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 Conversion Factors For Production Traits. Source: INTERBULL 1912  
 Converted Canadian Proof = A + (B\* Foreign Proof)  
 Converted Proof Reliability = PCORR2\*Foreign Reliability

breed	country2	amilk	bmilk	afat	bfat	aprot	bprot	pcorr2
JER	AUS	390.20	1.2910	9.200	1.6630	9.800	1.3300	0.4900
JER	CHE	-6.64	1.5585	22.206	1.4464	7.856	1.4653	0.7056
JER	DEU	174.77	1.0791	19.827	1.1297	10.369	1.0799	0.7744
JER	DFS	-5741.80	58.8240	-154.900	2.1060	-138.600	1.6290	0.8281
JER	GBR	-326.10	2.7510	2.900	2.1910	-8.400	2.7250	0.6889
JER	IRL	462.70	2.1800	-17.700	3.4940	5.800	1.8410	0.5476
JER	ITA	63.87	0.9670	12.251	0.9113	6.248	0.8303	0.7396
JER	NLD	2210.08	0.8503	40.688	0.9141	55.882	0.8357	0.7569
JER	NZL	519.30	1.4470	16.200	1.3460	15.500	1.3950	0.4761
JER	USA	605.50	0.8550	14.800	0.9640	16.200	0.8950	0.7921
JER	ZAF	186.50	1.4860	2.900	1.6240	4.600	1.4540	0.6724

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 Conversion Factors For SCS Traits. Source: INTERBULL 1912  
 Converted Canadian Proof = A + (B\* Foreign Proof)  
 Converted Proof Reliability = SCORR2\*Foreign Reliability

breed	country2	a	b	scorr2
JER	AUS	98.100	-19.6750	0.7744
JER	CHE	56.790	0.4528	0.7921
JER	DFS	60.600	0.4440	0.8100
JER	GBR	100.700	-0.5100	0.8281
JER	NLD	-43.573	1.4899	0.8100
JER	NZL	99.300	-13.9770	0.7744
JER	USA	188.100	-29.2200	0.7921
JER	ZAF	100.700	-0.2750	0.7744

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 Conversion Factors For Type. Source = INTERBULL MACE 1912  
 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	t
b	t	n	t		a	c
r	r	t	r		v	
e	a	r	a		a	o
e	i	y	i		l	r
d	t	2	t		u	r
					e	2

  

JER CONFORMATION	AUS GENERAL APPEARANCE	-6.030	4.4292	0.32
JER FEET AND LEGS	AUS OVERALL FEET & LEG	-43.465	0.3870	

JER MAMMARY SYSTEM	AUS OVERALL UDDER SCORE	-5.850	5.0052
JER STATURE	AUS STATURE	-4.639	10.7831
JER CHEST WIDTH	AUS CHEST WIDTH	1.609	16.2418
JER BODY DEPTH	AUS BODY DEPTH	1.542	12.1915
JER PIN WIDTH	AUS PIN WIDTH	0.215	15.1707
JER RUMP ANGLE	AUS RUMP ANGLE	0.630	12.4012
JER FOOT ANGLE	AUS FOOT ANGLE	-3.070	13.9192
JER REAR LEGS SIDE VIEW	AUS REAR LEG SET	2.621	22.0195
JER REAR LEG REAR VIEW	AUS REAR LEG REAR VIEW	-4.669	11.2804
JER UDDER DEPTH	AUS UDDER DEPTH	-5.205	12.4284
JER MEDIAN SUSPENSORY	AUS MEDIAN SUSPENSORY	0.107	12.9313
JER FORE ATTACHMENT	AUS FORE UDDER	-5.276	10.0950
JER FRONT TEAT PLACEMENT	AUS FRONT TEAT PLACEMENT	-0.682	11.5298
JER TEAT LENGTH	AUS TEAT LENGTH	-0.561	16.5963
JER REAR ATTACHMENT HEIGHT	AUS REAR UDDER HEIGHT	-4.261	15.5228
JER REAR TEAT PLACEMENT	AUS REAR TEAT PLACEMENT	0.197	15.6828
JER ANGULARITY	AUS ANGULARITY	-3.345	12.7327

