

**Provincial genetic trends by birth year for Holstein cows**  
**Lactanet Canada, August 2023**

**Prince Edward Island**

Year	Cows	LPI	Milk	Fat	Protein	Fat%	Protein%	Pers	SCS	Conf	DS	F&L	MS	Rump	HL	DF	DCA
2010	2418	1943	-637	-30.3	-26.6	-0.05	-0.04	97.9	97.1	-4.3	0.3	-2.9	-5.7	0.6	96.0	98.0	96.2
2011	2192	2035	-542	-25.0	-23.5	-0.03	-0.04	97.5	97.2	-2.9	1.0	-1.8	-4.5	1.2	96.6	97.7	97.1
2012	2354	2084	-523	-22.1	-20.9	-0.01	-0.02	97.5	97.2	-2.2	1.2	-1.4	-3.7	1.2	96.8	97.6	97.4
2013	2333	2166	-347	-18.0	-15.2	-0.04	-0.03	97.8	97.6	-1.5	1.3	-1.0	-2.8	1.3	97.3	97.8	97.6
2014	2352	2266	-244	-10.6	-10.4	-0.01	-0.02	98.2	98.3	-0.7	1.2	-0.1	-2.1	1.5	98.0	98.3	97.9
2015	2389	2349	-150	-5.7	-5.5	0.01	-0.00	98.7	99.0	0.1	1.6	0.4	-1.2	1.6	98.6	98.2	98.4
2016	2402	2454	-0	2.0	0.6	0.02	0.01	98.6	99.3	0.8	1.6	1.0	-0.4	1.6	99.3	98.7	99.3
2017	2075	2556	100	9.4	6.3	0.05	0.03	99.1	99.9	1.7	1.9	1.4	0.5	1.7	100.0	99.0	99.9
2018	2059	2635	263	15.2	11.5	0.05	0.02	99.4	100.2	2.1	1.8	1.5	1.2	2.0	100.4	99.4	100.4
2019	1886	2726	272	23.0	15.3	0.11	0.05	99.5	100.9	2.8	2.1	2.1	1.7	2.2	101.1	99.6	100.7
2020	1581	2840	428	34.8	23.2	0.16	0.07	99.8	101.0	3.4	2.6	2.7	2.2	2.4	101.3	99.7	100.9

Notes:

1. Based on all cows with both production and type indexes.
2. Production in kg EBV units and conformation in EBV points.
3. Conformation indexes based on first lactation classifications of each cow.

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**Nova Scotia**

Year	Cows	LPI	Milk	Fat	Protein	Fat%	Protein%	Pers	SCS	Conf	DS	F&L	MS	Rump	HL	DF	DCA
2010	3176	1962	-530	-27.8	-23.6	-0.06	-0.04	97.3	97.1	-4.9	-0.1	-3.4	-6.2	0.5	96.1	98.8	96.9
2011	2970	2037	-496	-23.7	-21.3	-0.04	-0.03	97.3	97.3	-3.8	0.2	-2.4	-5.1	0.7	96.9	98.4	97.7
2012	2853	2141	-436	-17.9	-16.8	-0.01	-0.01	97.3	97.5	-2.4	0.9	-1.3	-3.8	1.0	97.3	98.6	98.1
2013	2878	2228	-260	-12.2	-11.4	-0.01	-0.02	97.5	98.0	-1.6	0.9	-0.6	-3.0	1.3	97.8	98.6	98.3
2014	2967	2290	-163	-8.7	-7.7	-0.02	-0.02	98.3	98.6	-1.2	0.8	-0.3	-2.4	1.0	98.4	98.9	98.5
2015	3080	2382	-89	-2.5	-3.0	0.01	0.00	98.4	99.1	-0.2	1.3	0.4	-1.5	1.3	99.0	98.9	99.0
2016	2843	2486	39	4.6	2.7	0.03	0.01	98.7	99.4	0.5	1.2	1.0	-0.8	1.5	99.8	99.6	99.9
2017	2665	2579	162	10.1	7.2	0.04	0.02	99.1	100.1	1.6	1.5	1.4	0.5	2.2	100.4	99.6	100.2
2018	2605	2651	232	15.2	11.0	0.06	0.03	99.5	100.4	2.3	1.6	1.9	1.3	2.5	100.8	99.7	100.7
2019	2369	2759	349	25.0	18.0	0.10	0.05	99.9	100.9	2.9	1.8	2.2	1.9	2.6	101.4	100.0	101.2
2020	1976	2856	522	34.8	25.0	0.13	0.06	100.0	100.9	3.7	2.7	2.8	2.4	2.9	101.4	99.9	101.4

