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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
AYS	AUS	297.80	1.1890	20.800	1.3350	16.800	1.2740	0.4761
AYS	CAM	-550.08	1.2104	-29.534	0.9232	-17.928	1.5318	0.7921
AYS	DEU	449.10	0.8880	34.600	0.8220	24.000	0.8560	0.7569
AYS	DFS	-4476.00	54.0200	-158.700	2.0190	-116.300	1.5830	0.7921
AYS	EST	396.40	1.1430	17.000	1.1370	18.600	1.0780	0.6889
AYS	GBR	-417.40	2.1150	-18.100	2.3560	-11.300	2.3740	0.6889
AYS	IRL	704.74	3.0128	23.814	2.7105	27.485	2.5488	0.5476
AYS	LTU	-539.90	1.5020	-10.500	1.3140	-9.500	1.6340	0.6889
AYS	LVA	146.80	1.8020	13.200	1.7010	10.800	1.9800	0.6724
AYS	NLD	1362.30	0.7400	47.602	0.6971	47.624	0.6123	0.7744
AYS	NOR	-3601.70	42.5670	-143.600	1.6930	-99.500	1.3060	0.7744
AYS	NZL	-51.30	1.6440	26.900	1.4920	15.500	1.7940	0.4761
AYS	USA	-273.20	0.8710	-15.600	0.9050	-9.900	0.8880	0.7921
AYS	ZAF	-63.06	0.8883	-5.388	0.9485	-1.018	0.9046	0.6561

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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
AYS	AUS	3.800	-0.0060	0.7921
AYS	CAM	-0.706	1.2750	0.8836
AYS	DEU	4.700	-0.0160	0.8649
AYS	DFS	4.700	-0.0170	0.8836
AYS	EST	4.800	-0.0170	0.7921
AYS	GBR	3.000	0.0190	0.8649
AYS	LTU	3.100	0.5940	0.8100
AYS	LVA	3.100	0.4930	0.8100
AYS	NLD	-2.922	0.0586	0.8281
AYS	NOR	4.600	-0.0150	0.8464
AYS	NZL	3.200	0.5330	0.7744
AYS	USA	0.100	0.9650	0.8464
AYS	ZAF	3.028	0.0087	0.7921

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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
AYS	CONFORMATION	AUS	CONFORMATION	-74.222	0.6814	0.35
AYS	FEET AND LEGS	AUS	OVERALL FEET & LEG	-39.050	0.3376	
AYS	MAMMARY SYSTEM	AUS	OVERALL UDDER SCORE	-69.567	0.6398	
AYS	STATURE	AUS	STATURE	-90.269	0.8613	
AYS	CHEST WIDTH	AUS	CHEST WIDTH	-76.144	0.7781	
AYS	BODY DEPTH	AUS	BODY DEPTH	-76.498	0.7485	
AYS	PIN WIDTH	AUS	RUMP WIDTH	-89.412	0.8764	
AYS	RUMP ANGLE	AUS	RUMP ANGLE	-72.272	0.7093	
AYS	FOOT ANGLE	AUS	FOOT ANGLE	-60.269	0.5919	
AYS	REAR LEGS SIDE VIEW	AUS	REAR LEG SET	-57.479	0.6172	
AYS	REAR LEG REAR VIEW	AUS	REAR LEG REAR VIEW	-59.962	0.5730	
AYS	UDDER DEPTH	AUS	UDDER DEPTH	-61.841	0.5725	
AYS	MEDIAN SUSPENSORY	AUS	MEDIAN SUSPENSORY	-62.935	0.5958	
AYS	FORE ATTACHMENT	AUS	FORE UDDER	-69.829	0.6530	
AYS	TEAT PLACEMENT	AUS	FRONT TEAT PLACEMENT	-78.301	0.7700	
AYS	TEAT LENGTH	AUS	TEAT LENGTH	-62.892	0.6428	
AYS	REAR ATTACHMENT HEIGHT	AUS	REAR UDDER HEIGHT	-81.392	0.7282	
AYS	REAR TEAT PLACEMENT	AUS	REAR TEAT PLACEMENT	-87.550	0.8428	
AYS	ANGULARITY	AUS	ANGULARITY	-63.889	0.5732	