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Conversion Factors For Type. Source = INTERBULL MACE 1912  
Converted Canadian Proof = A + (B\* Foreign Proof)  
Converted Proof Reliability = TCORR2\*Foreign Reliability

country2=CHE

	c	c	f			
	a	o	o	a	b	t
b	n	u	r	v	v	c
r	t	n	t	a	a	r
e	r	t	r	l	l	r
e	a	r	a	u	u	r
d	i	y	i	e	e	2
	t	2	t			
JER CONFORMATION	CHE CONFORMATION	-72.591	0.6974	0.81		
JER FEET AND LEGS	CHE OVERALL FEET & LEG	-52.458	0.4980			
JER MAMMARY SYSTEM	CHE OVERALL UDDER SCORE	-55.672	0.5432			
JER STATURE	CHE STATURE	-58.394	0.5551			
JER CHEST WIDTH	CHE CHEST WIDTH	-49.634	0.4955			
JER BODY DEPTH	CHE BODY DEPTH	-36.753	0.3662			
JER PIN WIDTH	CHE RUMP WIDTH	-50.454	0.4843			
JER RUMP ANGLE	CHE RUMP ANGLE	-40.430	0.4277			
JER FOOT ANGLE	CHE FOOT ANGLE	-37.769	0.3582			
JER REAR LEGS SIDE VIEW	CHE REAR LEG SET	-55.431	0.5734			
JER REAR LEG REAR VIEW	CHE REAR LEG REAR VIEW	-42.693	0.3953			
JER UDDER DEPTH	CHE UDDER DEPTH	-52.537	0.5335			
JER MEDIAN SUSPENSORY	CHE MEDIAN SUSPENSORY	-60.675	0.5988			
JER FORE ATTACHMENT	CHE FORE UDDER	-47.088	0.4561			
JER TEAT PLACEMENT	CHE FRONT TEAT PLACEMENT	-59.463	0.5848			
JER TEAT LENGTH	CHE TEAT LENGTH	-45.916	0.4510			
JER REAR ATTACHMENT HEIGHT	CHE REAR UDDER HEIGHT	-52.514	0.5109			
JER REAR TEAT PLACEMENT	CHE REAR TEAT PLACEMENT	-55.251	0.5432			
JER ANGULARITY	CHE ANGULARITY	58.937	-0.6143			

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Conversion Factors For Type. Source = INTERBULL MACE 1912

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			-36.642	0.3185	0.58
JER FEET AND LEGS	DFS OVERALL FEET & LEG			-36.136	0.3343	
JER MAMMARY SYSTEM	DFS OVERALL UDDER SCORE			-42.568	0.3943	
JER STATURE	DFS STATURE			-56.405	0.5229	
JER CHEST WIDTH	DFS CHEST WIDTH			-37.510	0.3575	
JER BODY DEPTH	DFS BODY DEPTH			-37.413	0.3478	
JER PIN WIDTH	DFS RUMP WIDTH			-54.397	0.4884	
JER RUMP ANGLE	DFS RUMP ANGLE			-47.047	0.4825	
JER FOOT ANGLE	DFS FOOT ANGLE			-40.879	0.4019	
JER REAR LEGS SIDE VIEW	DFS REAR LEG SET			-41.337	0.4417	
JER REAR LEG REAR VIEW	DFS REAR LEG REAR VIEW			-41.123	0.3651	
JER UDDER DEPTH	DFS UDDER DEPTH			-38.958	0.3927	
JER MEDIAN SUSPENSORY	DFS MEDIAN SUSPENSORY			-48.155	0.4530	
JER FORE ATTACHMENT	DFS FORE UDDER			-39.300	0.3689	
JER TEAT PLACEMENT	DFS FRONT TEAT PLACEMENT			-50.856	0.4774	
JER TEAT LENGTH	DFS TEAT LENGTH			-37.566	0.3710	
JER REAR ATTACHMENT HEIGHT	DFS REAR UDDER HEIGHT			-55.050	0.5353	
JER REAR TEAT PLACEMENT	DFS REAR TEAT PLACEMENT			-51.277	0.4753	
JER ANGULARITY	DFS ANGULARITY			-47.305	0.4533	

