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 Conversion Factors For Production Traits. Source: INTERBULL 1812  
 Converted Canadian Proof = A + (B\* Foreign Proof)  
 Converted Proof Reliability = PCORR2\*Foreign Reliability

breed	country2	amilk	bmilk	afat	bfat	aprot	bprot	pcorr2
AYS	AUS	336.20	1.1950	21.900	1.3260	18.000	1.2810	0.4761
AYS	CAM	-526.31	1.2131	-29.116	0.9292	-17.477	1.5256	0.7921
AYS	DEU	470.10	0.8830	35.300	0.8340	24.700	0.8500	0.7744
AYS	DFS	-4371.80	53.5310	-154.600	1.9910	-113.200	1.5650	0.7921
AYS	EST	447.70	1.1470	18.600	1.1490	20.000	1.0890	0.6889
AYS	GBR	-382.30	2.0350	-16.500	2.1820	-10.200	2.2570	0.6889
AYS	IRL	725.82	3.0693	24.505	2.5883	28.029	2.5595	0.5476
AYS	LTU	-527.00	1.5520	-8.500	1.2670	-9.100	1.6640	0.6889
AYS	LVA	175.80	1.7740	14.200	1.6830	11.500	1.9200	0.6724
AYS	NLD	1318.55	0.6857	48.646	0.7233	47.086	0.5865	0.7744
AYS	NOR	-3473.80	41.8780	-141.400	1.6890	-99.100	1.3220	0.7744
AYS	NZL	-7.20	1.6670	28.300	1.5100	16.600	1.7910	0.4761
AYS	USA	-256.20	0.8790	-14.800	0.9030	-9.000	0.8980	0.7921
AYS	ZAF	-45.00	0.8902	-4.689	0.9437	-0.455	0.9039	0.6561

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 Conversion Factors For SCS Traits. Source: INTERBULL 1812  
 Converted Canadian Proof = A + (B\* Foreign Proof)  
 Converted Proof Reliability = SCORR2\*Foreign Reliability

breed	country2	a	b	scorr2
AYS	AUS	82.100	0.1550	0.7921
AYS	CAM	8.498	0.8927	0.8836
AYS	DEU	61.700	0.3750	0.8649
AYS	DFS	61.700	0.3960	0.8836
AYS	EST	58.700	0.4050	0.7921
AYS	GBR	99.100	-0.4440	0.8649
AYS	LTU	97.300	-13.2320	0.8100
AYS	LVA	96.800	-11.0330	0.8100
AYS	NLD	-30.272	1.2849	0.8281
AYS	NOR	63.300	0.3610	0.8464
AYS	NZL	94.700	-12.0700	0.7744
AYS	USA	164.300	-21.6190	0.8464
AYS	ZAF	100.174	0.1948	0.7921

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 Conversion Factors For Type. Source = INTERBULL MACE 1812  
 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	-73.200	0.6788	0.35
AYS	FEET AND LEGS	AUS	OVERALL FEET & LEG	-38.732	0.3348	
AYS	MAMMARY SYSTEM	AUS	OVERALL UDDER SCORE	-71.708	0.6610	
AYS	STATURE	AUS	STATURE	-90.042	0.8602	
AYS	CHEST WIDTH	AUS	CHEST WIDTH	-77.848	0.7975	
AYS	BODY DEPTH	AUS	BODY DEPTH	-74.710	0.7341	
AYS	PIN WIDTH	AUS	RUMP WIDTH	-89.644	0.8788	
AYS	RUMP ANGLE	AUS	RUMP ANGLE	-71.662	0.7036	
AYS	FOOT ANGLE	AUS	FOOT ANGLE	-60.611	0.5939	
AYS	REAR LEGS SIDE VIEW	AUS	REAR LEG SET	-59.955	0.6397	
AYS	REAR LEG REAR VIEW	AUS	REAR LEG REAR VIEW	-60.603	0.5822	
AYS	UDDER DEPTH	AUS	UDDER DEPTH	-61.300	0.5664	
AYS	MEDIAN SUSPENSORY	AUS	MEDIAN SUSPENSORY	-63.920	0.6092	
AYS	FORE ATTACHMENT	AUS	FORE UDDER	-72.871	0.6847	
AYS	TEAT PLACEMENT	AUS	FRONT TEAT PLACEMENT	-76.997	0.7568	
AYS	TEAT LENGTH	AUS	TEAT LENGTH	-63.548	0.6482	
AYS	REAR ATTACHMENT HEIGHT	AUS	REAR UDDER HEIGHT	-82.166	0.7390	
AYS	REAR TEAT PLACEMENT	AUS	REAR TEAT PLACEMENT	-88.472	0.8560	
AYS	ANGULARITY	AUS	ANGULARITY	-64.337	0.5804	

