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 Conversion Factors For Production Traits. Source: INTERBULL 1804
 Converted Canadian Proof = A + (B* Foreign Proof)
 Converted Proof Reliability = PCORR2*Foreign Reliability

breed	country2	amilk	bmilk	afat	bfat	aprot	bprot	pcorr2
MSH	AUS	741.50	0.8670	56.400	1.3040	24.000	0.7640	0.6084
MSH	CAN	578.50	0.5930	39.200	0.7500	15.600	0.4480	0.7921
MSH	DEU	835.50	0.6260	68.300	0.8120	27.700	0.4800	0.7921
MSH	DFS	-2551.40	37.0000	-112.300	1.8640	-49.400	0.8590	0.7921
MSH	EST	805.70	0.8430	52.200	1.1050	25.300	0.6590	0.7921
MSH	GBR	286.30	1.5000	23.300	2.2390	10.000	1.3480	0.7921
MSH	IRL	1025.37	2.2250	57.967	2.7061	29.647	1.6597	0.6889
MSH	LTU	124.20	1.1810	27.000	1.2780	9.200	0.9590	0.7921
MSH	LVA	626.40	1.3380	48.600	1.6350	20.700	1.1250	0.7921
MSH	NLD	1485.14	0.5222	80.808	0.6668	41.492	0.3598	0.7921
MSH	NOR	-2092.70	31.0000	-98.900	1.6000	-42.300	0.7500	0.7921
MSH	NZL	526.80	1.2250	65.400	1.4540	24.400	1.0360	0.5776
MSH	USA	382.80	0.6540	24.700	0.8870	10.600	0.5110	0.8281
MSH	ZAF	424.43	0.7032	26.484	1.0175	11.331	0.5814	0.7921

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 Conversion Factors For SCS Traits. Source: INTERBULL 1804
 Converted Canadian Proof = A + (B* Foreign Proof)
 Converted Proof Reliability = SCORR2*Foreign Reliability

breed	country2	a	b	scorr2
MSH	AUS	3.500	-0.0050	0.8649
MSH	CAN	0.800	0.6840	0.8836
MSH	DEU	4.100	-0.0120	0.8836
MSH	DFS	4.100	-0.0130	0.8836
MSH	EST	4.300	-0.0140	0.8836
MSH	GBR	2.900	0.0140	0.8836
MSH	LTU	3.000	0.4740	0.8649
MSH	LVA	3.000	0.3790	0.8649
MSH	NLD	-1.582	0.0444	0.8836
MSH	NOR	4.100	-0.0120	0.8649
MSH	NZL	3.000	0.4010	0.8100
MSH	USA	0.800	0.7060	0.8100
MSH	ZAF	2.929	0.0067	0.8649

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 Conversion Factors For Type. Source = INTERBULL MACE 1804
 Converted Canadian Proof = A + (B* Foreign Proof)
 Converted Proof Reliability = TCORR2*Foreign Reliability

country2=AUS

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
MSH	CONFORMATION	AUS	CONFORMATION	-88.050	0.9219	0.52
MSH	FEET AND LEGS	AUS	OVERALL FEET & LEG	-62.910	0.6417	
MSH	MAMMARY SYSTEM	AUS	OVERALL UDDER SCORE	-69.746	0.7464	
MSH	STATURE	AUS	STATURE	-81.876	0.8189	
MSH	CHEST WIDTH	AUS	CHEST WIDTH	-81.102	0.8272	
MSH	BODY DEPTH	AUS	BODY DEPTH	-66.448	0.6746	
MSH	PIN WIDTH	AUS	RUMP WIDTH	-87.223	0.8775	
MSH	RUMP ANGLE	AUS	RUMP ANGLE	-74.163	0.7215	
MSH	FOOT ANGLE	AUS	FOOT ANGLE	-87.090	0.8744	
MSH	REAR LEGS SIDE VIEW	AUS	REAR LEG SET	-68.073	0.6883	
MSH	REAR LEG REAR VIEW	AUS	REAR LEG REAR VIEW	-68.792	0.7030	
MSH	UDDER DEPTH	AUS	UDDER DEPTH	-51.641	0.5209	
MSH	MEDIAN SUSPENSORY	AUS	MEDIAN SUSPENSORY	-60.955	0.6216	
MSH	FORE ATTACHMENT	AUS	FORE UDDER	-88.338	0.9088	
MSH	TEAT PLACEMENT	AUS	FRONT TEAT PLACEMENT	-90.994	0.9516	
MSH	TEAT LENGTH	AUS	TEAT LENGTH	-88.008	0.8801	
MSH	REAR ATTACHMENT HEIGHT	AUS	REAR UDDER HEIGHT	-75.207	0.7765	
MSH	REAR TEAT PLACEMENT	AUS	REAR TEAT PLACEMENT	-82.064	0.8323	
MSH	ANGULARITY	AUS	ANGULARITY	-63.195	0.6682	