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 Conversion Factors For Type. Source = INTERBULL MACE 1912  
 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	t	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			-3.151	3.2908	
JER MAMMARY SYSTEM	GBR OVERALL UDDER SCORE			-3.942	4.4337	
JER STATURE	GBR STATURE			-7.646	6.1695	
JER CHEST WIDTH	GBR CHEST WIDTH			-0.235	3.9503	
JER BODY DEPTH	GBR BODY DEPTH			-0.764	3.1697	
JER PIN WIDTH	GBR RUMP WIDTH			-3.517	4.3299	
JER RUMP ANGLE	GBR RUMP ANGLE			-1.520	4.6705	
JER FOOT ANGLE	GBR FOOT ANGLE			-1.659	3.3505	

JER REAR LEGS SIDE VIEW	GBR REAR LEG SET	1.115	2.8803
JER UDDER DEPTH	GBR UDDER DEPTH	-1.139	3.3171
JER MEDIAN SUSPENSORY	GBR MEDIAN SUSPENSORY	-2.631	3.4598
JER FORE ATTACHMENT	GBR FORE UDDER	-1.337	3.3040
JER TEAT PLACEMENT	GBR FRONT TEAT PLACEMENT	-1.651	4.3750
JER TEAT LENGTH	GBR TEAT LENGTH	-1.125	3.8348
JER REAR ATTACHMENT HEIGHT	GBR REAR UDDER HEIGHT	-4.140	4.9199
JER ANGULARITY	GBR ANGULARITY	-6.372	5.4644

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Conversion Factors For Type. Source = INTERBULL MACE 1912  
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	-5.108	6.7200	0.66
JER FEET AND LEGS	ITA OVERALL FEET & LEG	-2.732	3.9732	
JER STATURE	ITA STATURE	-4.608	5.1733	
JER CHEST WIDTH	ITA CHEST WIDTH	0.277	4.0781	
JER BODY DEPTH	ITA BODY DEPTH	0.184	2.9565	
JER PIN WIDTH	ITA RUMP WIDTH	-2.968	3.6633	
JER RUMP ANGLE	ITA RUMP ANGLE	-0.067	4.0003	
JER FOOT ANGLE	ITA FOOT ANGLE	-1.240	2.4285	
JER REAR LEGS SIDE VIEW	ITA REAR LEG SET	1.631	3.3090	
JER REAR LEG REAR VIEW	ITA REAR LEG REAR VIEW	-2.421	4.9581	
JER UDDER DEPTH	ITA UDDER DEPTH	-2.718	3.4510	
JER MEDIAN SUSPENSORY	ITA MEDIAN SUSPENSORY	-1.596	3.2077	
JER FORE ATTACHMENT	ITA FORE UDDER	-3.793	3.2231	
JER TEAT PLACEMENT	ITA FRONT TEAT PLACEMENT	-3.315	3.4289	
JER TEAT LENGTH	ITA TEAT LENGTH	-0.552	3.1982	
JER REAR ATTACHMENT HEIGHT	ITA REAR UDDER HEIGHT	-2.744	4.1655	
JER ANGULARITY	ITA ANGULARITY	-2.569	4.8227	