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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=CAM

b	c	c	f	a	b	t
r	a	o	o	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
AYS	CONFORMATION	CAM	CONFORMATION	-9.216	0.7634	0.74
AYS	FEET AND LEGS	CAM	OVERALL FEET & LEG	-6.103	0.5997	
AYS	MAMMARY SYSTEM	CAM	OVERALL UDDER SCORE	-9.262	0.7326	
AYS	STATURE	CAM	STATURE	-4.366	1.0327	
AYS	CHEST WIDTH	CAM	CHEST WIDTH	0.303	0.8641	
AYS	BODY DEPTH	CAM	BODY DEPTH	-2.776	0.9544	
AYS	PIN WIDTH	CAM	RUMP WIDTH	-2.236	0.8828	
AYS	RUMP ANGLE	CAM	RUMP ANGLE	0.668	0.9442	
AYS	FOOT ANGLE	CAM	FOOT ANGLE	-1.168	0.6147	
AYS	REAR LEGS SIDE VIEW	CAM	REAR LEG SET	3.656	0.7988	
AYS	REAR LEG REAR VIEW	CAM	REAR LEG REAR VIEW	-3.805	0.7453	
AYS	UDDER DEPTH	CAM	UDDER DEPTH	-5.034	1.0461	
AYS	MEDIAN SUSPENSORY	CAM	MEDIAN SUSPENSORY	-4.436	0.7309	
AYS	FORE ATTACHMENT	CAM	FORE UDDER	-6.244	0.6779	
AYS	TEAT PLACEMENT	CAM	FRONT TEAT PLACEMENT	-4.425	0.7283	
AYS	TEAT LENGTH	CAM	TEAT LENGTH	1.270	0.6903	

AYS	REAR ATTACHMENT HEIGHT	CAM	REAR UDDER HEIGHT	-10.611	0.8046
AYS	REAR TEAT PLACEMENT	CAM	REAR TEAT PLACEMENT	-4.300	0.9303
AYS	ANGULARITY	CAM	ANGULARITY	-9.237	0.7122

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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
AYS	FEET AND LEGS	DEU	OVERALL FEET & LEG	-30.738	0.3008	
AYS	MAMMARY SYSTEM	DEU	OVERALL UDDER SCORE	-34.957	0.3337	
AYS	STATURE	DEU	STATURE	-42.590	0.4441	
AYS	CHEST WIDTH	DEU	CHEST WIDTH	-46.603	0.4819	
AYS	BODY DEPTH	DEU	BODY DEPTH	-50.805	0.5221	
AYS	PIN WIDTH	DEU	RUMP WIDTH	-55.100	0.5738	
AYS	RUMP ANGLE	DEU	RUMP ANGLE	-66.103	0.6252	
AYS	FOOT ANGLE	DEU	FOOT ANGLE	-33.268	0.3634	
AYS	REAR LEGS SIDE VIEW	DEU	REAR LEG SET	-63.658	0.6189	
AYS	REAR LEG REAR VIEW	DEU	REAR LEG REAR VIEW	-55.810	0.5756	
AYS	UDDER DEPTH	DEU	UDDER DEPTH	-44.941	0.4406	
AYS	MEDIAN SUSPENSORY	DEU	MEDIAN SUSPENSORY	-43.002	0.4190	
AYS	FORE ATTACHMENT	DEU	FORE UDDER	-48.697	0.4576	
AYS	FRONT TEAT PLACEMENT	DEU	FRONT TEAT PLACEMENT	-39.547	0.3823	
AYS	TEAT LENGTH	DEU	TEAT LENGTH	-35.589	0.3462	
AYS	REAR ATTACHMENT HEIGHT	DEU	REAR UDDER HEIGHT	-40.925	0.3659	
AYS	REAR TEAT PLACEMENT	DEU	REAR TEAT PLACEMENT	-45.604	0.4209	
AYS	ANGULARITY	DEU	ANGULARITY	-45.306	0.4480	