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 Conversion Factors For Type. Source = INTERBULL MACE 1812  
 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	r	v	v	c
e	n	u	r	a	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	-7.956	0.7842	0.74
AYS	FEET AND LEGS	CAM	OVERALL FEET & LEG	-5.881	0.6087	
AYS	MAMMARY SYSTEM	CAM	OVERALL UDDER SCORE	-9.158	0.7623	
AYS	STATURE	CAM	STATURE	-4.147	1.0144	
AYS	CHEST WIDTH	CAM	CHEST WIDTH	0.668	0.8517	
AYS	BODY DEPTH	CAM	BODY DEPTH	-2.393	1.0042	
AYS	PIN WIDTH	CAM	RUMP WIDTH	-2.251	0.8258	
AYS	RUMP ANGLE	CAM	RUMP ANGLE	0.791	0.9527	
AYS	FOOT ANGLE	CAM	FOOT ANGLE	-1.076	0.6219	
AYS	REAR LEGS SIDE VIEW	CAM	REAR LEG SET	3.315	0.8168	
AYS	REAR LEG REAR VIEW	CAM	REAR LEG REAR VIEW	-3.618	0.7363	
AYS	UDDER DEPTH	CAM	UDDER DEPTH	-4.908	1.0938	
AYS	MEDIAN SUSPENSORY	CAM	MEDIAN SUSPENSORY	-4.025	0.7507	
AYS	FORE ATTACHMENT	CAM	FORE UDDER	-5.847	0.6992	
AYS	TEAT PLACEMENT	CAM	FRONT TEAT PLACEMENT	-4.346	0.7113	
AYS	TEAT LENGTH	CAM	TEAT LENGTH	1.176	0.6705	

AYS	REAR ATTACHMENT HEIGHT	CAM	REAR UDDER HEIGHT	-10.024	0.7920
AYS	REAR TEAT PLACEMENT	CAM	REAR TEAT PLACEMENT	-3.977	0.9305
AYS	ANGULARITY	CAM	ANGULARITY	-8.659	0.7161

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Conversion Factors For Type. Source = INTERBULL MACE 1812  
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
AYS	FEET AND LEGS	DEU	OVERALL FEET & LEG	-31.187	0.3061	
AYS	MAMMARY SYSTEM	DEU	OVERALL UDDER SCORE	-34.708	0.3301	
AYS	STATURE	DEU	STATURE	-42.259	0.4409	
AYS	CHEST WIDTH	DEU	CHEST WIDTH	-47.629	0.4900	
AYS	BODY DEPTH	DEU	BODY DEPTH	-51.883	0.5332	
AYS	PIN WIDTH	DEU	RUMP WIDTH	-55.549	0.5758	
AYS	RUMP ANGLE	DEU	RUMP ANGLE	-65.723	0.6209	
AYS	FOOT ANGLE	DEU	FOOT ANGLE	-33.920	0.3704	
AYS	REAR LEGS SIDE VIEW	DEU	REAR LEG SET	-63.167	0.6144	
AYS	REAR LEG REAR VIEW	DEU	REAR LEG REAR VIEW	-55.789	0.5746	
AYS	UDDER DEPTH	DEU	UDDER DEPTH	-44.705	0.4365	
AYS	MEDIAN SUSPENSORY	DEU	MEDIAN SUSPENSORY	-42.999	0.4192	
AYS	FORE ATTACHMENT	DEU	FORE UDDER	-48.034	0.4549	
AYS	FRONT TEAT PLACEMENT	DEU	FRONT TEAT PLACEMENT	-39.150	0.3796	
AYS	TEAT LENGTH	DEU	TEAT LENGTH	-36.183	0.3502	
AYS	REAR ATTACHMENT HEIGHT	DEU	REAR UDDER HEIGHT	-40.251	0.3603	
AYS	REAR TEAT PLACEMENT	DEU	REAR TEAT PLACEMENT	-46.208	0.4288	
AYS	ANGULARITY	DEU	ANGULARITY	-42.071	0.4174	

