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 Conversion Factors For Production Traits. Source: INTERBULL 1904
 Converted Canadian Proof = A + (B* Foreign Proof)
 Converted Proof Reliability = PCORR2*Foreign Reliability

breed	country2	amilk	bmilk	afat	bfat	aprot	bprot	pcorr2
JER	AUS	391.00	1.3050	8.400	1.6360	9.300	1.3040	0.5041
JER	CHE	-27.31	1.5880	21.100	1.4913	7.284	1.4996	0.7056
JER	DEU	173.77	1.0779	19.422	1.1105	9.849	1.0574	0.7569
JER	DFS	-5760.70	58.4590	-161.100	2.1360	-141.000	1.6260	0.8100
JER	GBR	-292.00	2.7850	3.200	2.2220	-8.200	2.7170	0.6889
JER	IRL	498.70	2.2460	-18.400	3.4420	5.600	1.7780	0.5625
JER	ITA	54.26	0.9568	11.783	0.9112	5.761	0.8230	0.7225
JER	NLD	2245.69	0.8645	40.894	0.9365	56.237	0.8478	0.7744
JER	NZL	515.90	1.4530	13.900	1.3090	14.100	1.3590	0.4761
JER	USA	614.20	0.8630	15.200	0.9710	16.400	0.8980	0.7921
JER	ZAF	189.00	1.4840	2.400	1.6640	4.500	1.4570	0.6724

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 Conversion Factors For SCS Traits. Source: INTERBULL 1904
 Converted Canadian Proof = A + (B* Foreign Proof)
 Converted Proof Reliability = SCORR2*Foreign Reliability

breed	country2	a	b	scorr2
JER	AUS	98.200	-19.7900	0.7744
JER	CHE	54.651	0.4774	0.7921
JER	DFS	60.100	0.4510	0.8100
JER	GBR	100.647	-0.5115	0.8281
JER	NLD	-50.128	1.5589	0.8100
JER	NZL	99.500	-14.2790	0.7744
JER	USA	189.000	-29.4910	0.7921
JER	ZAF	101.135	-0.2591	0.7744

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 Conversion Factors For Type. Source = INTERBULL MACE 1904
 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			-6.246	4.6865	0.32
JER FEET AND LEGS		AUS OVERALL FEET & LEG			-44.128	0.3924	

JER MAMMARY SYSTEM	AUS OVERALL UDDER SCORE	-3.561	4.7858
JER STATURE	AUS STATURE	-4.570	11.1292
JER CHEST WIDTH	AUS CHEST WIDTH	1.446	16.4770
JER BODY DEPTH	AUS BODY DEPTH	1.925	11.7928
JER PIN WIDTH	AUS PIN WIDTH	-0.019	15.9779
JER RUMP ANGLE	AUS RUMP ANGLE	0.292	13.1473
JER FOOT ANGLE	AUS FOOT ANGLE	-2.245	15.1713
JER REAR LEGS SIDE VIEW	AUS REAR LEG SET	2.450	22.3163
JER REAR LEG REAR VIEW	AUS REAR LEG REAR VIEW	-5.319	11.4223
JER UDDER DEPTH	AUS UDDER DEPTH	-4.958	12.8188
JER MEDIAN SUSPENSORY	AUS MEDIAN SUSPENSORY	0.192	12.9124
JER FORE ATTACHMENT	AUS FORE UDDER	-3.756	10.0307
JER FRONT TEAT PLACEMENT	AUS FRONT TEAT PLACEMENT	-0.691	11.6631
JER TEAT LENGTH	AUS TEAT LENGTH	-0.806	16.4020
JER REAR ATTACHMENT HEIGHT	AUS REAR UDDER HEIGHT	-4.301	15.2263
JER REAR TEAT PLACEMENT	AUS REAR TEAT PLACEMENT	0.267	15.3822
JER ANGULARITY	AUS ANGULARITY	-3.533	12.9514

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Conversion Factors For Type. Source = INTERBULL MACE 1904
Converted Canadian Proof = A + (B* Foreign Proof)
Converted Proof Reliability = TCORR2*Foreign Reliability