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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
AYS	CONFORMATION	DFS	OVERALL CONFORMATION	-51.679	0.4612	0.58

AYS	FEET AND LEGS	DFS	OVERALL FEET & LEG	-40.337	0.3721
AYS	MAMMARY SYSTEM	DFS	OVERALL UDDER SCORE	-46.455	0.4300
AYS	STATURE	DFS	STATURE	-69.179	0.6709
AYS	CHEST WIDTH	DFS	CHEST WIDTH	-43.750	0.4548
AYS	BODY DEPTH	DFS	BODY DEPTH	-47.032	0.4364
AYS	PIN WIDTH	DFS	RUMP WIDTH	-53.182	0.5258
AYS	RUMP ANGLE	DFS	RUMP ANGLE	-54.645	0.5508
AYS	FOOT ANGLE	DFS	FOOT ANGLE	-51.968	0.5302
AYS	REAR LEGS SIDE VIEW	DFS	REAR LEG SET	-62.703	0.6690
AYS	REAR LEG REAR VIEW	DFS	REAR LEG REAR VIEW	-53.184	0.5200
AYS	UDDER DEPTH	DFS	UDDER DEPTH	-48.674	0.4753
AYS	MEDIAN SUSPENSORY	DFS	MEDIAN SUSPENSORY	-37.073	0.3401
AYS	FORE ATTACHMENT	DFS	FORE UDDER	-42.856	0.4085
AYS	FRONT TEAT PLACEMENT	DFS	FRONT TEAT PLACEMENT	-41.821	0.4153
AYS	TEAT LENGTH	DFS	TEAT LENGTH	-43.635	0.4249
AYS	REAR ATTACHMENT HEIGHT	DFS	REAR UDDER HEIGHT	-56.131	0.4961
AYS	REAR TEAT PLACEMENT	DFS	REAR TEAT PLACEMENT	-47.977	0.4574
AYS	ANGULARITY	DFS	ANGULARITY	-65.951	0.5937

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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
AYS	FEET AND LEGS	GBR	OVERALL FEET & LEG	-3.378	3.0723	
AYS	MAMMARY SYSTEM	GBR	OVERALL UDDER SCORE	-1.731	3.3407	
AYS	STATURE	GBR	STATURE	-2.394	4.8786	
AYS	CHEST WIDTH	GBR	CHEST WIDTH	2.122	3.9615	
AYS	BODY DEPTH	GBR	BODY DEPTH	0.822	3.7349	
AYS	PIN WIDTH	GBR	RUMP WIDTH	-1.017	4.3094	
AYS	RUMP ANGLE	GBR	RUMP ANGLE	-2.051	3.8002	
AYS	FOOT ANGLE	GBR	FOOT ANGLE	-1.359	3.2762	
AYS	REAR LEGS SIDE VIEW	GBR	REAR LEG SET	-0.356	3.8146	
AYS	UDDER DEPTH	GBR	UDDER DEPTH	-0.562	2.9051	
AYS	MEDIAN SUSPENSORY	GBR	MEDIAN SUSPENSORY	-1.290	2.8565	
AYS	FORE ATTACHMENT	GBR	FORE UDDER	-0.045	3.1431	
AYS	TEAT PLACEMENT	GBR	FRONT TEAT PLACEMENT	1.971	3.3486	
AYS	TEAT LENGTH	GBR	TEAT LENGTH	-0.859	3.3752	
AYS	REAR ATTACHMENT HEIGHT	GBR	REAR UDDER HEIGHT	-3.569	4.0181	
AYS	ANGULARITY	GBR	ANGULARITY	-5.618	4.9295	