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Conversion Factors For Type. Source = INTERBULL MACE 1912  
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		-147.287	1.6020	0.59
JER FEET AND LEGS		NLD OVERALL FEET & LEG		-88.757	0.7643	
JER MAMMARY SYSTEM		NLD OVERALL UDDER SCORE		-122.714	1.2927	
JER STATURE		NLD STATURE		-91.418	1.2384	
JER CHEST WIDTH		NLD CHEST WIDTH		-112.401	1.4181	
JER BODY DEPTH		NLD BODY DEPTH		-114.439	1.3709	
JER PIN WIDTH		NLD RUMP WIDTH		-106.434	1.3127	
JER RUMP ANGLE		NLD RUMP ANGLE		-109.734	1.1597	
JER FOOT ANGLE		NLD FOOT ANGLE		-99.152	1.0520	
JER REAR LEGS SIDE VIEW		NLD REAR LEG SET		-155.490	1.5248	
JER REAR LEG REAR VIEW		NLD REAR LEG REAR VIEW		-119.233	1.0405	
JER UDDER DEPTH		NLD UDDER DEPTH		-107.518	1.2014	
JER MEDIAN SUSPENSORY		NLD MEDIAN SUSPENSORY		-104.293	1.0725	
JER FORE ATTACHMENT		NLD FORE UDDER		-102.045	1.0428	
JER TEAT PLACEMENT		NLD FRONT TEAT PLACEMENT		-116.462	1.1731	
JER TEAT LENGTH		NLD TEAT LENGTH		-124.338	1.1833	
JER REAR ATTACHMENT HEIGHT		NLD REAR UDDER HEIGHT		-119.008	1.2065	
JER REAR TEAT PLACEMENT		NLD REAR TEAT PLACEMENT		-130.762	1.3485	
JER ANGULARITY		NLD ANGULARITY		-108.662	1.2048	

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Conversion Factors For Type. Source = INTERBULL MACE 1912  
Converted Canadian Proof = A + (B\* Foreign Proof)  
Converted Proof Reliability = TCORR2\*Foreign Reliability

country2=NZL

b r e e d	c a n t r y 2	c o u n t r 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		-10.363	11.6598	0.35
JER MAMMARY SYSTEM		NZL OVERALL UDDER SCORE		-10.753	10.7578	
JER STATURE		NZL STATURE		4.076	15.3914	
JER CHEST WIDTH		NZL CHEST WIDTH		6.289	12.4496	
JER BODY DEPTH		NZL BODY DEPTH		4.228	10.7168	
JER PIN WIDTH		NZL RUMP WIDTH		4.089	18.0809	
JER RUMP ANGLE		NZL RUMP ANGLE		1.132	17.5132	
JER REAR LEGS SIDE VIEW		NZL REAR LEG SET		0.134	34.4849	
JER MEDIAN SUSPENSORY		NZL MEDIAN SUSPENSORY		-4.583	10.4023	
JER FORE ATTACHMENT		NZL FORE UDDER		-6.809	9.9824	
JER FRONT TEAT PLACEMENT		NZL FRONT TEAT PLACEMENT		-5.247	19.7260	
JER REAR ATTACHMENT HEIGHT		NZL REAR UDDER HEIGHT		-9.659	13.0690	
JER REAR TEAT PLACEMENT		NZL REAR TEAT PLACEMENT		-2.362	14.9675	