country2=CHE

	c	c	f			
	a	o	o		b	t
	n	u	r	a	v	c
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	-74.780	0.7196	0.79		
JER FEET AND LEGS	CHE OVERALL FEET & LEG	-54.942	0.5232			
JER MAMMARY SYSTEM	CHE OVERALL UDDER SCORE	-54.608	0.5333			
JER STATURE	CHE STATURE	-59.314	0.5637			
JER CHEST WIDTH	CHE CHEST WIDTH	-54.046	0.5392			
JER BODY DEPTH	CHE BODY DEPTH	-37.738	0.3753			
JER PIN WIDTH	CHE RUMP WIDTH	-52.696	0.5050			
JER RUMP ANGLE	CHE RUMP ANGLE	-40.121	0.4245			
JER FOOT ANGLE	CHE FOOT ANGLE	-38.022	0.3614			
JER REAR LEGS SIDE VIEW	CHE REAR LEG SET	-55.226	0.5722			
JER REAR LEG REAR VIEW	CHE REAR LEG REAR VIEW	-44.243	0.4092			
JER UDDER DEPTH	CHE UDDER DEPTH	-53.507	0.5442			
JER MEDIAN SUSPENSORY	CHE MEDIAN SUSPENSORY	-58.796	0.5803			
JER FORE ATTACHMENT	CHE FORE UDDER	-46.542	0.4535			
JER TEAT PLACEMENT	CHE FRONT TEAT PLACEMENT	-59.932	0.5882			
JER TEAT LENGTH	CHE TEAT LENGTH	-46.445	0.4570			
JER REAR ATTACHMENT HEIGHT	CHE REAR UDDER HEIGHT	-51.895	0.5046			
JER REAR TEAT PLACEMENT	CHE REAR TEAT PLACEMENT	-53.831	0.5286			
JER ANGULARITY	CHE ANGULARITY	61.029	-0.6383			

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Conversion Factors For Type. Source = INTERBULL MACE 1904

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			-36.988	0.3187	0.58
JER FEET AND LEGS	DFS OVERALL FEET & LEG			-36.325	0.3356	
JER MAMMARY SYSTEM	DFS OVERALL UDDER SCORE			-42.484	0.3926	
JER STATURE	DFS STATURE			-56.455	0.5223	
JER CHEST WIDTH	DFS CHEST WIDTH			-37.896	0.3602	
JER BODY DEPTH	DFS BODY DEPTH			-38.125	0.3541	
JER PIN WIDTH	DFS RUMP WIDTH			-56.162	0.4966	
JER RUMP ANGLE	DFS RUMP ANGLE			-46.507	0.4784	
JER FOOT ANGLE	DFS FOOT ANGLE			-40.284	0.3971	
JER REAR LEGS SIDE VIEW	DFS REAR LEG SET			-41.718	0.4444	
JER REAR LEG REAR VIEW	DFS REAR LEG REAR VIEW			-42.034	0.3693	
JER UDDER DEPTH	DFS UDDER DEPTH			-38.754	0.3909	
JER MEDIAN SUSPENSORY	DFS MEDIAN SUSPENSORY			-46.879	0.4404	
JER FORE ATTACHMENT	DFS FORE UDDER			-38.631	0.3626	
JER TEAT PLACEMENT	DFS FRONT TEAT PLACEMENT			-51.622	0.4793	
JER TEAT LENGTH	DFS TEAT LENGTH			-37.730	0.3750	
JER REAR ATTACHMENT HEIGHT	DFS REAR UDDER HEIGHT			-54.929	0.5358	
JER REAR TEAT PLACEMENT	DFS REAR TEAT PLACEMENT			-51.830	0.4776	
JER ANGULARITY	DFS ANGULARITY			-47.568	0.4505	

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 Conversion Factors For Type. Source = INTERBULL MACE 1904
 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			-3.235	3.3189	
JER MAMMARY SYSTEM	GBR OVERALL UDDER SCORE			-3.932	4.4293	
JER STATURE	GBR STATURE			-7.496	6.1977	
JER CHEST WIDTH	GBR CHEST WIDTH			-0.133	3.9903	
JER BODY DEPTH	GBR BODY DEPTH			-0.761	3.1987	
JER PIN WIDTH	GBR RUMP WIDTH			-3.580	4.4007	
JER RUMP ANGLE	GBR RUMP ANGLE			-1.381	4.5384	
JER FOOT ANGLE	GBR FOOT ANGLE			-1.547	3.3197	

JER REAR LEGS SIDE VIEW	GBR REAR LEG SET	1.096	2.8689
JER UDDER DEPTH	GBR UDDER DEPTH	-1.144	3.2747
JER MEDIAN SUSPENSORY	GBR MEDIAN SUSPENSORY	-2.455	3.4155
JER FORE ATTACHMENT	GBR FORE UDDER	-1.339	3.2438
JER TEAT PLACEMENT	GBR FRONT TEAT PLACEMENT	-1.785	4.3565
JER TEAT LENGTH	GBR TEAT LENGTH	-1.065	3.8433
JER REAR ATTACHMENT HEIGHT	GBR REAR UDDER HEIGHT	-4.184	4.9088
JER ANGULARITY	GBR ANGULARITY	-6.412	5.4040

