

Inbreeding Update - August 2015 -

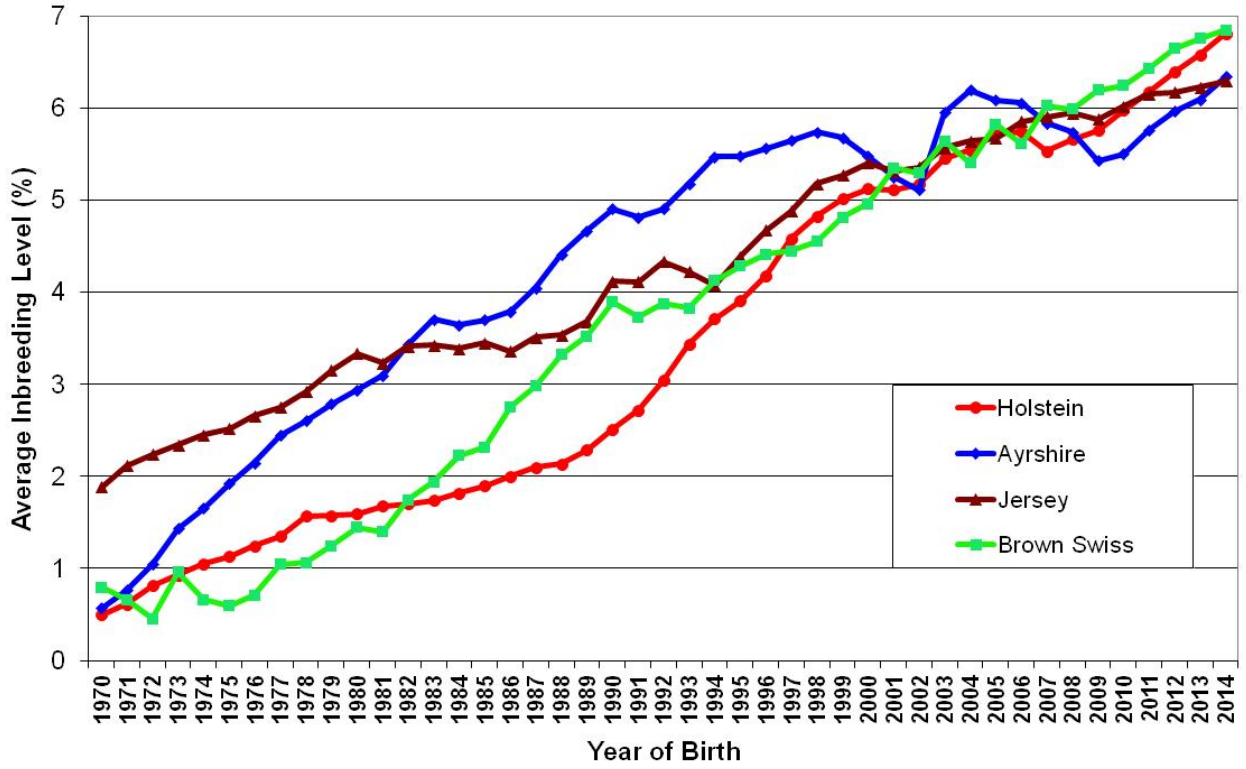
Each year, based on official animal registration and pedigree information within its database, Canadian Dairy Network (CDN) computes current statistics related to the level of inbreeding within the Canadian cow population of each dairy breed. In this way, the average level of inbreeding for animals born in the most recent complete calendar year as well as trends in the level of inbreeding over time can easily be monitored. The following table is based on females born in Canada since 1970 up to and including registered heifers born in 2014.

Current Inbreeding Level and Change in Average Inbreeding by Breed						
Breed	Average % Inbreeding for 2014	Average Annual Increase in Average Inbreeding Percentage by Time Period				
		1970-1980	1980-1990	1990-2000	2000-2010	2010-2014
Ayrshire	6.34	.24	.20	.06	.00	.21
Brown Swiss	6.85	.07	.24	.11	.13	.15
Canadienne	9.03	.16	.22	.30	.19	.05
Guernsey	7.43	.06	.12	.15	.22	.09
Holstein	6.81	.11	.09	.26	.09	.21
Jersey	6.29	.15	.08	.13	.06	.07
Milking Shorthorn	2.72	.01	.03	.27	-.13	.12

Among the four major dairy breeds in Canada, all have an average inbreeding level between 6.29% (Jersey) and 6.85% (Brown Swiss) for heifers born in 2014. The Ayrshire breed has well controlled the rate of increase in inbreeding from 2000 to 2010 with no net change during that decade. In this regard, Jersey and Holstein also did reasonably well at +.06% and +.09% per year, respectively. More recently, however, the Jersey trend has been quite stable whereas the other major breeds are experiencing a steady increase for animals born since 2010. Among the breeds with the smallest populations in Canada, Canadienne continues to have the highest average inbreeding, now at 9.03% for females born in 2014. Guernsey heifers born in 2014 average 7.43% inbreeding and the average rate of increase during the past few years has also been moderately high at +.09% per year. For Milking Shorthorn, heifers born in 2014 average 2.72% inbreeding based on available pedigree data for the breed but the rate of increase has been slowly on the rise for heifers born since 2012.

Below is a graph showing the inbreeding trend for the four largest dairy breeds based on registered females born in Canada since 1970 as well as a specific graph for the Holstein population alone. For further information, please feel free to contact Canadian Dairy Network (CDN).

Inbreeding Trends in Canadian Dairy Breeds



Inbreeding Trend in Canadian Holsteins