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

country2=NLD

	c a n n t r e e d	c o u n t r y 2	f o r m a t i o n	a b v v l u e	b v l u e	t c o r r e c t i o n
AYS	CONFORMATION	NLD	CONFORMATION	-122.622	1.2742	0.61
AYS	FEET AND LEGS	NLD	OVERALL FEET & LEG	-53.816	0.5194	
AYS	MAMMARY SYSTEM	NLD	OVERALL UDDER SCORE	-109.247	1.1446	
AYS	STATURE	NLD	STATURE	-105.237	1.1619	
AYS	CHEST WIDTH	NLD	CHEST WIDTH	-153.485	1.6433	
AYS	BODY DEPTH	NLD	BODY DEPTH	-112.438	1.2353	
AYS	PIN WIDTH	NLD	RUMP WIDTH	-88.063	0.9510	
AYS	RUMP ANGLE	NLD	RUMP ANGLE	-100.052	0.9887	
AYS	FOOT ANGLE	NLD	FOOT ANGLE	-92.145	0.9671	
AYS	REAR LEGS SIDE VIEW	NLD	REAR LEG SET	-110.812	1.0877	
AYS	REAR LEG REAR VIEW	NLD	REAR LEG REAR VIEW	-101.204	1.0172	
AYS	UDDER DEPTH	NLD	UDDER DEPTH	-110.576	1.1423	
AYS	MEDIAN SUSPENSORY	NLD	MEDIAN SUSPENSORY	-95.219	0.9656	
AYS	FORE ATTACHMENT	NLD	FORE UDDER	-118.337	1.2075	
AYS	TEAT PLACEMENT	NLD	FRONT TEAT PLACEMENT	-114.401	1.1840	
AYS	TEAT LENGTH	NLD	TEAT LENGTH	-81.393	0.8302	
AYS	REAR ATTACHMENT HEIGHT	NLD	REAR UDDER HEIGHT	-88.241	0.9227	
AYS	REAR TEAT PLACEMENT	NLD	REAR TEAT PLACEMENT	-113.940	1.1608	
AYS	ANGULARITY	NLD	ANGULARITY	-92.978	1.0095	

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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 a n n t r e e d	c o u n t r y 2	f o r m a t i o n	a b v v l u e	b v l u e	t c o r r e c t i o n
AYS	CONFORMATION	NOR	OVERALL CONFORMATION	-39.567	0.3148	0.71
AYS	FEET AND LEGS	NOR	OVERALL FEET & LEG	-34.160	0.2723	
AYS	MAMMARY SYSTEM	NOR	OVERALL UDDER SCORE	-44.391	0.3715	
AYS	STATURE	NOR	STATURE	-50.141	0.4333	
AYS	BODY DEPTH	NOR	BODY DEPTH	-36.391	0.3250	
AYS	RUMP ANGLE	NOR	RUMP ANGLE	-40.835	0.4238	
AYS	FOOT ANGLE	NOR	FOOT ANGLE	-32.053	0.3064	
AYS	REAR LEGS SIDE VIEW	NOR	REAR LEG SET	-35.729	0.4011	
AYS	REAR LEG REAR VIEW	NOR	REAR LEG REAR VIEW	-36.883	0.3407	
AYS	UDDER DEPTH	NOR	UDDER DEPTH	-44.595	0.3916	

AYS	MEDIAN SUSPENSORY	NOR	MEDIAN SUSPENSORY	-35.743	0.2953
AYS	FORE ATTACHMENT	NOR	FORE UDDER	-37.899	0.3316
AYS	FRONT TEAT PLACEMENT	NOR	FRONT TEAT PLACEMENT	-37.446	0.3546
AYS	TEAT LENGTH	NOR	TEAT LENGTH	-35.846	0.3502
AYS	REAR ATTACHMENT HEIGHT	NOR	REAR UDDER HEIGHT	-47.848	0.3670
AYS	REAR TEAT PLACEMENT	NOR	REAR TEAT PLACEMENT	-37.649	0.3498