Notes:

1. Based on all cows with both production and type indexes.
2. Production in kg EBV units and conformation in EBV points.
3. Conformation indexes based on first lactation classifications of each cow.

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**Lactanet Canada, August 2023**

**New Brunswick**

Year	Cows	LPI	Milk	Fat	Protein	Fat%	Protein%	Pers	SCS	Conf	DS	F&L	MS	Rump	HL	DF	DCA
2010	2405	1923	-547	-29.1	-23.7	-0.07	-0.04	97.3	97.1	-5.4	-0.2	-3.4	-6.7	0.1	95.7	98.3	96.6
2011	2219	2014	-470	-23.8	-21.2	-0.05	-0.04	97.2	97.0	-4.0	0.4	-2.3	-5.5	0.8	96.4	98.1	97.3
2012	2168	2089	-462	-19.0	-18.6	-0.01	-0.02	97.3	97.2	-2.8	0.8	-1.5	-4.2	0.9	96.7	97.8	97.6
2013	2115	2184	-287	-14.6	-12.7	-0.03	-0.02	97.5	97.8	-1.9	1.0	-0.9	-3.2	1.0	97.3	98.2	98.0
2014	1978	2276	-234	-8.4	-9.0	0.01	-0.01	97.9	98.3	-1.3	0.7	-0.2	-2.5	1.2	98.2	98.6	98.5
2015	2062	2355	-116	-3.9	-4.2	0.01	-0.00	98.4	98.9	-0.3	1.2	0.3	-1.5	1.3	98.6	98.5	98.5
2016	2087	2442	-12	2.7	-0.3	0.03	0.00	98.4	99.2	0.4	1.3	0.7	-0.8	1.6	99.4	99.0	99.3
2017	1843	2531	70	8.2	4.0	0.05	0.01	98.8	99.9	1.2	1.5	1.1	0.1	1.8	100.1	99.3	99.8
2018	1695	2623	156	14.5	8.2	0.08	0.02	99.2	100.1	2.2	1.6	1.7	1.2	2.1	100.7	99.4	100.5
2019	1529	2712	241	22.1	14.5	0.11	0.05	99.6	100.6	2.6	1.7	2.2	1.6	2.3	101.1	99.8	100.9
2020	1214	2797	380	29.0	18.8	0.13	0.05	99.7	100.8	3.6	2.5	2.7	2.5	2.4	101.3	99.6	101.1

Notes:

1. Based on all cows with both production and type indexes.
2. Production in kg EBV units and conformation in EBV points.
3. Conformation indexes based on first lactation classifications of each cow.

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**Lactanet Canada, August 2023**