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Conversion Factors For Type. Source = INTERBULL MACE 1812  
Converted Canadian Proof = A + (B\* Foreign Proof)  
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	-44.265	0.3828	0.58

AYS	FEET AND LEGS	DFS	OVERALL FEET & LEG	-39.824	0.3699
AYS	MAMMARY SYSTEM	DFS	OVERALL UDDER SCORE	-47.117	0.4382
AYS	STATURE	DFS	STATURE	-69.967	0.6781
AYS	CHEST WIDTH	DFS	CHEST WIDTH	-44.739	0.4634
AYS	BODY DEPTH	DFS	BODY DEPTH	-47.308	0.4402
AYS	PIN WIDTH	DFS	RUMP WIDTH	-54.038	0.5314
AYS	RUMP ANGLE	DFS	RUMP ANGLE	-54.301	0.5470
AYS	FOOT ANGLE	DFS	FOOT ANGLE	-52.061	0.5296
AYS	REAR LEGS SIDE VIEW	DFS	REAR LEG SET	-61.353	0.6558
AYS	REAR LEG REAR VIEW	DFS	REAR LEG REAR VIEW	-52.614	0.5145
AYS	UDDER DEPTH	DFS	UDDER DEPTH	-49.707	0.4893
AYS	MEDIAN SUSPENSORY	DFS	MEDIAN SUSPENSORY	-35.903	0.3301
AYS	FORE ATTACHMENT	DFS	FORE UDDER	-42.441	0.4066
AYS	FRONT TEAT PLACEMENT	DFS	FRONT TEAT PLACEMENT	-40.880	0.4082
AYS	TEAT LENGTH	DFS	TEAT LENGTH	-44.676	0.4331
AYS	REAR ATTACHMENT HEIGHT	DFS	REAR UDDER HEIGHT	-54.491	0.4834
AYS	REAR TEAT PLACEMENT	DFS	REAR TEAT PLACEMENT	-47.640	0.4577
AYS	ANGULARITY	DFS	ANGULARITY	-64.657	0.5855

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Conversion Factors For Type. Source = INTERBULL MACE 1812  
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	-3.334	2.9695	
AYS	MAMMARY SYSTEM	GBR	OVERALL UDDER SCORE	-1.558	3.2924	
AYS	STATURE	GBR	STATURE	-2.345	4.9530	
AYS	CHEST WIDTH	GBR	CHEST WIDTH	2.380	4.0628	
AYS	BODY DEPTH	GBR	BODY DEPTH	0.954	3.8248	
AYS	PIN WIDTH	GBR	RUMP WIDTH	-0.916	4.3523	
AYS	RUMP ANGLE	GBR	RUMP ANGLE	-2.057	3.7965	
AYS	FOOT ANGLE	GBR	FOOT ANGLE	-1.327	3.1555	
AYS	REAR LEGS SIDE VIEW	GBR	REAR LEG SET	-0.525	3.6974	
AYS	UDDER DEPTH	GBR	UDDER DEPTH	-0.506	2.8702	
AYS	MEDIAN SUSPENSORY	GBR	MEDIAN SUSPENSORY	-1.067	2.7453	
AYS	FORE ATTACHMENT	GBR	FORE UDDER	0.137	3.0536	
AYS	TEAT PLACEMENT	GBR	FRONT TEAT PLACEMENT	2.065	3.2744	
AYS	TEAT LENGTH	GBR	TEAT LENGTH	-0.866	3.3730	
AYS	REAR ATTACHMENT HEIGHT	GBR	REAR UDDER HEIGHT	-3.286	3.9261	
AYS	ANGULARITY	GBR	ANGULARITY	-5.430	5.1263	

