INTERBULL breeding values calculated August 2025

This newsletter is primarily written for VikingGenetics staff and breeding advisors in Denmark, Sweden, and Finland, but can also be of interest for dairy farmers.

Table of content

International breeding values for the traits and breeds shown in table 1 have been published 12th August 2025

Current evaluation	
Daughter proven bulls: Yield Conformation Somatic cell count and udder health Longevity Calving – maternal and direct Female fertility Milking speed and temperament NTM for Nordic and foreign bulls	Young genomic tested bulls - HOL: Yield Conformation Somatic cell count and udder health Longevity Calving – maternal and direct Female fertility Milking speed and temperament

Table 1. Traits and breeds for which international breeding values are published.

Trait:	**International breeding values for the breeds:**
Yield	Red breeds, Holstein and Jersey
Conformation	Red breeds, Holstein and Jersey
Udder health	Red breeds, Holstein and Jersey
Longevity	Red breeds, Holstein and Jersey
Calving – maternal and direct	Red breeds and Holstein
Female fertility	Red breeds, Holstein and Jersey
Milking speed	Red breeds, Holstein and Jersey
Temperament	Red breeds and Holstein

You can find Interbull breeding values for all bulls with international breeding values on NAV Interbull search

On the page you can search within breed or country of birth. You can also search with the herdbook number or the name of the bull. Click on the herdbook number of the bull and view a graphical representation of the bulls' breeding values.

You can sort the bulls by different breeding values by clicking on the top line of the table.

Bulls born in Denmark, Finland and Sweden are in the following grouped under DNK/FIN/SWE

Daughter proven bulls

In the tables below, only sires that have breeding values based on daughter information is shown. Country refer to birth country of the bulls.

Yield

In tables 2-4 is a comparison of the genetic level of yield for bulls from different countries. The analysis includes bulls born in 2018 or later, that have more than 60 daughters in the genetic evaluation.

Table 2. Genetic level for yield traits, Red breeds. Bulls born in 2018 or later.

Country	No. of bulls	Milkindex	Fatindex	Proteinindex	Y-index	Y-index STD
Canada	15	94,2	87,9	86,3	85,2	11,2
Germany	9	101,8	95,6	100,8	97,7	7,9
DNK/FIN/SWE	135	99,7	104,9	103,8	105,4	9,0
UK	6	78,2	71,0	65,5	65,2	6,1
Norway	110	99,6	93,6	95,5	93,5	10,3
New Zealand	9	91,4	82,6	82,6	80,3	10,8
USA	5	81,6	62,0	62,2	57,2	21,3

Table 3. Genetic level for yield traits, Holstein. Bulls born in 2018 or later.

Country	No. of bulls	Milkindex	Fatindex	Proteinindex	Y-index	Y-index STD
Australia	49	98,3	101,3	99,3	100,7	8,6
Belgium	11	104,6	104,6	106,4	105,9	4,4
Canada	297	108,2	110,8	107,2	109,0	13,0
Switzerland	70	96,5	96,4	94,7	95,2	10,4
Czech Republic	46	113,3	110,1	110,5	109,6	7,4
Germany	672	113,5	107,1	111,4	108,5	9,8
DNK/FIN/SWE	207	98,5	103,4	102,8	104,2	8,7
Spain	62	115,2	102,0	107,6	102,6	7,7
France	262	106,9	101,7	105,7	103,2	8,5
UK	46	98,7	110,4	102,0	107,5	10,6
Hungary	7	110,7	114,4	112,6	114,1	10,0
Israel	106	99,9	97,1	97,3	96,6	7,5
Italy	131	107,8	104,1	107,7	105,7	8,0
Japan	20	108,9	109,6	105,9	107,2	10,0
Netherlands	414	104,7	106,7	106,5	107,1	9,5
New Zealand	550	71,5	89,8	80,9	88,2	6,6
Poland	69	108,1	103,0	105,9	103,8	7,1
Slovenia	24	99,2	85,9	89,8	85,3	7,4
USA	1940	109,3	115,1	109,0	112,3	10,4

Table 4. Genetic level for yield traits, Jersey. Bulls born in 2018 or later.

Country	No. of bulls	Milkindex	Fatindex	Proteinindex	Y-index	Y-index STD
Australia	21	106,5	89,4	97,3	89,5	5,8
Canada	21	104,5	93,7	97,2	92,7	14,9
DNK/FIN/SWE	64	102,0	105,0	105,2	106,1	8,5
New Zealand	323	97,1	92,7	96,1	93,6	8,0
USA	326	116,6	105,0	111,3	105,6	10,5

Conformation

The international genetic evaluation is done for 16 linear traits for Holstein, Red breeds and Jersey. In addition, frame, body condition score and locomotion are included in this trait group.