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Conversion Factors For Type. Source = INTERBULL MACE 1912  
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)		-4.667	5.4532	0.62
JER FEET AND LEGS		USA OVERALL FEET & LEG		-2.503	5.6214	
JER MAMMARY SYSTEM		USA OVERALL UDDER SCORE		-3.836	9.0948	
JER STATURE		USA STATURE		-2.056	4.8426	
JER CHEST WIDTH		USA STRENGTH		-0.806	7.3392	
JER BODY DEPTH		USA BODY DEPTH		0.350	4.9513	
JER PIN WIDTH		USA THURL WIDTH		-0.310	6.9670	
JER RUMP ANGLE		USA RUMP ANGLE		0.523	5.0894	
JER FOOT ANGLE		USA FOOT ANGLE		-2.223	7.3139	
JER REAR LEGS SIDE VIEW		USA REAR LEGS - SIDE VIEW		1.369	8.0310	
JER REAR LEG REAR VIEW		USA REAR LEG REAR VIEW		-2.164	-7.3223	
JER UDDER DEPTH		USA UDDER DEPTH		-3.841	3.4243	
JER MEDIAN SUSPENSORY		USA UDDER CLEFT		-0.298	7.1317	
JER FORE ATTACHMENT		USA FORE UDDER ATTACHMENT		-3.853	4.2863	
JER FRONT TEAT PLACEMENT		USA FRONT TEAT PLACEMENT		-1.302	5.6089	
JER TEAT LENGTH		USA TEAT LENGTH		-0.331	5.9852	
JER REAR ATTACHMENT HEIGHT		USA REAR UDDER HEIGHT		-2.509	5.3826	
JER REAR TEAT PLACEMENT		USA REAR TEAT PLACEMENT		-0.736	4.2968	
JER ANGULARITY		USA DAIRY FORM		-1.326	6.2015	

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Conversion Factors For Type. Source = INTERBULL MACE 1912

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		-67.389	0.6261	
JER CHEST WIDTH		ZAF CHEST WIDTH		-64.276	0.6327	
JER BODY DEPTH		ZAF BODY DEPTH		-45.577	0.4587	
JER PIN WIDTH		ZAF RUMP WIDTH		-56.869	0.5546	
JER RUMP ANGLE		ZAF RUMP ANGLE		-58.428	0.5851	
JER FOOT ANGLE		ZAF FOOT ANGLE		-42.118	0.4014	
JER REAR LEGS SIDE VIEW		ZAF REAR LEG SET		-33.932	0.3569	
JER REAR LEG REAR VIEW		ZAF REAR LEG REAR VIEW		-33.263	0.2984	
JER UDDER DEPTH		ZAF UDDER DEPTH		-47.249	0.4471	

JER MEDIAN SUSPENSORY	ZAF MEDIAN SUSPENSORY	-51.022	0.5044
JER FORE ATTACHMENT	ZAF FORE UDDER	-45.601	0.4219
JER TEAT PLACEMENT	ZAF FRONT TEAT PLACEMENT	-58.480	0.5713
JER TEAT LENGTH	ZAF TEAT LENGTH	-48.301	0.4819
JER REAR ATTACHMENT HEIGHT	ZAF REAR UDDER HEIGHT	-77.828	0.7308
JER REAR TEAT PLACEMENT	ZAF REAR TEAT PLACEMENT	-63.202	0.6262
JER ANGULARITY	ZAF ANGULARITY	-56.135	0.5414

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CALCULATION OF FAT% AND PROTEIN% FOR DECEMBER 2019

BREED	BMILK	BFAT	BPRT
AYS	7815	325	264
BSW	8623	365	304
CN	6050	262	214
GUE	6678	309	230
JER	6768	345	260
HOL	10402	408	336
MS	6633	264	221

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

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

EXAMPLE:

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

$$\begin{aligned}
 EBVFAT\% &= 200 * [ (408 + 50 * 0.5) / (10402 + 1000 * 0.5) - (408 / 1E4) ] \\
 &= 200 * [ (408 + 25) / (10402 + 500) - (0.03922) ] \\
 &= 200 * [ 0.03972 - 0.03922 ] \\
 &= 200 * 0.00049 \\
 &= 0.10
 \end{aligned}$$

$$\begin{aligned}
 EBVPROT\% &= 200 * [ (336 + 40 * 0.5) / (10402 + 1000 * 0.5) - (336 / 1E4) ] \\
 &= 200 * [ (336 + 20) / (10402 + 500) - (0.03230) ] \\
 &= 200 * [ 0.03265 - 0.03230 ] \\
 &= 200 * 0.00035 \\
 &= 0.07
 \end{aligned}$$