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Conversion Factors For Type. Source = INTERBULL MACE 1904
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	-5.065	6.7976	0.66
JER FEET AND LEGS	ITA OVERALL FEET & LEG	-2.775	4.0183	
JER STATURE	ITA STATURE	-4.473	5.1799	
JER CHEST WIDTH	ITA CHEST WIDTH	0.261	4.2031	
JER BODY DEPTH	ITA BODY DEPTH	0.052	2.9969	
JER PIN WIDTH	ITA RUMP WIDTH	-3.048	3.7392	
JER RUMP ANGLE	ITA RUMP ANGLE	-0.046	3.9725	
JER FOOT ANGLE	ITA FOOT ANGLE	-1.136	2.4292	
JER REAR LEGS SIDE VIEW	ITA REAR LEG SET	1.543	3.2995	
JER REAR LEG REAR VIEW	ITA REAR LEG REAR VIEW	-2.654	5.0038	
JER UDDER DEPTH	ITA UDDER DEPTH	-2.587	3.4363	
JER MEDIAN SUSPENSORY	ITA MEDIAN SUSPENSORY	-1.470	3.1529	
JER FORE ATTACHMENT	ITA FORE UDDER	-3.652	3.1640	
JER TEAT PLACEMENT	ITA FRONT TEAT PLACEMENT	-3.407	3.4122	
JER TEAT LENGTH	ITA TEAT LENGTH	-0.486	3.2216	
JER REAR ATTACHMENT HEIGHT	ITA REAR UDDER HEIGHT	-2.753	4.1059	
JER ANGULARITY	ITA ANGULARITY	-2.638	4.8715	

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Conversion Factors For Type. Source = INTERBULL MACE 1904
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		-168.539	1.8475	0.61
JER FEET AND LEGS		NLD OVERALL FEET & LEG		-88.816	0.7646	
JER MAMMARY SYSTEM		NLD OVERALL UDDER SCORE		-120.395	1.2658	
JER STATURE		NLD STATURE		-96.767	1.3184	
JER CHEST WIDTH		NLD CHEST WIDTH		-120.745	1.5326	
JER BODY DEPTH		NLD BODY DEPTH		-127.730	1.5403	
JER PIN WIDTH		NLD RUMP WIDTH		-114.528	1.4218	
JER RUMP ANGLE		NLD RUMP ANGLE		-106.343	1.1247	
JER FOOT ANGLE		NLD FOOT ANGLE		-89.783	0.9533	
JER REAR LEGS SIDE VIEW		NLD REAR LEG SET		-154.555	1.5161	
JER REAR LEG REAR VIEW		NLD REAR LEG REAR VIEW		-118.017	1.0278	
JER UDDER DEPTH		NLD UDDER DEPTH		-104.463	1.1669	
JER MEDIAN SUSPENSORY		NLD MEDIAN SUSPENSORY		-99.427	1.0247	
JER FORE ATTACHMENT		NLD FORE UDDER		-98.511	1.0057	
JER TEAT PLACEMENT		NLD FRONT TEAT PLACEMENT		-118.589	1.1963	
JER TEAT LENGTH		NLD TEAT LENGTH		-119.191	1.1350	
JER REAR ATTACHMENT HEIGHT		NLD REAR UDDER HEIGHT		-119.063	1.2086	
JER REAR TEAT PLACEMENT		NLD REAR TEAT PLACEMENT		-133.069	1.3770	
JER ANGULARITY		NLD ANGULARITY		-125.340	1.4098	

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Conversion Factors For Type. Source = INTERBULL MACE 1904
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 a n c e	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		-10.478	11.8230	0.35
JER MAMMARY SYSTEM		NZL OVERALL UDDER SCORE		-10.688	10.7981	
JER STATURE		NZL STATURE		4.160	15.4574	
JER CHEST WIDTH		NZL CHEST WIDTH		6.483	12.6425	
JER BODY DEPTH		NZL BODY DEPTH		4.127	10.8355	
JER PIN WIDTH		NZL RUMP WIDTH		4.097	18.5679	
JER RUMP ANGLE		NZL RUMP ANGLE		1.200	17.4267	
JER REAR LEGS SIDE VIEW		NZL REAR LEG SET		0.128	34.5929	
JER MEDIAN SUSPENSORY		NZL MEDIAN SUSPENSORY		-4.408	10.1472	
JER FORE ATTACHMENT		NZL FORE UDDER		-6.623	9.9095	
JER FRONT TEAT PLACEMENT		NZL FRONT TEAT PLACEMENT		-5.393	19.6983	
JER REAR ATTACHMENT HEIGHT		NZL REAR UDDER HEIGHT		-9.565	13.1039	
JER REAR TEAT PLACEMENT		NZL REAR TEAT PLACEMENT		-2.280	15.0176	