Breeding values for frame

EBV for frame is calculated from the 6 linear traits that are part of the international genetic evaluation. The composite NAV breeding value for frame also includes topline. There is no international genetic evaluation of topline.

We calculate international breeding value for frame based on a regression of NAV breeding values for the 6 linear international traits on NAV EBV for frame for Danish, Swedish and Finnish bulls born in 2015-2018. The estimated regression coefficients are used to calculate international breeding value for frame for foreign bulls. This method is used to ensure the same relative weight between traits in NAV and international composite traits.

Breeding values for feet and legs

EBV for feet and legs is calculated from the 3 linear traits that are part of the international genetic evaluation. The composite NAV breeding values for feet and legs also include hock quality and bone quality. There is no international genetic evaluation for these two traits.

We calculate international breeding value for feet and legs based on a regression of NAV breeding values for the 3 linear international traits on NAV EBV for feet and legs for Danish, Swedish and Finnish bulls born in 2015-2018. The estimated regression coefficients are used to calculate international breeding value for feet and legs for foreign bulls.

Breeding values for udder

The international genetic evaluation for udder includes 7 traits. The Nordic genetic evaluation for udder also includes teat thickness and udder balance. There is no international evaluation for these two traits.

We calculate international breeding value for udder based on a regression of NAV breeding values for the 7 linear international traits on NAV EBV for udder for Danish, Swedish and Finnish bulls born in 2015-2018. For Holstein the non Interbull traits Rear udder Width, Udder balance and Teat thickness are estimated from the 7 seven linear Interbull udder traits. For RDC and Jersey the estimated regression coefficients are used to calculate international breeding value for udder for foreign bulls.

Genetic level of composite conformation traits

In tables 5-7 is a comparison of genetic level of composite conformation traits for bulls from different countries. The calculation includes bulls that have at least 25 daughters in genetic evaluation.

Table 5. Genetic level for conformation traits, Red breeds. Bulls born in 2018 or later.

Country	No. of bulls	Frame		Feet&legs		Udder	
		Average	STD	Average	STD	Average	STD
Canada	19	101,4	4,6	104,8	5,9	101,3	8,0
Germany	15	108,5	4,7	104,2	3,8	104,1	8,0
DNK/FIN/SWE	124	97,3	8,7	102,6	6,0	102,4	6,9
UK	6	99,2	4,2			106,3	7,1
Norway	90	97,1	8,2	100,7	6,0	88,3	9,1
New Zealand	10	96,2	12,4			94,5	8,2
USA	6	108,7	4,7	105,3	3,4	111,3	6,2

Table 6. Genetic level of conformation traits, Holstein. Bulls born in 2018 or later.

Country	No	Frame		Feet&legs		Udder	
		Average	STD	Average	STD	Average	STD
Australia	21	113,9	12,8	99,7	5,6	102,3	12,4
Belgium	11	109,5	14,6	105,5	5,1	102,5	6,5
Canada	273	112,8	10,9	97,0	5,9	106,9	9,5
Switzerland	85	109,1	8,9	98,6	5,5	109,5	9,1
Czech Republic	49	107,9	9,1	99,9	4,6	97,9	9,1
Germany	642	105,7	9,0	101,2	5,2	104,7	8,4
DNK/FIN/SWE	188	98,3	10,2	101,1	5,8	102,6	8,3
Spain	71	111,3	8,3	100,5	5,7	104,7	9,7
France	239	116,6	9,5	103,1	5,4	110,7	9,2
UK	29	102,1	13,1	98,4	5,2	103,5	6,4
Hungary	8	111,4	9,9	98,0	5,5	101,6	6,6
Italy	127	111,4	9,9	98,7	5,1	102,8	8,9
Japan	258	109,6	9,3	97,6	4,9	99,1	8,4
Netherlands	336	107,3	10,0	106,2	7,4	100,6	10,4
New Zealand	555	85,0	9,3			89,0	7,7
Poland	64	111,9	12,4	103,2	5,5	100,9	9,5
Slovenia	24	106,8	7,8	97,8	4,9	90,2	8,0
USA	1123	105,5	10,5	98,0	5,4	101,2	8,8

Table 7. Genetic level of conformation traits, Jersey. Bulls born in 2018 or later.

Country	No	Frame		Feet&legs		Udder	
		Average	STD	Average	STD	Average	STD
Australia	11	108,8	9,0	103,8	4,3	94,1	7,8
Canada	25	103,0	11,1	105,8	6,2	99,8	9,3
DNK/FIN/SWE	62	96,8	7,4	97,3	7,6	100,0	9,9
USA	219	102,9	7,7	100,4	6,1	101,0	8,3

Somatic cell count and udder health

Interbull does two international genetic evaluations – one for somatic cell count and one for udder health. In the first one only somatic cell count is included for all countries. NAV sends breeding values for somatic cell count to Interbull, so Nordic bulls get official breeding values for somatic cell count in countries where this trait is official. In the second evaluation breeding values based on mastitis diagnoses are included. NAV's official breeding value for udder health is used. For countries that do not record mastitis diagnoses, somatic cell count is included in this evaluation.

