



Base Change Summary - April 2022

March 19, 2022

Each year, the genetic base used to express genetic evaluations in Canada is updated in conjunction with the first official release.

The definition of each genetic base used is therefore as follows:

Breed(s)	Traits	Genetic Base Definition Used
All	Production	Cows born during a 3-year period centred seven years ago (2014, 2015 or 2016) that have test day records in the Canadian Test Day Model genetic evaluation analysis. The same base group is also used for Pro\$.
Holstein	Conformation	Proven bulls born in the most recent complete 10-year period (2007 to 2016).
Coloured	Conformation	Proven bulls born in the most recent complete 15-year period (2002 to 2016). For Canadienne and Milking Shorthorn breeds, the base period starts with proven bulls born in 1984 and for the Guernsey breed it starts with proven bulls born in 1994.

The table below indicates the amount of base change realized in 2022 compared to 2021 for each trait and breed. For LPI, the following base adjustments reflect the change to the new scale with half the variance compared to previous years.

Base Changes for 2022 Versus 2021

	AY	BS	CN	GU	HO	JE	MS
LPI ¹	0	0	0	0	0	0	0
Milk (kg)	58	36	-35	72	107	42	33
Fat (kg)	2.5	1.8	-1.4	0.4	5.5	2.7	1.9
Protein (kg)	2.5	1.6	-0.9	1.9	4.4	2.0	1.0
Conformation ³	0.49	0.11	0.12	0.07	0.83	0.17	0.20
Mammary System ³	0.44	0.03	0.10	0.02	0.97	0.21	0.03
Feet & Legs ³	0.49	0.20	0.23	0.17	0.50	-0.07	0.20
Dairy Strength ³	0.39	0.05	0.09	-0.04	0.17	0.12	0.41
Rump ³	0.00	0.22	0.15	0.06	0.01	0.00	0.30
Herd Life ²	0.40	0.21	0.23	-0.06	0.65	0.15	0.20
Somatic Cell Score ²	0.28	0.05	0.28	0.08	0.66	0.23	0.17
Daughter Fertility ²	-0.02	-0.04	-0.12	0.05	0.62	0.18	-0.03

1 - Base change for LPI is set to zero since it is already reflected by the

change in the “Constant” included in the LPI formula.

2 - Traits expressed on scale of Relative Breeding Values (RBV).

3 - The base change for Conformation traits are based on genetic evaluations calculated using daughter classifications and not composite indexes as introduced in April 2021

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