**Quebec**

Year	Cows	LPI	Milk	Fat	Protein	Fat%	Protein%	Pers	SCS	Conf	DS	F&L	MS	Rump	HL	DF	DCA
2010	68022	1960	-477	-26.6	-21.1	-0.07	-0.04	97.5	97.0	-5.3	-0.6	-3.3	-6.4	0.2	95.9	98.6	96.6
2011	67137	2038	-441	-22.9	-18.9	-0.05	-0.03	97.5	97.2	-4.2	-0.3	-2.5	-5.3	0.4	96.8	98.5	97.5
2012	67768	2128	-394	-17.3	-15.5	-0.01	-0.02	97.8	97.5	-3.0	0.2	-1.6	-4.2	0.7	97.2	98.6	97.9
2013	63384	2220	-248	-12.7	-10.2	-0.02	-0.01	97.7	98.2	-2.0	0.4	-0.9	-3.1	1.0	97.9	98.8	98.0
2014	61561	2306	-175	-7.8	-6.4	-0.00	-0.00	98.4	98.9	-1.3	0.4	-0.2	-2.4	1.1	98.7	99.1	98.4
2015	60232	2388	-70	-2.8	-2.5	0.00	0.00	98.5	99.3	-0.2	1.0	0.5	-1.4	1.3	99.2	99.1	98.9
2016	56749	2476	66	3.0	2.4	0.01	0.00	98.7	99.8	0.4	1.2	0.9	-0.8	1.3	99.9	99.7	99.6
2017	54170	2560	216	6.8	7.3	-0.01	0.00	99.1	100.4	1.4	1.3	1.5	0.4	1.9	100.5	99.5	100.0
2018	51916	2655	270	14.3	11.9	0.04	0.02	99.6	100.4	2.3	1.3	1.9	1.3	2.3	101.1	99.8	100.6
2019	45280	2747	402	21.6	18.0	0.06	0.04	99.8	101.2	2.9	1.7	2.3	2.0	2.3	101.6	100.1	101.1
2020	41306	2830	488	30.5	22.8	0.10	0.05	99.9	101.2	3.5	2.3	2.8	2.5	2.3	101.7	100.0	101.5

Notes:

1. Based on all cows with both production and type indexes.
2. Production in kg EBV units and conformation in EBV points.
3. Conformation indexes based on first lactation classifications of each cow.

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**Ontario**

Year	Cows	LPI	Milk	Fat	Protein	Fat%	Protein%	Pers	SCS	Conf	DS	F&L	MS	Rump	HL	DF	DCA
2010	56273	1919	-588	-29.1	-24.8	-0.05	-0.04	97.4	96.9	-5.3	-0.4	-3.4	-6.6	0.2	95.8	98.3	96.5
2011	55307	2001	-531	-23.9	-22.1	-0.03	-0.03	97.3	97.1	-4.2	0.1	-2.6	-5.6	0.7	96.5	98.2	97.4
2012	54590	2089	-464	-18.9	-18.4	-0.01	-0.02	97.4	97.2	-3.0	0.6	-1.8	-4.3	0.8	96.8	98.1	97.8
2013	53088	2166	-319	-14.5	-13.5	-0.01	-0.02	97.4	97.5	-2.2	0.6	-1.2	-3.5	0.8	97.2	98.2	98.0
2014	52280	2257	-235	-9.3	-9.6	0.00	-0.01	97.9	98.3	-1.4	0.7	-0.3	-2.7	1.1	98.0	98.5	98.3
2015	53530	2341	-146	-4.6	-5.4	0.01	-0.00	98.1	98.8	-0.5	1.1	0.2	-1.7	1.3	98.7	98.6	98.7
2016	51380	2426	-2	1.2	-0.5	0.02	-0.00	98.3	99.1	0.2	1.2	0.6	-1.0	1.4	99.2	98.9	99.4
2017	47842	2518	97	5.8	4.2	0.02	0.01	98.7	99.9	1.1	1.4	1.2	0.0	1.8	100.0	99.2	99.9
2018	45424	2606	193	11.6	8.8	0.04	0.02	99.0	100.0	2.0	1.5	1.7	0.9	2.1	100.5	99.6	100.5
2019	40913	2695	267	18.3	14.1	0.07	0.04	99.3	100.5	2.7	1.8	2.3	1.6	2.3	101.0	99.8	100.9
2020	35046	2795	419	27.7	20.2	0.10	0.05	99.5	100.8	3.5	2.5	2.8	2.2	2.6	101.3	99.8	101.2

Notes:

1. Based on all cows with both production and type indexes.
2. Production in kg EBV units and conformation in EBV points.
3. Conformation indexes based on first lactation classifications of each cow.