Index for udder health is published in the Nordic countries when reliability is 40% or higher. In tables 8-10 is a comparison of genetic level of udder health for bulls from different countries.

Table 8. Genetic level for udder health, Red breeds. Bulls born in 2018 or later.

Country	No. of bulls	Average	STD
Australia	19	96,1	7,4
Canada	15	93,8	10,3
DNK/FIN/SWE	232	101,2	8,9
UK	10	99,9	6,2
Norway	161	99,8	8,9
New Zealand	36	91,7	7,2
USA	9	96,1	7,5

Table 9. Genetic level for udder health, Holstein. Bulls born in 2018 or later.

Country	No. of bulls	Average	STD
Australia	83	97,4	7,1
Austria	6	95,4	3,7
Belgium	16	98,8	6,3
Canada	312	98,7	8,7
Switzerland	38	99,2	8,6
Czech Republic	66	97,4	9,0
Germany	685	100,0	8,0
DNK/FIN/SWE	276	102,4	7,1
Spain	95	101,7	8,3
Estonia	11	96,7	9,2
France	356	102,1	7,2
UK	40	99,1	6,6
Hungary	7	99,2	11,6
Israel	155	99,1	8,8
Italy	161	100,2	8,2
Japan	282	94,1	7,3
Korea	27	93,7	6,2
Luxembourg	8	99,6	5,8
Netherlands	377	100,1	7,6
New Zealand	777	92,2	7,3
Poland	118	98,8	9,4
Slovenia	42	93,3	9,4
USA	1694	98,8	8,3

Table 10. Genetic level for udder health, Jersey. Bulls born in 2018 or later.

Country	No. of bulls	Average	STD
Australia	38	89,2	5,9
Canada	13	86,6	9,5
DNK/FIN/SWE	93	101,3	7,6
New Zealand	446	92,6	6,8
USA	252	82,9	9,1

Longevity

In tables 11-13 is a comparison of genetic level of longevity for bulls from different countries. Bulls are included if they have at least 40 daughters in the genetic evaluation.

Table 11. Genetic level for longevity, Red breeds. Bulls born in 2017 or later.

Country	No. of bulls	Average	STD
Australia	10	87,6	9,8
Canada	27	83,7	12,0
Germany	14	98,8	8,3
DNK/FIN/SWE	146	101,5	9,9
UK	12	82,9	6,3
Norge	126	91,4	7,4
USA	8	78,9	10,1

Table 12. Genetic level for longevity, Holstein. Bulls born in 2017 or later.

Country	No. of bulls	Average	STD
Australia	55	95,5	9,2
Austria	8	100,6	7,6
Belgium	18	102,6	7,6
Canada	427	100,3	9,0
Switzerland	105	97,1	8,0
Czech Republic	60	105,8	6,4
Germany	860	105,1	8,8
DNK/FIN/SWE	237	103,0	7,3
Spain	38	96,3	6,8
France	318	98,3	7,6
UK	42	97,1	13,7
Israel	145	94,1	5,4
Italy	147	99,8	8,0
Luxembourg	14	99,4	11,7
Netherlands	586	103,2	8,6
New Zealand	502	85,7	5,8
Poland	95	95,6	9,1
Slovenia	42	92,8	6,2
USA	2323	103,4	8,7

Table 13. Genetic level for longevity, Jersey. Bulls born in 2017 or later.

Country	No. of bulls	Average	STD
Australia	19	95,1	6,8
Canada	21	95,2	6,8
DNK/FIN/SWE	81	99,7	7,1
Netherlands	5	95,4	4,1
New Zealand	128	91,7	6,0
USA	378	100,6	7,3

Calving – maternal and direct

For Red breeds Canada, Denmark, Finland, Norway, Sweden and The United States send data to this evaluation. It has not been possible to obtain enough high correlations between countries for still birth, so the international evaluation only includes calving ease (maternal and direct) for Red breeds.

In the Holstein group there are international breeding values for both still birth (maternal and direct) and calving ease (maternal and direct), but only for first lactation. In the Nordic countries also, information from later lactations and from birth weight is included in calving, maternal and calving, direct.

We have calculated international indices for calving, maternal and calving, direct by performing a regression between NAV breeding values for still birth and calving ease and NAV breeding value for calving for Nordic bulls born in 2008-2012. The calculated regression coefficients are used to calculate a calving index for foreign bulls - same method is used for calving, maternal and calving, direct.

In Tables 14 and 15 the average genetic level for Red breed and Holstein bulls is shown for different countries. Only bulls born in 2018 or later are included. Bulls need to have breeding values for yield to be included.