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 Conversion Factors For Type. Source = INTERBULL MACE 1804
 Converted Canadian Proof = A + (B* Foreign Proof)
 Converted Proof Reliability = TCORR2*Foreign Reliability

country2=CAN

b	c	c	f	a	b	t
r	a	o	r	v	v	c
e	n	u	r	l	a	o
e	t	r	a	l	l	r
d	i	y	i	u	u	r
	t	2	t	e	e	2
MSH	CONFORMATION	CAN	CONFORMATION	8.774	0.8388	0.74
MSH	FEET AND LEGS	CAN	OVERALL FEET & LEG	5.588	0.8646	
MSH	MAMMARY SYSTEM	CAN	OVERALL UDDER SCORE	10.878	0.9992	
MSH	STATURE	CAN	STATURE	4.332	0.8097	
MSH	CHEST WIDTH	CAN	CHEST WIDTH	-0.761	0.7593	
MSH	BODY DEPTH	CAN	BODY DEPTH	1.252	0.7109	
MSH	PIN WIDTH	CAN	RUMP WIDTH	2.402	0.8761	
MSH	RUMP ANGLE	CAN	RUMP ANGLE	-0.620	0.9498	
MSH	FOOT ANGLE	CAN	FOOT ANGLE	2.071	0.9402	
MSH	REAR LEGS SIDE VIEW	CAN	REAR LEG SET	-1.185	0.8473	
MSH	REAR LEG REAR VIEW	CAN	REAR LEG REAR VIEW	2.967	0.7107	
MSH	UDDER DEPTH	CAN	UDDER DEPTH	4.282	0.8490	
MSH	MEDIAN SUSPENSORY	CAN	MEDIAN SUSPENSORY	4.341	0.8172	
MSH	FORE ATTACHMENT	CAN	FORE UDDER	7.080	1.0096	
MSH	TEAT PLACEMENT	CAN	FRONT TEAT PLACEMENT	5.292	1.1264	
MSH	TEAT LENGTH	CAN	TEAT LENGTH	-1.554	1.2903	

MSH	REAR ATTACHMENT HEIGHT	CAN	REAR UDDER HEIGHT	9.858	0.8877
MSH	REAR TEAT PLACEMENT	CAN	REAR TEAT PLACEMENT	4.185	0.9373
MSH	ANGULARITY	CAN	ANGULARITY	8.626	0.7623

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Conversion Factors For Type. Source = INTERBULL MACE 1804
Converted Canadian Proof = A + (B* Foreign Proof)
Converted Proof Reliability = TCORR2*Foreign Reliability

country2=DEU

	c	c	f			
	a	o	o		b	t
b	n	u	r	a	v	c
r	t	n	t	v	v	
e	r	t	r	a	a	o
e	a	r	a	l	l	r
d	i	y	i	u	u	r
	t	2	t	e	e	2
MSH	FEET AND LEGS	DEU	OVERALL FEET & LEG	-26.200	0.3281	
MSH	MAMMARY SYSTEM	DEU	OVERALL UDDER SCORE	-29.483	0.3886	
MSH	STATURE	DEU	STATURE	-32.394	0.3747	
MSH	CHEST WIDTH	DEU	CHEST WIDTH	-41.969	0.4412	
MSH	BODY DEPTH	DEU	BODY DEPTH	-41.717	0.4569	
MSH	PIN WIDTH	DEU	RUMP WIDTH	-49.318	0.5361	
MSH	RUMP ANGLE	DEU	RUMP ANGLE	-64.255	0.6017	
MSH	FOOT ANGLE	DEU	FOOT ANGLE	-35.844	0.4150	
MSH	REAR LEGS SIDE VIEW	DEU	REAR LEG SET	-65.430	0.6055	
MSH	REAR LEG REAR VIEW	DEU	REAR LEG REAR VIEW	-42.615	0.4779	
MSH	UDDER DEPTH	DEU	UDDER DEPTH	-35.280	0.3907	
MSH	MEDIAN SUSPENSORY	DEU	MEDIAN SUSPENSORY	-35.889	0.3895	
MSH	FORE ATTACHMENT	DEU	FORE UDDER	-46.756	0.5098	
MSH	TEAT PLACEMENT	DEU	FRONT TEAT PLACEMENT	-42.021	0.4628	
MSH	TEAT LENGTH	DEU	TEAT LENGTH	-50.924	0.4767	
MSH	REAR ATTACHMENT HEIGHT	DEU	REAR UDDER HEIGHT	-29.985	0.3709	
MSH	REAR TEAT PLACEMENT	DEU	REAR TEAT PLACEMENT	-38.767	0.3967	
MSH	ANGULARITY	DEU	ANGULARITY	-32.997	0.4269	

