUSPENSORY	DFS MEDIAN SUSPENSORY			-47.263	0.4455	
JER FORE ATTACHMENT	DFS FORE UDDER			-38.959	0.3658	
JER TEAT PLACEMENT	DFS FRONT TEAT PLACEMENT			-50.707	0.4755	
JER TEAT LENGTH	DFS TEAT LENGTH			-37.579	0.3722	
JER REAR ATTACHMENT HEIGHT	DFS REAR UDDER HEIGHT			-55.249	0.5368	
JER REAR TEAT PLACEMENT	DFS REAR TEAT PLACEMENT			-51.086	0.4733	
JER ANGULARITY	DFS ANGULARITY			-47.022	0.4485	

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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=GBR

	c	c	f			
	a	o	o	a	b	t
b	n	u	r	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
JER FEET AND LEGS	GBR OVERALL FEET & LEG			-3.201	3.2833	
JER MAMMARY SYSTEM	GBR OVERALL UDDER SCORE			-3.954	4.4194	
JER STATURE	GBR STATURE			-7.560	6.1740	
JER CHEST WIDTH	GBR CHEST WIDTH			-0.181	3.9471	
JER BODY DEPTH	GBR BODY DEPTH			-0.796	3.1537	
JER PIN WIDTH	GBR RUMP WIDTH			-3.559	4.4132	
JER RUMP ANGLE	GBR RUMP ANGLE			-1.384	4.6201	
JER FOOT ANGLE	GBR FOOT ANGLE			-1.683	3.3109	

JER REAR LEGS SIDE VIEW	GBR REAR LEG SET	1.129	2.8723
JER UDDER DEPTH	GBR UDDER DEPTH	-1.147	3.2974
JER MEDIAN SUSPENSORY	GBR MEDIAN SUSPENSORY	-2.512	3.4192
JER FORE ATTACHMENT	GBR FORE UDDER	-1.319	3.2905
JER TEAT PLACEMENT	GBR FRONT TEAT PLACEMENT	-1.681	4.3589
JER TEAT LENGTH	GBR TEAT LENGTH	-1.142	3.8315
JER REAR ATTACHMENT HEIGHT	GBR REAR UDDER HEIGHT	-4.169	4.9413
JER ANGULARITY	GBR ANGULARITY	-6.332	5.3514

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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=ITA

	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

JER CONFORMATION	ITA CONFORMATION	-5.064	6.7625	0.66
JER FEET AND LEGS	ITA OVERALL FEET & LEG	-2.734	4.0212	
JER STATURE	ITA STATURE	-4.469	5.1249	
JER CHEST WIDTH	ITA CHEST WIDTH	0.268	4.1224	
JER BODY DEPTH	ITA BODY DEPTH	0.110	2.9392	
JER PIN WIDTH	ITA RUMP WIDTH	-2.968	3.7270	
JER RUMP ANGLE	ITA RUMP ANGLE	-0.029	3.9676	
JER FOOT ANGLE	ITA FOOT ANGLE	-1.223	2.4052	
JER REAR LEGS SIDE VIEW	ITA REAR LEG SET	1.615	3.3086	
JER REAR LEG REAR VIEW	ITA REAR LEG REAR VIEW	-2.603	4.9405	
JER UDDER DEPTH	ITA UDDER DEPTH	-2.661	3.4224	
JER MEDIAN SUSPENSORY	ITA MEDIAN SUSPENSORY	-1.497	3.1389	
JER FORE ATTACHMENT	ITA FORE UDDER	-3.715	3.2017	
JER TEAT PLACEMENT	ITA FRONT TEAT PLACEMENT	-3.284	3.4286	
JER TEAT LENGTH	ITA TEAT LENGTH	-0.596	3.1996	
JER REAR ATTACHMENT HEIGHT	ITA REAR UDDER HEIGHT	-2.800	4.1685	
JER ANGULARITY	ITA ANGULARITY	-2.645	4.8336	

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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=NLD

	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 d	i t	y 2	i t	u e	u e	r 2
JER CONFORMATION		NLD CONFORMATION		-164.464	1.8016	0.61
JER FEET AND LEGS		NLD OVERALL FEET & LEG		-87.094	0.7480	
JER MAMMARY SYSTEM		NLD OVERALL UDDER SCORE		-121.626	1.2778	
JER STATURE		NLD STATURE		-95.484	1.3017	
JER CHEST WIDTH		NLD CHEST WIDTH		-119.981	1.5237	
JER BODY DEPTH		NLD BODY DEPTH		-130.654	1.5718	
JER PIN WIDTH		NLD RUMP WIDTH		-107.899	1.3327	
JER RUMP ANGLE		NLD RUMP ANGLE		-110.388	1.1673	
JER FOOT ANGLE		NLD FOOT ANGLE		-94.722	1.0031	
JER REAR LEGS SIDE VIEW		NLD REAR LEG SET		-158.513	1.5532	
JER REAR LEG REAR VIEW		NLD REAR LEG REAR VIEW		-116.166	1.0122	
JER UDDER DEPTH		NLD UDDER DEPTH		-104.287	1.1646	
JER MEDIAN SUSPENSORY		NLD MEDIAN SUSPENSORY		-103.170	1.0612	
JER FORE ATTACHMENT		NLD FORE UDDER		-99.096	1.0123	
JER TEAT PLACEMENT		NLD FRONT TEAT PLACEMENT		-115.934	1.1663	
JER TEAT LENGTH		NLD TEAT LENGTH		-122.831	1.1687	
JER REAR ATTACHMENT HEIGHT		NLD REAR UDDER HEIGHT		-120.174	1.2174	
JER REAR TEAT PLACEMENT		NLD REAR TEAT PLACEMENT		-133.661	1.3799	
JER ANGULARITY		NLD ANGULARITY		-133.476	1.4940	