Table 14. Genetic level for calving, maternal and calving, direct, Red breeds. Bulls born in 2018 or later.

Country	Calving, direct			Calving, maternal		
	No. of bulls	Average	STD	No. of bulls	Average	STD
Canada	18	94,6	5,3	8	98,0	8,3
DNK/FIN/SWE	142	101,1	6,8	123	99,7	5,9
Norway	110	99,1	8,4	108	91,8	7,1

Table 15. Genetic level for calving, maternal and calving, direct, Holstein. Bulls born in 2018 or later.

Country	Calving, direct			Calving, maternal		
	No. of bulls	Average	STD	No. of bulls	Average	STD
Australia	58	97,1	4,6	1	94,0	
Austria	5	95,0	6,0	4	97,3	8,7
Belgium	12	99,8	5,1	11	101,0	3,9
Canada	319	98,4	5,8	243	101,5	5,0
Switzerland	96	97,5	4,8	64	101,8	8,6
Germany	713	99,3	5,9	630	100,7	5,9
DNK/FIN/SWE	211	100,5	5,2	203	101,7	5,1
Spain	38	98,6	5,1	9	102,3	3,3
France	297	96,8	5,8	267	105,6	7,4
UK	40	100,4	3,7	20	101,4	3,5
Israel	62	96,8	4,5	111	92,6	6,1
Italy	133	97,5	4,8	98	101,3	4,3
Netherlands	421	99,0	5,8	367	98,5	7,3
Poland	86	96,6	4,2	79	99,0	5,6
USA	2022	100,4	4,9	1381	103,4	4,6

Female fertility

NAV calculates breeding values for female fertility based on linear regression between NAV breeding values for female fertility and NAV breeding values for the sub-indices in female fertility. Basis for the regressions are Nordic bulls born in 2003-2007 – see more information below. The estimated regression coefficients are used to calculate international breeding value for female fertility for foreign bulls.

In practice 3 regressions are calculated with different explaining variables (Jersey only 2 and 3):

1: Female fertility = Ability to conceive (R^2, HOL = 0,05) (R^2, Red breeds = 0,35)
2: Female fertility = Days open (R^2, HOL = 0,87) (R^2, Red breeds = 0,85) (R^2, Jer = 0,87)
3: Female fertility = Ability to return to recycle after calving + ability to conceive + Days open (R^2, HOL = 0,96) (R^2, Red breeds = 0,94), (R^2, Jer = 0,94).

R^2 (degree of explanation) indicates the proportion of the variance of the index for female fertility, that the traits in the regression can explain. Since the regression is used on foreign bulls, and the genetic correlations between international and NAV traits are not 1, the observed degree of explanation will be lower.

For each foreign bull we use the regression with the greatest explanatory power given the international sub-indices that are available. The degree of explanation therefore depends largely of the traits being available from the different countries.

Table 16. Genetic level for female fertility, Red breeds. Bulls born in 2018 or later.

Country	No. of bulls	Average	STD
Canada	15	95,6	10,9
Germany	9	98,2	10,4
DNK/FIN/SWE	133	100,7	9,7
UK	6	91,8	7,8
Norway	100	112,3	6,8
New Zealand	6	99,7	2,1
USA	5	90,8	4,7

Table 17. Genetic level for female fertility, Holstein. Bulls born in 2018 or later.

Country	No. of bulls	Average	STD
Australia	44	97,6	7,7
Belgium	11	95,4	8,6
Canada	273	94,6	9,2
Switzerland	69	95,6	4,7
Czech Republic	41	95,5	4,3
Germany	571	97,6	9,7
DNK/FIN/SWE	207	104,4	9,8
Spain	35	93,6	7,6
France	213	97,2	8,2
UK	37	100,0	6,1
Israel	100	96,0	2,5
Italy	116	96,1	8,8
Japan	20	90,5	6,2
Netherlands	396	94,1	9,5
New Zealand	359	99,0	5,5
Poland	38	89,7	8,9
USA	1814	95,1	7,3

Table 18. Genetic level for female fertility, Jersey. Bulls born in 2018 or later.

Country	No. of bulls	Average	STD
Australia	13	89,1	5,0
Canada	21	88,2	8,8
DNK/FIN/SWE	67	101,8	13,6
New Zealand	219	95,0	7,0
USA	305	88,4	7,6

Milking speed and temperament

In Tables 19-21, the genetic level for bulls from different countries, born in 2018 or later are shown for Holstein, Red breeds and Jersey.

Table 19. Genetic level for milking speed and temperament, Red breeds. Bulls born in 2018 or later.

Country	Milking speed			Temperament		
	No. of bulls	Average	STD	No. of bulls	Average	STD
Canada	18	90,4	15,2	17	94,2	13,1
Germany	10	102,1	5,7	13	103,2	5,8
DNK/FIN/SWE	154	99,5	7,0	113	101,2	10,9
Norway	99	94,4	3,7	96	98,1	5,5

Table 20. Genetic level for milking speed and temperament, Holstein. Bulls born in 2018 or later.