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Conversion Factors For Type. Source = INTERBULL MACE 1904
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)	-4.577	5.5202	0.62	
JER FEET AND LEGS	USA	OVERALL FEET & LEG	-2.548	5.7258		
JER MAMMARY SYSTEM	USA	OVERALL UDDER SCORE	-3.740	9.1859		
JER STATURE	USA	STATURE	-1.867	4.8761		
JER CHEST WIDTH	USA	STRENGTH	-0.778	7.4555		
JER BODY DEPTH	USA	BODY DEPTH	0.377	5.0512		
JER PIN WIDTH	USA	THURL WIDTH	-0.172	7.2187		
JER RUMP ANGLE	USA	RUMP ANGLE	0.588	5.0522		
JER FOOT ANGLE	USA	FOOT ANGLE	-2.187	7.2553		
JER REAR LEGS SIDE VIEW	USA	REAR LEGS - SIDE VIEW	1.342	8.1632		
JER REAR LEG REAR VIEW	USA	REAR LEG REAR VIEW	-2.325	-7.6220		
JER UDDER DEPTH	USA	UDDER DEPTH	-3.684	3.4499		
JER MEDIAN SUSPENSORY	USA	UDDER CLEFT	-0.303	7.0615		
JER FORE ATTACHMENT	USA	FORE UDDER ATTACHMENT	-3.719	4.2616		
JER FRONT TEAT PLACEMENT	USA	FRONT TEAT PLACEMENT	-1.305	5.6145		
JER TEAT LENGTH	USA	TEAT LENGTH	-0.290	6.0406		
JER REAR ATTACHMENT HEIGHT	USA	REAR UDDER HEIGHT	-2.473	5.4035		
JER REAR TEAT PLACEMENT	USA	REAR TEAT PLACEMENT	-0.848	4.3439		
JER ANGULARITY	USA	DAIRY FORM	-1.212	6.2871		

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Conversion Factors For Type. Source = INTERBULL MACE 1904

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	-67.737	0.6309		
JER CHEST WIDTH	ZAF	CHEST WIDTH	-65.384	0.6442		
JER BODY DEPTH	ZAF	BODY DEPTH	-45.845	0.4616		
JER PIN WIDTH	ZAF	RUMP WIDTH	-57.132	0.5567		
JER RUMP ANGLE	ZAF	RUMP ANGLE	-58.324	0.5842		
JER FOOT ANGLE	ZAF	FOOT ANGLE	-41.433	0.3952		
JER REAR LEGS SIDE VIEW	ZAF	REAR LEG SET	-34.018	0.3567		
JER REAR LEG REAR VIEW	ZAF	REAR LEG REAR VIEW	-35.442	0.3173		
JER UDDER DEPTH	ZAF	UDDER DEPTH	-46.838	0.4432		

JER MEDIAN SUSPENSORY	ZAF MEDIAN SUSPENSORY	-49.978	0.4959
JER FORE ATTACHMENT	ZAF FORE UDDER	-44.983	0.4168
JER TEAT PLACEMENT	ZAF FRONT TEAT PLACEMENT	-58.081	0.5674
JER TEAT LENGTH	ZAF TEAT LENGTH	-48.782	0.4873
JER REAR ATTACHMENT HEIGHT	ZAF REAR UDDER HEIGHT	-74.411	0.6980
JER REAR TEAT PLACEMENT	ZAF REAR TEAT PLACEMENT	-61.783	0.6125
JER ANGULARITY	ZAF ANGULARITY	-55.725	0.5362

CALCULATION OF FAT% AND PROTEIN% FOR APRIL 2019

BREED	BMILK	BFAT	BPRT
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AYS	7813	325	264
BSW	8633	366	305
CN	5913	254	210
GUE	6904	324	238
JER	6735	343	259
HOL	10397	407	336
MS	6689	264	222

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

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

EXAMPLE:

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

$$\begin{aligned}
 EBVFAT\% &= 200 * [(407 + 50 * 0.5) / (10397 + 1000 * 0.5) - (407 / 1E4)] \\
 &= 200 * [(407 + 25) / (10397 + 500) - (0.03915)] \\
 &= 200 * [0.03964 - 0.03915] \\
 &= 200 * 0.00050 \\
 &= 0.10
 \end{aligned}$$

$$\begin{aligned}
 EBVPROT\% &= 200 * [(336 + 40 * 0.5) / (10397 + 1000 * 0.5) - (336 / 1E4)] \\
 &= 200 * [(336 + 20) / (10397 + 500) - (0.03232)] \\
 &= 200 * [0.03267 - 0.03232] \\
 &= 200 * 0.00035 \\
 &= 0.07
 \end{aligned}$$