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Conversion Factors For Type. Source = INTERBULL MACE 1804
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Converted Proof Reliability = TCORR2*Foreign Reliability

country2=DFS

	c	c	f			
	a	o	o		b	t
b	n	u	r	a	v	c
r	t	n	t	v	v	
e	r	t	r	a	a	o
e	a	r	a	l	l	r
d	i	y	i	u	u	r
	t	2	t	e	e	2
MSH	CONFORMATION	DFS	CONFORMATION	-52.322	0.5710	0.74

MSH	FEET AND LEGS	DFS	OVERALL FEET & LEG	-36.373	0.4015
MSH	MAMMARY SYSTEM	DFS	OVERALL UDDER SCORE	-46.432	0.5403
MSH	STATURE	DFS	STATURE	-55.445	0.5730
MSH	CHEST WIDTH	DFS	CHEST WIDTH	-42.010	0.4359
MSH	BODY DEPTH	DFS	BODY DEPTH	-39.106	0.3850
MSH	PIN WIDTH	DFS	RUMP WIDTH	-48.503	0.5013
MSH	RUMP ANGLE	DFS	RUMP ANGLE	-54.714	0.5450
MSH	FOOT ANGLE	DFS	FOOT ANGLE	-64.798	0.6799
MSH	REAR LEGS SIDE VIEW	DFS	REAR LEG SET	-59.442	0.6015
MSH	REAR LEG REAR VIEW	DFS	REAR LEG REAR VIEW	-41.738	0.4447
MSH	UDDER DEPTH	DFS	UDDER DEPTH	-38.686	0.4220
MSH	MEDIAN SUSPENSORY	DFS	MEDIAN SUSPENSORY	-35.884	0.3734
MSH	FORE ATTACHMENT	DFS	FORE UDDER	-43.891	0.4937
MSH	TEAT PLACEMENT	DFS	FRONT TEAT PLACEMENT	-45.300	0.5084
MSH	TEAT LENGTH	DFS	TEAT LENGTH	-64.632	0.6111
MSH	REAR ATTACHMENT HEIGHT	DFS	REAR UDDER HEIGHT	-43.426	0.4785
MSH	REAR TEAT PLACEMENT	DFS	REAR TEAT PLACEMENT	-42.509	0.4446
MSH	ANGULARITY	DFS	ANGULARITY	-53.204	0.5676

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Converted Canadian Proof = A + (B* Foreign Proof)
Converted Proof Reliability = TCORR2*Foreign Reliability

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
MSH	FEET AND LEGS	GBR	OVERALL FEET & LEG	3.839	3.4884	
MSH	MAMMARY SYSTEM	GBR	OVERALL UDDER SCORE	9.928	4.1023	
MSH	STATURE	GBR	STATURE	1.903	4.2577	
MSH	CHEST WIDTH	GBR	CHEST WIDTH	3.254	3.6927	
MSH	BODY DEPTH	GBR	BODY DEPTH	3.394	3.2875	
MSH	PIN WIDTH	GBR	RUMP WIDTH	1.609	4.1986	
MSH	RUMP ANGLE	GBR	RUMP ANGLE	-2.693	3.6795	
MSH	FOOT ANGLE	GBR	FOOT ANGLE	-0.043	4.1334	
MSH	REAR LEGS SIDE VIEW	GBR	REAR LEG SET	-2.127	3.6911	
MSH	UDDER DEPTH	GBR	UDDER DEPTH	3.864	2.5703	
MSH	MEDIAN SUSPENSORY	GBR	MEDIAN SUSPENSORY	3.802	2.7350	
MSH	FORE ATTACHMENT	GBR	FORE UDDER	7.987	3.5910	
MSH	TEAT PLACEMENT	GBR	FRONT TEAT PLACEMENT	7.910	4.0923	
MSH	TEAT LENGTH	GBR	TEAT LENGTH	-2.715	4.7024	
MSH	REAR ATTACHMENT HEIGHT	GBR	REAR UDDER HEIGHT	7.599	4.0109	
MSH	ANGULARITY	GBR	ANGULARITY	4.942	4.3553	