Country	Milking speed			Temperament		
	No. of bulls	Average	STD	No. of bulls	Average	STD
Australia	24	102,3	6,0	24	105,1	5,6
Austria	5	89,9	6,9			
Belgium	9	88,0	5,9	9	103,2	12,2
Canada	212	98,7	12,0	209	104,0	13,5
Switzerland	88	97,2	10,3	86	104,4	11,0
Germany	486	95,2	9,2	382	101,5	16,5
DNK/FIN/SWE	146	100,3	8,0	149	100,8	16,2
France	243	92,7	9,9	242	104,0	10,5
UK	31	99,5	14,3	31	104,8	10,7
Italy	118	92,5	3,7	116	102,4	10,0
Netherlands	351	91,8	9,1	282	102,7	12,4
New Zealand	558	101,5	2,8	558	97,9	2,3
Slovenia	27	96,7	5,3			
USA	493	98,6	12,6	469	103,7	14,9

Table 21. Genetic level for milking speed, Jersey. Bulls born in 2018 or later.

Country	No. of bulls	Average	STD
Australien	12	102,1	9,6
Canada	21	96,8	8,2
DNK/FIN/SWE	61	100,0	9,5
New Zealand	304	99,6	6,7
USA	13	100,0	7,0

NTM for Nordic and foreign bulls

NTM index is calculated for all bulls (Nordic and others) that have official breeding values (NAV breeding values or international EBVs) for yield, udder health and conformation.

Interbull NTM is calculated by weighing the Interbull / NAV breeding values for yield, female fertility, calving (maternal and direct), udder health, longevity, feet&legs, udder, milking speed and temperament. The same economic weight factors are used as for NAV breeding values.

Rules for calculation of NTM based partly or entirely on international breeding values are stated below in order of priority.

1. **Bull has NAV breeding value for a trait**

If the bull has NAV breeding value for a specific trait, this is used in the calculation of NTM - no matter if the bull also has international breeding value for that trait.

2. **Bull has no NAV breeding value, but has an international breeding value for a trait**

If the bull does not have NAV breeding value for the trait, the international breeding value is used, provided that Interbull calculates international breeding values for that trait and the bull comes from a country which provides data for that trait.

3. **Bull has no NAV or no international breeding value for a trait**

For traits where no Interbull EBV is available or the bull has no Interbull EBV, and at the same time it is not tested in the Nordic countries, a pedigree index is used. Pedigree index is calculated as ½ (EBV_{sire} -100) +1/4 ($EBV_{maternal\ grand\ sire}$-100) +100. The contributions from the sire and maternal grand sire can be based on either NAV breeding values or international breeding values. If EBV_{sire} or $EBV_{maternal\ grand\ sire}$ are unofficial the pedigree index is set to 100.

Publication rules for NTM

All foreign and Nordic bulls that have Interbull breeding values for yield, udder health and udder get a public Interbull NTM. This NTM is calculated with a lower reliability than an NTM for Nordic proven bulls, where information for all traits is always available.

Genetic level for Interbull NTM

In tables 22-24 genetic level for Interbull NTM for Jersey, Red breeds and Holstein are shown. Bulls included are born in 2018 or later.

Table 22. Genetic level for NTM, Red breeds. Bulls born in 2018 or later.

Country	No. of bulls	Average	STD
Canada	11	-21,3	9,5
Germany	5	0	6,0
DNK/FIN/SWE	134	10,6	9,6
UK	5	-36,6	6,5
Norway	92	-7,8	9,4
New Zealand	7	-22,6	10,1

Table 23. Genetic level for NTM, Holstein. Bulls born in 2018 or later.

Country	No. of bulls	Average	STD
Australia	20	0,3	11,0
Belgium	10	3,8	5,1
Canada	202	6,1	14,9
Switzerland	46	-4,9	12,4
Czech Republic	43	6,2	6,9
Germany	500	9,1	9,1
DNK/FIN/SWE	200	10,9	9,2
Spain	61	2,4	7,2
France	236	3,9	8,4
UK	27	10,4	9,2
Hungary	7	14,1	10,8
Italy	100	5,5	7,3
Japan	20	0,1	8,8
Netherlands	308	5,9	10,3
Poland	67	0	8,2
Slovenia	24	-21,7	9,0
USA	918	11,0	9,9

Table 24. Genetic level for NTM, Jersey. Bulls born in 2018 or later.