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**Manitoba**

Year	Cows	LPI	Milk	Fat	Protein	Fat%	Protein%	Pers	SCS	Conf	DS	F&L	MS	Rump	HL	DF	DCA
2010	5987	1902	-562	-32.2	-25.8	-0.09	-0.05	97.4	96.7	-6.0	-1.6	-3.8	-6.8	-0.4	96.2	99.2	96.9
2011	5926	1976	-477	-26.9	-22.2	-0.07	-0.05	97.2	97.0	-5.1	-1.1	-3.1	-6.1	0.0	96.7	99.1	97.7
2012	6202	2061	-408	-22.3	-18.3	-0.05	-0.03	97.4	97.2	-4.1	-0.9	-2.3	-5.0	0.3	97.2	99.2	98.1
2013	5492	2153	-242	-17.4	-12.5	-0.07	-0.03	97.6	97.7	-3.2	-0.7	-1.7	-4.1	0.3	97.8	99.4	98.3
2014	5512	2222	-176	-13.5	-9.3	-0.05	-0.02	98.0	98.1	-2.6	-0.6	-1.2	-3.3	0.4	98.3	99.5	98.7
2015	5630	2310	-95	-8.3	-5.4	-0.03	-0.02	98.2	98.7	-1.7	-0.2	-0.6	-2.4	0.5	99.0	99.8	99.2
2016	5343	2400	18	-2.5	-0.7	-0.02	-0.01	98.7	98.9	-0.7	-0.0	0.0	-1.5	0.9	99.6	100.0	99.7
2017	4910	2508	150	4.1	4.8	-0.01	-0.00	99.1	99.6	0.3	0.2	0.4	-0.3	1.1	100.3	100.3	100.3
2018	4579	2593	224	11.6	9.7	0.03	0.02	99.3	99.7	1.1	0.5	1.1	0.5	1.4	100.6	100.1	100.7
2019	4313	2681	342	17.7	15.2	0.04	0.03	99.7	100.3	1.8	0.8	1.6	1.1	1.7	101.2	100.4	101.0
2020	3421	2797	494	30.3	23.0	0.10	0.05	99.8	100.6	2.6	1.7	1.8	1.7	2.1	101.4	100.4	101.5

Notes:

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2. Production in kg EBV units and conformation in EBV points.
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**Saskatchewan**

Year	Cows	LPI	Milk	Fat	Protein	Fat%	Protein%	Pers	SCS	Conf	DS	F&L	MS	Rump	HL	DF	DCA
2010	3966	1880	-647	-36.2	-28.6	-0.09	-0.05	96.9	96.4	-5.7	-1.1	-3.7	-6.6	-0.2	96.0	99.2	96.8
2011	3699	1958	-549	-31.4	-24.4	-0.08	-0.05	97.0	96.7	-4.6	-0.5	-2.7	-5.8	0.2	96.4	98.9	97.3
2012	3958	2036	-490	-26.1	-21.3	-0.06	-0.04	97.1	96.9	-3.6	-0.1	-2.2	-4.7	0.6	96.9	98.7	97.8
2013	3623	2115	-415	-22.5	-17.9	-0.05	-0.03	97.1	97.4	-2.7	0.1	-1.4	-3.8	0.6	97.5	98.9	98.1
2014	3236	2212	-262	-16.1	-12.7	-0.05	-0.03	97.5	98.0	-1.9	0.3	-0.7	-3.0	0.9	98.2	99.2	98.6
2015	3531	2286	-197	-10.9	-8.2	-0.02	-0.01	98.1	98.5	-1.1	0.4	-0.3	-2.1	0.8	98.6	99.1	98.8
2016	3818	2382	-90	-4.7	-2.9	-0.00	0.00	98.3	99.2	-0.5	0.4	0.2	-1.3	0.7	99.4	99.4	99.5
2017	3841	2455	-11	-0.5	0.6	0.01	0.01	98.9	99.6	0.4	0.6	0.6	-0.3	1.0	99.9	99.6	99.8
2018	3978	2549	91	5.3	4.6	0.02	0.01	99.0	99.7	1.4	0.8	1.3	0.8	1.4	100.4	99.9	100.4
2019	3550	2640	162	12.5	10.2	0.06	0.04	99.3	100.2	2.0	1.0	1.6	1.5	1.5	101.0	100.2	101.0
2020	3203	2748	291	23.2	17.7	0.11	0.06	99.6	100.6	2.9	1.7	1.9	2.3	1.7	101.2	100.0	101.3