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Conversion Factors For Type. Source = INTERBULL MACE 1804
Converted Canadian Proof = A + (B* Foreign Proof)
Converted Proof Reliability = TCORR2*Foreign Reliability

country2=NLD

	c	c	f			
	a	o	o		a	b
b	n	u	r		v	v
r	t	n	t		a	a
e	r	r	r		l	l
e	a	y	i		u	u
d	i	2	t		e	e
	t					2
MSH	CONFORMATION	NLD	CONFORMATION	-139.683	1.5715	0.74
MSH	FEET AND LEGS	NLD	OVERALL FEET & LEG	-64.014	0.7010	
MSH	MAMMARY SYSTEM	NLD	OVERALL UDDER SCORE	-118.293	1.3604	
MSH	STATURE	NLD	STATURE	-86.560	0.9962	
MSH	CHEST WIDTH	NLD	CHEST WIDTH	-129.508	1.3898	
MSH	BODY DEPTH	NLD	BODY DEPTH	-95.184	1.0720	
MSH	PIN WIDTH	NLD	RUMP WIDTH	-80.735	0.8956	
MSH	RUMP ANGLE	NLD	RUMP ANGLE	-98.620	0.9687	
MSH	FOOT ANGLE	NLD	FOOT ANGLE	-113.178	1.2087	
MSH	REAR LEGS SIDE VIEW	NLD	REAR LEG SET	-108.890	1.0370	
MSH	REAR LEG REAR VIEW	NLD	REAR LEG REAR VIEW	-82.959	0.8711	
MSH	UDDER DEPTH	NLD	UDDER DEPTH	-92.882	1.0061	
MSH	MEDIAN SUSPENSORY	NLD	MEDIAN SUSPENSORY	-91.557	0.9747	
MSH	FORE ATTACHMENT	NLD	FORE UDDER	-125.009	1.3536	
MSH	TEAT PLACEMENT	NLD	FRONT TEAT PLACEMENT	-131.114	1.4159	
MSH	TEAT LENGTH	NLD	TEAT LENGTH	-114.820	1.1519	
MSH	REAR ATTACHMENT HEIGHT	NLD	REAR UDDER HEIGHT	-85.297	1.0164	
MSH	REAR TEAT PLACEMENT	NLD	REAR TEAT PLACEMENT	-105.663	1.1207	
MSH	ANGULARITY	NLD	ANGULARITY	-90.360	1.0975	

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Conversion Factors For Type. Source = INTERBULL MACE 1804
Converted Canadian Proof = A + (B* Foreign Proof)
Converted Proof Reliability = TCORR2*Foreign Reliability

country2=NOR

	c	c	f			
	a	o	o		a	b
b	n	u	r		v	v
r	t	n	t		a	a
e	r	r	r		l	l
e	a	y	i		u	u
d	i	2	t		e	e
	t					2
MSH	CONFORMATION	NOR	CONFORMATION	-34.269	0.3607	0.74
MSH	FEET AND LEGS	NOR	OVERALL FEET & LEG	-33.331	0.3362	
MSH	MAMMARY SYSTEM	NOR	OVERALL UDDER SCORE	-41.179	0.4415	
MSH	STATURE	NOR	STATURE	-40.166	0.3791	
MSH	BODY DEPTH	NOR	BODY DEPTH	-29.476	0.2872	
MSH	RUMP ANGLE	NOR	RUMP ANGLE	-41.404	0.4239	
MSH	FOOT ANGLE	NOR	FOOT ANGLE	-37.753	0.3830	
MSH	REAR LEGS SIDE VIEW	NOR	REAR LEG SET	-38.721	0.3937	
MSH	REAR LEG REAR VIEW	NOR	REAR LEG REAR VIEW	-30.488	0.3191	
MSH	UDDER DEPTH	NOR	UDDER DEPTH	-35.402	0.3518	

MSH	MEDIAN SUSPENSORY	NOR	MEDIAN SUSPENSORY	-33.816	0.3214
MSH	FORE ATTACHMENT	NOR	FORE UDDER	-37.245	0.3990
MSH	TEAT PLACEMENT	NOR	FRONT TEAT PLACEMENT	-42.302	0.4557
MSH	TEAT LENGTH	NOR	TEAT LENGTH	-51.555	0.4852
MSH	REAR ATTACHMENT HEIGHT	NOR	REAR UDDER HEIGHT	-37.044	0.3692
MSH	REAR TEAT PLACEMENT	NOR	REAR TEAT PLACEMENT	-34.320	0.3639