Country	No. of bulls	Average	STD
Australia	10	-17,3	6,5
Canada	16	-12,1	12,9
DNK/FIN/SWE	63	9,8	8,2
USA	150	-7,7	8,1

Changes since last run

In the evaluation in August 2025 the following changes are done compared to April 2025 evaluation:

Yield:

- Germany (ALL) has base changes.
- Netherlands (ALL) has changes in type of proofs due to harmonized records.
- New Zealand (ALL) has base change and decrease in information due to a continuous parenting testing and herd data being updated.
- USA (ALL) has decrease in information due to pedigree verification and herd-year minimum edits.
- France (HOL) has decrease in information due to pedigree verification.
- Italy (HOL, JER) has decrease in information due to a four-month cut-off of data.

Fertility:

- Germany (ALL) has base changes.
- Netherlands (ALL) has changes in type of proofs due to harmonized records.
- New Zealand (ALL) has base change and decrease in information due to a continuous parenting testing and herd data being updated
- USA (ALL) has decrease in information due to pedigree verification and herd-year minimum edits.
- France (HOL) has decrease in information due to pedigree verification.
- Italy (HOL, JER) has decrease in information due to a four-month cut-off of data that also results in some bulls being missing.

Calving:
- Germany (ALL) has base changes.
- Netherlands (ALL) has changes in type of proofs due to harmonized records and participating in the evaluation for Direct Gestation Length for the first time.
- New Zealand (ALL) has base change, decrease in information due to a continuous parenting testing and herd data being updated and participating in the evaluation for Direct Gestation Length for the first time.
- USA (ALL) has decrease in information due to pedigree verification and herd-year minimum edits, correction of base changes for DCE during May test run and participating in the evaluation for Direct Gestation Length for the first time
- Denmark, Finland and Sweden (HOL)have a slight drops in information due to small variations within the data.
- France (HOL) has decrease in information due to pedigree verification.
- Italy (HOL, JER) has decrease in information due to a four-month cut-off of data.

Conformation:
- Denmark, Finland and Sweden (ALL) no longer participating in the body condition score (bcs) evaluation.
- France (ALL) has decrease in information due to pedigree verification.
- Germany (ALL) has base changes.
- The Netherlands (ALL) has changes in type of proofs due to harmonized records and changes in EDC due to an update of the EDC software (ALL).
- New Zealand (ALL) has base change and decrease in information due to a continuous parenting testing and herd data being updated.
- USA (ALL) has decrease in information due to pedigree verification and herd-year minimum edits.
- Italy (HOL) has decrease in information due to a four-month cut-off of data that also results in some bulls being missing.
- Denmark, Finland and Sweden (RDC) have changed the composition of OUS, resulting in greater weight being given to teat size traits and less to udder depth.

Udder health:
- Denmark, Finland and Sweden (ALL) have decrease in information, owed to an editing procedure where only active herds are included.
- Germany (ALL) has base changes.
- Netherlands (ALL) has changes in type of proofs due to harmonized records.
- New Zealand (ALL) has base change and decrease in information due to a continuous parenting testing and herd data being updated
- USA (ALL) has decrease in information due to pedigree verification and herd-year minimum edits.
- France (ALL) has decrease in information due to pedigree verification.
- Italy (HOL, JER) has decrease in information due to a four-month cut-off of data that also results in some bulls being missing.
- Italy (JER) has changed the base from a five-year base to a yearly rolling base.

Longevity:
- Denmark, Finland and Sweden (ALL) have a decrease in information due to an editing on stopping herds
- Germany (ALL) has base changes.
- Netherlands (ALL) has changes in type of proofs due to harmonized records.
- New Zealand (ALL) has base change and decrease in information due to a continuous parenting testing and herd data being updated

- USA (ALL) has decrease in information due to pedigree verification and herd-year minimum edits.
- France (ALL) has decrease in information due to pedigree verification.
- Italy (HOL) has decrease in information due to a four-month cut-off of data that also results in some bulls being missing.

Milking speed and temperament:
- Germany (ALL) has base changes.
- Netherlands (ALL) has changes in type of proofs due to harmonized records.
- New Zealand (ALL) has base change and decrease in information due to a continuous parenting testing and herd data being updated
- USA (ALL) has decrease in information due to pedigree verification and herd-year minimum edits.
- France (ALL) has decrease in information due to pedigree verification.
- Italy (HOL) has decrease in information due to a four-month cut-off of data that also results in some bulls being missing.

Genomic tested young Holstein bulls

In the tables below, only Holstein sires that have breeding values based on genomic information and no daughters is shown.

Averages are only shown for countries with more than 20 bulls.

Yield

In tables 25 is a comparison of the genetic level of yield for bulls from different countries.

Table 25. Genetic level for yield traits, Holstein. Bulls born in 2022 or later.