Notes:

1. Based on all cows with both production and type indexes.
2. Production in kg EBV units and conformation in EBV points.
3. Conformation indexes based on first lactation classifications of each cow.

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**Alberta**

Year	Cows	LPI	Milk	Fat	Protein	Fat%	Protein%	Pers	SCS	Conf	DS	F&L	MS	Rump	HL	DF	DCA
2010	13653	1899	-584	-33.7	-26.0	-0.09	-0.05	96.9	96.7	-5.8	-1.6	-3.7	-6.5	-0.5	96.2	99.1	96.9
2011	13130	1980	-480	-27.6	-21.8	-0.08	-0.04	97.0	96.8	-5.0	-1.0	-3.1	-5.8	-0.1	96.6	98.9	97.5
2012	13381	2057	-428	-23.2	-19.0	-0.05	-0.03	97.0	97.1	-3.9	-0.6	-2.3	-4.8	0.2	97.2	98.9	98.0
2013	12409	2129	-321	-19.5	-15.2	-0.06	-0.03	97.4	97.5	-3.1	-0.5	-1.7	-4.0	0.4	97.7	99.1	98.1
2014	12137	2217	-227	-14.4	-10.8	-0.04	-0.02	97.6	98.1	-2.2	-0.2	-0.9	-3.1	0.6	98.2	99.2	98.4
2015	12573	2283	-165	-11.2	-7.7	-0.04	-0.01	97.9	98.5	-1.5	-0.1	-0.5	-2.3	0.6	98.9	99.4	98.8
2016	11753	2374	-53	-4.6	-2.9	-0.02	-0.01	98.2	98.9	-0.7	0.1	0.0	-1.5	0.8	99.5	99.7	99.5
2017	11072	2468	23	0.8	2.2	0.01	0.01	98.7	99.6	0.2	0.2	0.4	-0.4	0.9	100.1	99.9	99.9
2018	10674	2550	132	7.0	7.4	0.02	0.03	98.9	99.7	0.9	0.5	0.9	0.3	1.0	100.4	100.0	100.5
2019	9821	2642	221	15.4	12.4	0.06	0.04	99.3	100.2	1.5	0.8	1.3	0.9	1.2	100.9	100.3	101.0
2020	9179	2743	347	25.5	19.5	0.11	0.06	99.3	100.4	2.1	1.4	1.7	1.5	1.3	101.1	100.3	101.3

Notes:

1. Based on all cows with both production and type indexes.
2. Production in kg EBV units and conformation in EBV points.
3. Conformation indexes based on first lactation classifications of each cow.



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**Lactanet Canada, August 2023**