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Conversion Factors For Type. Source = INTERBULL MACE 1812  
Converted Canadian Proof = A + (B\* Foreign Proof)  
Converted Proof Reliability = TCORR2\*Foreign Reliability

country2=NLD

	c	c	f			
b	n	o	r	a	b	t
r	r	u	r	v	v	c
e	a	r	r	a	a	o
e	i	y	a	l	l	r
d	t	2	i	u	u	r
			t	e	e	2
AYS	CONFORMATION	NLD	CONFORMATION	-123.795	1.2932	0.61
AYS	FEET AND LEGS	NLD	OVERALL FEET & LEG	-55.115	0.5346	
AYS	MAMMARY SYSTEM	NLD	OVERALL UDDER SCORE	-113.159	1.1866	
AYS	STATURE	NLD	STATURE	-108.877	1.2025	
AYS	CHEST WIDTH	NLD	CHEST WIDTH	-137.711	1.4686	
AYS	BODY DEPTH	NLD	BODY DEPTH	-111.610	1.2249	
AYS	PIN WIDTH	NLD	RUMP WIDTH	-88.886	0.9560	
AYS	RUMP ANGLE	NLD	RUMP ANGLE	-97.205	0.9626	
AYS	FOOT ANGLE	NLD	FOOT ANGLE	-97.648	1.0260	
AYS	REAR LEGS SIDE VIEW	NLD	REAR LEG SET	-115.623	1.1318	
AYS	REAR LEG REAR VIEW	NLD	REAR LEG REAR VIEW	-101.053	1.0180	
AYS	UDDER DEPTH	NLD	UDDER DEPTH	-113.397	1.1731	
AYS	MEDIAN SUSPENSORY	NLD	MEDIAN SUSPENSORY	-97.844	0.9974	
AYS	FORE ATTACHMENT	NLD	FORE UDDER	-120.442	1.2312	
AYS	TEAT PLACEMENT	NLD	FRONT TEAT PLACEMENT	-114.372	1.1820	
AYS	TEAT LENGTH	NLD	TEAT LENGTH	-83.145	0.8471	
AYS	REAR ATTACHMENT HEIGHT	NLD	REAR UDDER HEIGHT	-86.094	0.8997	
AYS	REAR TEAT PLACEMENT	NLD	REAR TEAT PLACEMENT	-116.241	1.1896	
AYS	ANGULARITY	NLD	ANGULARITY	-95.841	1.0419	

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Conversion Factors For Type. Source = INTERBULL MACE 1812  
Converted Canadian Proof = A + (B\* Foreign Proof)  
Converted Proof Reliability = TCORR2\*Foreign Reliability

country2=NOR

	c	c	f			
b	n	o	r	a	b	t
r	r	u	r	v	v	c
e	a	r	r	a	a	o
e	i	y	a	l	l	r
d	t	2	i	u	u	r
			t	e	e	2
AYS	CONFORMATION	NOR	OVERALL CONFORMATION	-46.455	0.3978	0.71
AYS	FEET AND LEGS	NOR	OVERALL FEET & LEG	-35.500	0.2860	
AYS	MAMMARY SYSTEM	NOR	OVERALL UDDER SCORE	-47.440	0.4016	
AYS	STATURE	NOR	STATURE	-51.366	0.4483	
AYS	CHEST WIDTH	NOR	CHEST WIDTH	-34.045	0.3939	
AYS	BODY DEPTH	NOR	BODY DEPTH	-37.455	0.3381	
AYS	PIN WIDTH	NOR	RUMP WIDTH	-39.213	0.4072	
AYS	RUMP ANGLE	NOR	RUMP ANGLE	-41.285	0.4286	
AYS	FOOT ANGLE	NOR	FOOT ANGLE	-34.584	0.3296	
AYS	REAR LEGS SIDE VIEW	NOR	REAR LEG SET	-39.234	0.4335	