Country	No. of bulls	Milkindex	Fatindex	Proteinindex	Y-index	Y-index STD
Australia	75	98,6	103,3	99,3	101,7	9,1
Belgium	19	113,1	117,8	116,1	117,8	6,2
Canada	679	110,9	118,7	111,6	115,7	11,1
Switzerland	25	108,6	109,5	107,2	108,1	6,9
Czech Republic	50	114,4	115,2	114,2	114,7	4,7
Germany	770	117,1	115,9	117,8	117,0	7,0
DNK/FIN/SWE	176	103,9	119,3	116,0	120,9	7,4
Spain	112	113,0	109,5	110,2	109,1	10,8
France	566	111,4	109,1	112,4	110,8	7,3
UK	70	108,4	123,6	113,9	120,7	13,7
Hungary	43	110,9	104,8	106,4	104,4	7,7
Italy	93	113,9	113,4	115,5	114,8	8,9
Netherlands	649	109,9	112,7	112,9	113,6	7,7
New Zealand	13	64,4	84,3	74,0	82,1	4,9
Poland	114	115,1	113,8	116,8	115,5	6,1
USA	2785	112,4	125,1	116,3	122,2	7,8

Conformation

The international genetic evaluation is done for 16 linear traits for Holstein. In addition, frame condition score and locomotion are included in this trait group.

Calculation of frame, feet&legs and udder follows same principles as for daughter proven bulls.

In tables 26 is a comparison of genetic level of composite conformation traits for bulls from different countries.

Table 26. Genetic level of conformation traits, Holstein. Bulls born in 2022 or later.

		Frame		Feet&legs		Udder	
Country	No	Average	STD	Average	STD	Average	STD
Australia	9	109,1	15,2	99,4	5,5	107,2	7,1
Belgium	10	110,9	6,1	107,1	7,4	103,6	6,0
Canada	439	116,1	11,2	101,2	4,5	106,6	8,4
Switzerland	19	116,7	7,5	102,3	4,5	116,9	7,4
Czech Republic	26	110,0	7,1	101,1	4,5	104,7	10,0
Germany	466	106,8	8,1	104,0	4,6	107,8	7,9
DNK/FIN/SWE	100	99,7	8,3	101,1	4,3	106,1	7,2
Spain	62	115,2	13,3	102,9	3,8	110,0	10,8
France	357	115,9	8,6	105,5	4,6	115,0	8,8
UK	52	104,3	7,6	98,3	3,4	97,7	9,2
Hungary	26	110,2	9,7	100,7	3,3	102,4	7,6
Italy	51	112,4	10,4	100,2	3,6	106,9	9,0
Netherlands	232	107,3	8,0	107,5	6,7	104,6	7,9
Poland	72	112,6	9,1	102,7	4,8	107,3	9,3
USA	1688	106,1	10,0	98,0	4,2	97,7	8,3

Somatic cell count and udder health

In tables 27 is a comparison of genetic level of udder health for bulls from different countries.

Table 27. Genetic level for udder health, Holstein. Bulls born in 2022 or later.

Country	No. of bulls	Average	STD
Australia	8	97,0	3,9
Belgium	10	101,6	4,7
Canada	439	97,6	5,3
Switzerland	19	102,7	4,7
Czech Republic	21	99,2	5,6
Germany	466	103,6	6,1
DNK/FIN/SWE	98	105,2	5,1
Spain	61	102,9	8,9
France	351	107,0	6,0
UK	50	98,4	4,8
Hungary	24	96,5	6,7
Italy	51	100,2	5,7
Netherlands	231	102,9	5,9
Poland	72	103,9	6,4
USA	1687	98,7	4,8

Longevity

In tables 28 is a comparison of genetic level of longevity for bulls from different countries.

Table 28. Genetic level for longevity, Holstein. Bulls born in 2022 or later.

Country	No. of bulls	Average	STD
Australia	9	101,1	6,5
Belgium	10	109,1	5,2
Canada	439	104,9	6,2
Switzerland	19	108,6	5,0
Czech Republic	21	106,0	5,4
Germany	466	114,0	5,8
DNK/FIN/SWE	99	110,3	5,3
Spain	62	107,4	8,9
France	352	110,2	6,1
UK	52	103,9	4,7
Hungary	26	99,1	6,2
Italy	51	104,5	5,6
Netherlands	232	111,0	7,1
Poland	72	107,1	4,9
USA	1690	106,3	5,0

Calving – maternal and direct

In Tables 29 the average genetic level for bulls is shown for different countries.

Table 29. Genetic level for calving, maternal and calving, direct, HOL. Bulls born in 2022 or later.