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Conversion Factors For Type. Source = INTERBULL MACE 1804
Converted Canadian Proof = A + (B* Foreign Proof)
Converted Proof Reliability = TCORR2*Foreign Reliability

country2=NZL

	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
MSH	CONFORMATION	NZL	CONFORMATION	0.943	19.2844	0.61
MSH	MAMMARY SYSTEM	NZL	OVERALL UDDER SCORE	0.890	13.7888	
MSH	STATURE	NZL	STATURE	-6.523	10.1906	
MSH	CHEST WIDTH	NZL	CHEST WIDTH	1.948	15.3481	
MSH	BODY DEPTH	NZL	BODY DEPTH	0.786	12.8135	
MSH	PIN WIDTH	NZL	RUMP WIDTH	-2.191	17.2659	
MSH	RUMP ANGLE	NZL	RUMP ANGLE	-6.028	18.8576	
MSH	REAR LEGS SIDE VIEW	NZL	REAR LEG SET	1.313	44.6431	
MSH	MEDIAN SUSPENSORY	NZL	MEDIAN SUSPENSORY	0.013	15.0248	
MSH	FORE ATTACHMENT	NZL	FORE UDDER	-0.786	17.7895	
MSH	TEAT PLACEMENT	NZL	FRONT TEAT PLACEMENT	-0.009	22.9334	
MSH	REAR ATTACHMENT HEIGHT	NZL	REAR UDDER HEIGHT	3.375	16.3581	
MSH	REAR TEAT PLACEMENT	NZL	REAR TEAT PLACEMENT	-1.552	17.1357	

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Conversion Factors For Type. Source = INTERBULL MACE 1804
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
MSH	CONFORMATION	USA	CONFORMATION	7.053	6.5076	0.74
MSH	FEET AND LEGS	USA	OVERALL FEET & LEG	4.467	4.5782	
MSH	MAMMARY SYSTEM	USA	OVERALL UDDER SCORE	9.629	6.0165	

MSH	STATURE	USA	STATURE	2.450	2.3348
MSH	CHEST WIDTH	USA	CHEST WIDTH	-0.164	4.7727
MSH	BODY DEPTH	USA	BODY DEPTH	1.779	4.1912
MSH	PIN WIDTH	USA	RUMP WIDTH	1.596	4.4764
MSH	RUMP ANGLE	USA	RUMP ANGLE	-1.481	5.1561
MSH	FOOT ANGLE	USA	FOOT ANGLE	0.778	6.8426
MSH	REAR LEGS SIDE VIEW	USA	REAR LEG SET	-2.348	7.3490
MSH	REAR LEG REAR VIEW	USA	REAR LEG REAR VIEW	0.501	6.6559
MSH	UDDER DEPTH	USA	UDDER DEPTH	4.072	4.3114
MSH	MEDIAN SUSPENSORY	USA	MEDIAN SUSPENSORY	1.617	4.6166
MSH	FORE ATTACHMENT	USA	FORE UDDER	5.990	5.0383
MSH	TEAT PLACEMENT	USA	FRONT TEAT PLACEMENT	5.401	5.0312
MSH	TEAT LENGTH	USA	TEAT LENGTH	-2.338	5.6305
MSH	REAR ATTACHMENT HEIGHT	USA	REAR UDDER HEIGHT	9.141	4.3530
MSH	REAR TEAT PLACEMENT	USA	REAR TEAT PLACEMENT	3.920	4.9157
MSH	ANGULARITY	USA	ANGULARITY	7.739	5.1455

CALCULATION OF FAT% AND PROTEIN% FOR APRIL 2018

BREED	BMILK	BFAT	BPRT
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AYS	7805	325	264
BSW	8505	360	301
CN	5915	253	208
GUE	6546	306	226
JER	6660	336	255
HOL	10222	399	329
MS	6812	269	227

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

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

EXAMPLE:

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

$$EBVFAT\% = 200 * [(399+50*.5)/(10222+1000*.5)-(399/1E4)]$$

$$= 200 * [(399+25)/(10222+500)-(0.03903)]$$

$$= 200 * [0.03954 - 0.03903]$$

$$= 200 * 0.00051$$

$$= 0.10$$

$$EBVPROT\% = 200 * [(329+40*.5)/(10222+1000*.5)-(329/1E4)]$$

$$= 200 * [(329+20)/(10222+500)-(0.03219)]$$

$$= 200 * [0.03255 - 0.03219]$$

$$= 200 * 0.00036$$

$$= 0.07$$