AYS	REAR LEG REAR VIEW	NOR	REAR LEG REAR VIEW	-36.261	0.3363
AYS	UDDER DEPTH	NOR	UDDER DEPTH	-45.483	0.4007
AYS	MEDIAN SUSPENSORY	NOR	MEDIAN SUSPENSORY	-37.561	0.3151
AYS	FORE ATTACHMENT	NOR	FORE UDDER	-39.174	0.3414
AYS	FRONT TEAT PLACEMENT	NOR	FRONT TEAT PLACEMENT	-39.638	0.3748
AYS	TEAT LENGTH	NOR	TEAT LENGTH	-36.877	0.3603
AYS	REAR ATTACHMENT HEIGHT	NOR	REAR UDDER HEIGHT	-53.334	0.4331
AYS	REAR TEAT PLACEMENT	NOR	REAR TEAT PLACEMENT	-38.769	0.3644

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Conversion Factors For Type. Source = INTERBULL MACE 1812  
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	-7.763	11.8719	0.37
AYS	MAMMARY SYSTEM	NZL	OVERALL UDDER SCORE	-9.268	12.9098	
AYS	STATURE	NZL	STATURE	-12.058	10.6681	
AYS	CHEST WIDTH	NZL	CHEST WIDTH	1.581	13.5635	
AYS	BODY DEPTH	NZL	BODY DEPTH	-1.837	12.9347	
AYS	PIN WIDTH	NZL	RUMP WIDTH	-4.730	16.9758	
AYS	RUMP ANGLE	NZL	RUMP ANGLE	-5.345	18.3344	
AYS	REAR LEGS SIDE VIEW	NZL	REAR LEG SET	4.564	37.1741	
AYS	MEDIAN SUSPENSORY	NZL	MEDIAN SUSPENSORY	-4.688	12.4973	
AYS	FORE ATTACHMENT	NZL	FORE UDDER	-7.499	13.6264	
AYS	FRONT TEAT PLACEMENT	NZL	FRONT TEAT PLACEMENT	-4.443	17.3302	
AYS	REAR ATTACHMENT HEIGHT	NZL	REAR UDDER HEIGHT	-7.958	14.8330	
AYS	REAR TEAT PLACEMENT	NZL	REAR TEAT PLACEMENT	-5.905	17.1997	

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Conversion Factors For Type. Source = INTERBULL MACE 1812  
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	-3.666	5.5023	0.69
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AYS	FEET AND LEGS	USA	OVERALL FEET & LEG	-2.821	3.6895
AYS	MAMMARY SYSTEM	USA	OVERALL UDDER SCORE	-1.723	5.1113
AYS	STATURE	USA	STATURE	-1.317	2.7919
AYS	CHEST WIDTH	USA	CHEST WIDTH	-0.247	5.3547
AYS	BODY DEPTH	USA	BODY DEPTH	-0.722	4.4007
AYS	PIN WIDTH	USA	RUMP WIDTH	-0.538	4.6487
AYS	RUMP ANGLE	USA	RUMP ANGLE	-0.969	5.4054
AYS	FOOT ANGLE	USA	FOOT ANGLE	-1.115	5.9068
AYS	REAR LEGS SIDE VIEW	USA	REAR LEG SET	0.909	7.7685
AYS	REAR LEG REAR VIEW	USA	REAR LEG REAR VIEW	-3.374	6.4210
AYS	UDDER DEPTH	USA	UDDER DEPTH	-0.626	4.8646
AYS	MEDIAN SUSPENSORY	USA	MEDIAN SUSPENSORY	-3.045	4.5748
AYS	FORE ATTACHMENT	USA	FORE UDDER	-1.559	4.4983
AYS	TEAT PLACEMENT	USA	FRONT TEAT PLACEMENT	-0.391	4.0049
AYS	TEAT LENGTH	USA	TEAT LENGTH	-0.323	4.0841
AYS	REAR ATTACHMENT HEIGHT	USA	REAR UDDER HEIGHT	-2.101	4.2063
AYS	REAR TEAT PLACEMENT	USA	REAR TEAT PLACEMENT	-0.487	4.8774
AYS	ANGULARITY	USA	ANGULARITY	-1.998	5.5835

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CALCULATION OF FAT% AND PROTEIN% FOR DECEMBER 2018

BREED	BMILK	BFAT	BPRT
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AYS	7799	325	263
BSW	8516	358	301
CN	5852	252	205
GUE	6576	304	225
JER	6632	336	254
HOL	10222	399	329
MS	6711	268	224

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

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

EXAMPLE:

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

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

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