

Base Change Summary - April 2023

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 (2015, 2016 or 2017) 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 (2008 to 2017).
Coloured	Conformation	Proven bulls born in the most recent complete 15-year period (2003 to 2017). 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 2023 compared to 2022 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 2023 Versus 2022

	AY	BS	CN	GU	HO	JE	MS
LPI ¹	0	0	0	0	0	0	0
Milk (kg)	74	60	37	91	111	59	-12
Fat (kg)	3.6	2.8	1.0	3.1	5.1	3.4	0.3
Protein (kg)	3.1	2.4	0.9	2.4	4.5	2.5	0.0
Conformation ³	0.44	0.11	0.12	0.31	0.71	0.14	0.16
Mammary System ³	0.48	0.18	0.10	0.17	0.79	0.18	0.15
Feet & Legs ³	0.28	0.08	0.13	0.19	0.44	0.00	0.13
Dairy Strength ³	0.33	-0.16	0.06	0.27	0.19	0.08	0.20
Rump ³	0.14	0.04	-0.08	0.12	0.07	0.02	0.04
Herd Life ²	0.36	0.07	0.00	0.19	0.70	0.12	-0.08
Somatic Cell Score ²	0.12	0.02	0.07	0.27	0.75	0.22	0.40
Daughter Fertility ²	-0.07	0.11	-0.04	0.09	0.74	0.14	0.06

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.