**British Columbia**

Year	Cows	LPI	Milk	Fat	Protein	Fat%	Protein%	Pers	SCS	Conf	DS	F&L	MS	Rump	HL	DF	DCA
2010	11286	1905	-545	-33.0	-25.3	-0.10	-0.05	97.2	96.5	-5.6	-1.2	-3.7	-6.3	-0.2	95.9	98.7	96.6
2011	11478	2000	-445	-27.0	-21.0	-0.08	-0.05	97.3	96.9	-4.4	-0.4	-2.7	-5.4	0.3	96.6	98.5	97.6
2012	11916	2074	-424	-22.6	-18.8	-0.05	-0.03	97.4	97.1	-3.3	-0.2	-1.9	-4.3	0.5	97.1	98.6	98.0
2013	12057	2156	-291	-17.7	-14.1	-0.05	-0.03	97.6	97.8	-2.6	-0.1	-1.3	-3.5	0.6	97.7	98.7	98.1
2014	11818	2249	-163	-12.6	-8.7	-0.05	-0.02	98.0	98.4	-1.8	-0.0	-0.6	-2.8	0.8	98.4	99.0	98.5
2015	11858	2335	-83	-7.8	-4.8	-0.03	-0.01	98.3	98.9	-0.9	0.4	-0.1	-1.9	1.0	99.0	99.3	99.0
2016	10762	2438	50	0.3	0.9	-0.01	-0.00	98.6	99.3	-0.1	0.6	0.4	-1.0	1.2	99.7	99.6	99.7
2017	10121	2523	154	4.9	5.3	-0.00	0.00	98.9	99.8	0.8	0.8	0.9	-0.0	1.5	100.3	99.8	100.2
2018	9268	2617	251	12.5	11.4	0.03	0.02	99.2	100.0	1.4	0.9	1.3	0.7	1.5	100.7	100.1	100.9
2019	8501	2731	331	23.4	18.0	0.10	0.06	99.4	100.5	2.1	1.2	1.7	1.4	1.7	101.2	100.5	101.4
2020	7331	2826	451	32.7	23.8	0.13	0.07	99.7	100.7	2.9	2.0	2.2	2.0	2.1	101.4	100.4	101.7

Notes:

1. Based on all cows with both production and type indexes.
2. Production in kg EBV units and conformation in EBV points.
3. Conformation indexes based on first lactation classifications of each cow.

**Provincial genetic trends by birth year for Holstein cows**  
**Lactanet Canada, August 2023**

**Newfoundland**

Year	Cows	LPI	Milk	Fat	Protein	Fat%	Protein%	Pers	SCS	Conf	DS	F&L	MS	Rump	HL	DF	DCA
2010	257	1834	-617	-35.8	-30.6	-0.10	-0.08	97.5	96.8	-5.8	-1.5	-3.9	-6.5	-0.3	95.9	98.6	96.3
2011	237	1948	-503	-29.7	-23.3	-0.09	-0.05	97.3	97.4	-5.3	-1.4	-3.2	-6.1	-0.2	97.0	99.1	97.7
2012	313	2063	-367	-22.2	-17.6	-0.06	-0.04	97.2	97.1	-3.5	-0.2	-1.8	-4.5	0.4	97.0	98.4	98.0
2013	311	2143	-332	-17.8	-14.9	-0.04	-0.03	97.4	97.7	-3.2	-0.9	-1.6	-3.8	-0.1	97.8	99.2	98.0
2014	363	2272	-195	-11.1	-7.6	-0.03	-0.01	98.2	98.6	-2.0	-0.4	-0.9	-2.8	0.5	98.7	99.8	98.6
2015	374	2370	82	-2.9	-0.3	-0.05	-0.02	98.2	99.6	-1.4	-0.1	-0.2	-2.1	-0.2	99.3	99.5	99.3
2016	391	2490	251	7.7	7.6	-0.01	-0.00	99.2	99.8	-0.9	-0.2	0.1	-1.4	0.1	100.1	100.1	100.1
2017	381	2624	411	17.2	16.5	0.02	0.02	98.7	100.2	0.4	0.2	0.6	0.0	0.4	100.6	100.1	100.4
2018	416	2684	483	21.8	20.8	0.03	0.04	99.5	100.1	0.7	0.2	0.6	0.6	0.7	100.7	100.5	101.4
2019	320	2795	636	29.9	26.7	0.05	0.04	99.2	100.7	2.0	1.1	1.6	1.4	1.4	101.4	100.6	101.7
2020	258	2915	820	45.5	35.8	0.12	0.06	99.6	101.1	2.6	2.8	2.0	1.4	2.0	101.2	100.2	101.8

Notes:

1. Based on all cows with both production and type indexes.
2. Production in kg EBV units and conformation in EBV points.
3. Conformation indexes based on first lactation classifications of each cow.