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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=NZL

b r e e d	c n t r a i t	c u n t y 2	f o r e i g n t	a v e r a g e	b v a r i a n c e	t c o r r e c t i o n
JER CONFORMATION		NZL OVERALL CONFORMATION		-10.373	11.7718	0.35
JER MAMMARY SYSTEM		NZL OVERALL UDDER SCORE		-10.742	10.7725	
JER STATURE		NZL STATURE		4.020	15.2916	
JER CHEST WIDTH		NZL CHEST WIDTH		6.347	12.5369	
JER BODY DEPTH		NZL BODY DEPTH		4.090	10.6599	
JER PIN WIDTH		NZL RUMP WIDTH		4.155	18.4969	
JER RUMP ANGLE		NZL RUMP ANGLE		1.172	17.4176	
JER REAR LEGS SIDE VIEW		NZL REAR LEG SET		0.172	34.4314	
JER MEDIAN SUSPENSORY		NZL MEDIAN SUSPENSORY		-4.450	10.1810	
JER FORE ATTACHMENT		NZL FORE UDDER		-6.621	9.9558	
JER FRONT TEAT PLACEMENT		NZL FRONT TEAT PLACEMENT		-5.273	19.6122	
JER REAR ATTACHMENT HEIGHT		NZL REAR UDDER HEIGHT		-9.638	13.0937	
JER REAR TEAT PLACEMENT		NZL REAR TEAT PLACEMENT		-2.277	14.9395	

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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	a	b	t
b	n	u	r	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
JER CONFORMATION		USA PTA TYPE (FINAL SCORE)		-4.550	5.4677	0.62
JER FEET AND LEGS		USA OVERALL FEET & LEG		-2.501	5.6763	
JER MAMMARY SYSTEM		USA OVERALL UDDER SCORE		-3.768	9.1144	
JER STATURE		USA STATURE		-1.883	4.8481	
JER CHEST WIDTH		USA STRENGTH		-0.774	7.3848	
JER BODY DEPTH		USA BODY DEPTH		0.322	4.9390	
JER PIN WIDTH		USA THURL WIDTH		-0.191	7.1516	
JER RUMP ANGLE		USA RUMP ANGLE		0.581	5.0459	
JER FOOT ANGLE		USA FOOT ANGLE		-2.208	7.1929	
JER REAR LEGS SIDE VIEW		USA REAR LEGS - SIDE VIEW		1.341	8.0336	
JER REAR LEG REAR VIEW		USA REAR LEG REAR VIEW		-2.186	-7.5003	
JER UDDER DEPTH		USA UDDER DEPTH		-3.753	3.4081	
JER MEDIAN SUSPENSORY		USA UDDER CLEFT		-0.313	7.0678	
JER FORE ATTACHMENT		USA FORE UDDER ATTACHMENT		-3.772	4.2532	
JER FRONT TEAT PLACEMENT		USA FRONT TEAT PLACEMENT		-1.228	5.5760	
JER TEAT LENGTH		USA TEAT LENGTH		-0.364	6.0438	
JER REAR ATTACHMENT HEIGHT		USA REAR UDDER HEIGHT		-2.491	5.4144	
JER REAR TEAT PLACEMENT		USA REAR TEAT PLACEMENT		-0.670	4.3028	
JER ANGULARITY		USA DAIRY FORM		-1.279	6.1960	

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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=ZAF

	c	c	f			
	a	o	o	a	b	t
b	n	u	r	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
JER STATURE		ZAF STATURE		-66.875	0.6221	
JER CHEST WIDTH		ZAF CHEST WIDTH		-65.030	0.6406	
JER BODY DEPTH		ZAF BODY DEPTH		-44.845	0.4513	
JER PIN WIDTH		ZAF RUMP WIDTH		-57.670	0.5624	
JER RUMP ANGLE		ZAF RUMP ANGLE		-57.725	0.5787	
JER FOOT ANGLE		ZAF FOOT ANGLE		-41.268	0.3934	
JER REAR LEGS SIDE VIEW		ZAF REAR LEG SET		-33.967	0.3565	
JER REAR LEG REAR VIEW		ZAF REAR LEG REAR VIEW		-35.084	0.3152	
JER UDDER DEPTH		ZAF UDDER DEPTH		-46.729	0.4421	

JER MEDIAN SUSPENSORY	ZAF MEDIAN SUSPENSORY	-50.504	0.5002
JER FORE ATTACHMENT	ZAF FORE UDDER	-45.060	0.4173
JER TEAT PLACEMENT	ZAF FRONT TEAT PLACEMENT	-57.830	0.5652
JER TEAT LENGTH	ZAF TEAT LENGTH	-48.769	0.4865
JER REAR ATTACHMENT HEIGHT	ZAF REAR UDDER HEIGHT	-77.882	0.7312
JER REAR TEAT PLACEMENT	ZAF REAR TEAT PLACEMENT	-62.658	0.6211
JER ANGULARITY	ZAF ANGULARITY	-55.884	0.5379

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

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

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