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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
AYS	CONFORMATION	NZL	OVERALL CONFORMATION	-9.367	13.1474	0.37
AYS	MAMMARY SYSTEM	NZL	OVERALL UDDER SCORE	-9.034	12.9113	
AYS	STATURE	NZL	STATURE	-12.159	10.8181	
AYS	CHEST WIDTH	NZL	CHEST WIDTH	1.191	13.5077	
AYS	BODY DEPTH	NZL	BODY DEPTH	-2.164	12.7853	
AYS	PIN WIDTH	NZL	RUMP WIDTH	-4.705	17.1005	
AYS	RUMP ANGLE	NZL	RUMP ANGLE	-5.365	18.4221	
AYS	REAR LEGS SIDE VIEW	NZL	REAR LEG SET	4.718	37.4807	
AYS	MEDIAN SUSPENSORY	NZL	MEDIAN SUSPENSORY	-4.809	12.5276	
AYS	FORE ATTACHMENT	NZL	FORE UDDER	-7.679	13.7516	
AYS	FRONT TEAT PLACEMENT	NZL	FRONT TEAT PLACEMENT	-4.599	17.4535	
AYS	REAR ATTACHMENT HEIGHT	NZL	REAR UDDER HEIGHT	-8.375	14.8776	
AYS	REAR TEAT PLACEMENT	NZL	REAR TEAT PLACEMENT	-6.239	17.2698	

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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
AYS	CONFORMATION	USA	CONFORMATION	-3.448	5.6096	0.69
AYS	FEET AND LEGS	USA	OVERALL FEET & LEG	-2.902	3.7225	
AYS	MAMMARY SYSTEM	USA	OVERALL UDDER SCORE	-1.471	5.2242	

AYS	STATURE	USA	STATURE	-1.361	2.7683
AYS	CHEST WIDTH	USA	CHEST WIDTH	-0.413	5.3632
AYS	BODY DEPTH	USA	BODY DEPTH	-0.918	4.3596
AYS	PIN WIDTH	USA	RUMP WIDTH	-0.681	4.5819
AYS	RUMP ANGLE	USA	RUMP ANGLE	-0.935	5.3399
AYS	FOOT ANGLE	USA	FOOT ANGLE	-1.086	5.9836
AYS	REAR LEGS SIDE VIEW	USA	REAR LEG SET	0.896	7.8196
AYS	REAR LEG REAR VIEW	USA	REAR LEG REAR VIEW	-3.602	6.4482
AYS	UDDER DEPTH	USA	UDDER DEPTH	-0.504	4.8830
AYS	MEDIAN SUSPENSORY	USA	MEDIAN SUSPENSORY	-2.912	4.5859
AYS	FORE ATTACHMENT	USA	FORE UDDER	-1.432	4.5753
AYS	TEAT PLACEMENT	USA	FRONT TEAT PLACEMENT	-0.330	4.0114
AYS	TEAT LENGTH	USA	TEAT LENGTH	-0.326	4.0591
AYS	REAR ATTACHMENT HEIGHT	USA	REAR UDDER HEIGHT	-1.840	4.3569
AYS	REAR TEAT PLACEMENT	USA	REAR TEAT PLACEMENT	-0.545	4.8254
AYS	ANGULARITY	USA	ANGULARITY	-1.981	5.5794

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

$$\begin{aligned}
 EBVFAT\% &= 200 * [(399+50*0.5)/(10222+1000*0.5)-(399/1E4)] \\
 &= 200 * [(399+25)/(10222+500)-(0.03903)] \\
 &= 200 * [0.03954 - 0.03903] \\
 &= 200 * 0.00051 \\
 &= 0.10
 \end{aligned}$$

$$\begin{aligned}
 EBVPROT\% &= 200 * [(329+40*0.5)/(10222+1000*0.5)-(329/1E4)] \\
 &= 200 * [(329+20)/(10222+500)-(0.03219)] \\
 &= 200 * [0.03255 - 0.03219] \\
 &= 200 * 0.00036 \\
 &= 0.07
 \end{aligned}$$