Country	Calving, direct			Calving, maternal		
	No. of bulls	Average	STD	No. of bulls	Average	STD
Australia	7	99,0	3,2	8	105,8	4,3
Belgium	10	100,1	2,9	10	103,5	4,4
Canada	436	97,9	3,8	439	101,2	5,3
Switzerland	18	99,1	3,6	19	103,3	3,7
Czech Republic	21	98,1	3,6	21	103,2	3,6
Germany	455	101,1	3,7	466	103,9	5,0
DNK/FIN/SWE	92	101,5	3,9	98	103,5	5,0
Spain	62	98,9	4,7	61	101,8	4,9
France	353	98,1	4,0	353	102,4	5,0
UK	50	98,8	3,8	50	102,5	3,2
Hungary	26	97,5	3,3	26	100,5	2,6
Italy	51	99,4	3,6	51	102,8	4,3
Netherlands	224	100,6	3,4	232	102,2	4,7
Poland	71	98,9	3,8	72	102,5	5,9
USA	1636	100,2	3,6	1687	103,7	3,8

Female fertility

In Tables 30 the average genetic level for bulls is shown for different countries.

Table 30. Genetic level for female fertility, Holstein. Bulls born in 2022 or later.

Country	No. of bulls	Average	STD
Australia	7	99,3	7,7
Belgium	9	98,9	7,1
Canada	435	96,4	7,5
Switzerland	19	100,0	5,8
Czech Republic	21	95,2	5,4
Germany	466	103,2	7,9
DNK/FIN/SWE	100	109,1	8,1
Spain	61	99,4	7,7
France	351	103,9	7,7
UK	43	100,3	5,6
Italy	51	97,4	6,9
Netherlands	232	101,0	8,2
Poland	72	100,7	7,0
USA	1647	100,2	5,8

Milking speed and temperament

In Tables 31, the genetic level for bulls from different countries.

Table 31. Genetic level for milking speed and temperament, Holstein. Bulls born in 2022 or later.

Country	Milking speed			Temperament		
	No. of bulls	Average	STD	No. of bulls	Average	STD
Australia	9	103,5	10,8	9	101,6	3,2
Belgium	10	96,1	5,0	8	104,8	5,7
Canada	435	98,6	5,5	388	105,1	9,0
Switzerland	19	97,4	2,7			
Czech Republic	21	102,7	9,2			
Germany	458	97,3	2,9	458	102,6	5,3
DNK/FIN/SWE	92	102,6	14,7	95	102,2	3,2
Spain	61	97,4	3,0	59	103,6	7,9
France	357	94,2	3,2	349	104,5	4,1
UK	44	102,8	8,3	42	101,3	1,0
Italy	51	93,1	8,2	51	103,1	7,4
Netherlands	232	95,2	4,6	230	101,2	10,7
Poland	72	95,9	13,8	72	102,7	14,7
USA	1659	102,0	4,6	1639	103,7	4,0

Changes since last run
In the evaluation in August 2025 the following changes are done compared to April 2025 evaluation:

Yield:
- France are missing some bulls due to pedigree update and some bulls changed from official to unofficial because they have been blocked from publication by Holstein breed society
- Germany introduce single step evaluation
- Italy has some bulls missing pedigree due to the authority issue

Fertility:
- France are missing some bulls due to pedigree update and some bulls changed from official to unofficial because they have been blocked from publication by Holstein breed society
- Germany introduce single step evaluation
- Italy has some bulls missing pedigree due to the authority issue

Calving:
- Denmark, Finland, Sweden has decreased reliability due to the bug fixation in a program used to create files for April MACE evaluation, merging reliability and GEBVs incorrectly for some foreign bulls.
- France are missing some bulls due to pedigree update and some bulls changed from official to unofficial because they have been blocked from publication by Holstein breed society
- Germany introduce single step evaluation
- Italy has some bulls missing pedigree due to the authority issue

Conformation:
- Denmark, Finland, Sweden no longer participating in the body condition score (bcs) evaluation
- France are missing some bulls due to pedigree update and some bulls changed from official to unofficial because they have been blocked from publication by Holstein breed society
- Germany introduce single step evaluation
- Italy has some bulls missing pedigree due to the authority issue

Udder health:
- France are missing some bulls due to pedigree update and some bulls changed from official to unofficial because they have been blocked from publication by Holstein breed society
- Germany introduce single step evaluation. Has decrease in reliability due to some bulls from Poland, and decrease in correlation between Germany and Poland for somatic cell score in April run due to the changes that Poland applied
- Italy has some bulls missing pedigree due to the authority issue

Longevity:
- France are missing some bulls due to pedigree update and some bulls changed from official to unofficial because they have been blocked from publication by Holstein breed society
- Germany introduce single step evaluation
- Italy has some bulls missing pedigree due to the authority issue

Milking speed and temperament:
- France are missing some bulls due to pedigree update and some bulls changed from official to unofficial because they have been blocked from publication by Holstein breed society
- Germany introduce single step evaluation
- Italy has some bulls missing pedigree due to the authority issue

Dates of publication of Interbull breeding values in 2025:

Month	Date
August	12
December	2

The indices can be found at the national databases in Denmark, Sweden, and Finland 2-3 days after they have been published by Interbull.

Regards
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