April 2026 Changes to the LPI Production Subindex Amid Milk Pricing Changes

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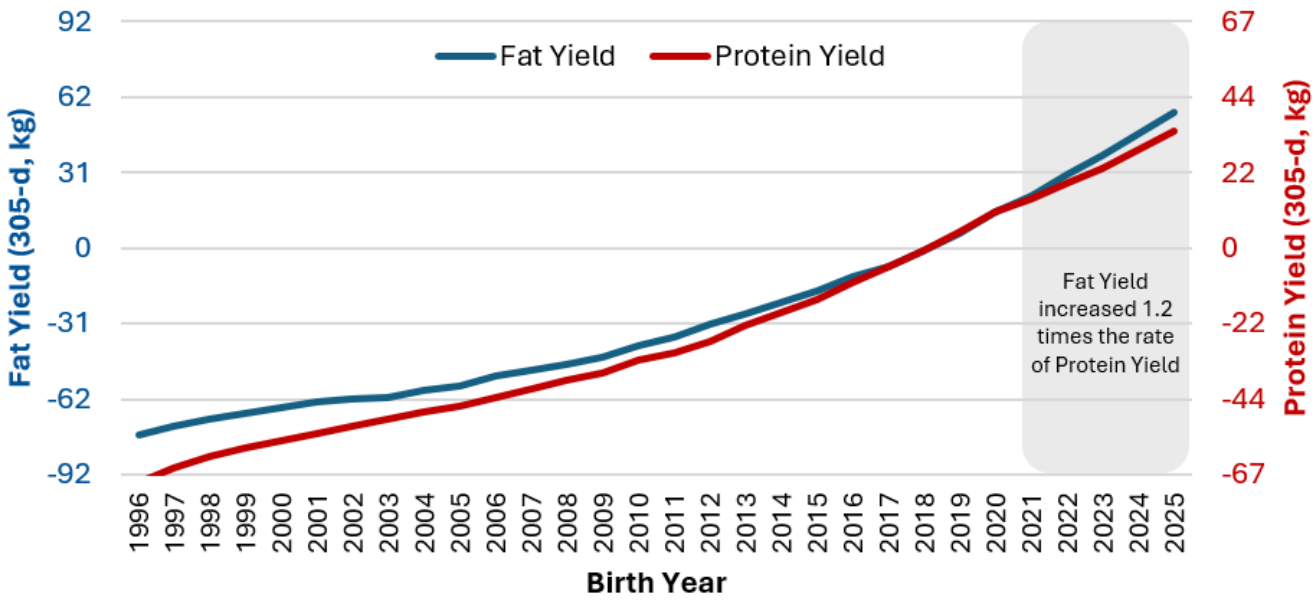
The growing demand for high-protein foods is reshaping processor requirements and influencing how milk is valued at the farm level. With pricing changes on the horizon, dairy farmers will need to adjust both their genetic strategies and on farm practices to fully capture this opportunity. In this article, we take a genetic perspective on milk components for the Holstein, Jersey and Ayrshire breeds. We examine genetic trends and outline the April 2026 changes to the relative emphasis of Fat Yield and Protein Yield within the Production subindex of the Lifetime Performance Index (LPI).

Genetic Trends for Fat Yield and Protein Yield

To evaluate genetic progress for Fat Yield and Protein Yield over the past 30 years, Lactanet analyzed December 2025 data for registered Canadian

Holstein, Jersey and Ayrshire females. Figures 1 to 3 present the average genetic values, Parent Averages (PA) and Estimated Breeding Values (EBVs), by birth year for 305-day Fat Yield and Protein Yield for each breed. These values are expressed as deviations from the average genetic evaluation for all cows born during the base period (2017, 2018, 2019). Take note of the different scales for the two traits in each graph, the scale for Fat Yield is on the left axis while the scale for Protein Yield appears on the right. Both scales have been standardized so that each line represents one standard deviation. For example, one standard deviation in the Holstein breed for Fat Yield is 31 kg while one standard deviation for Protein Yield is 22 kg.

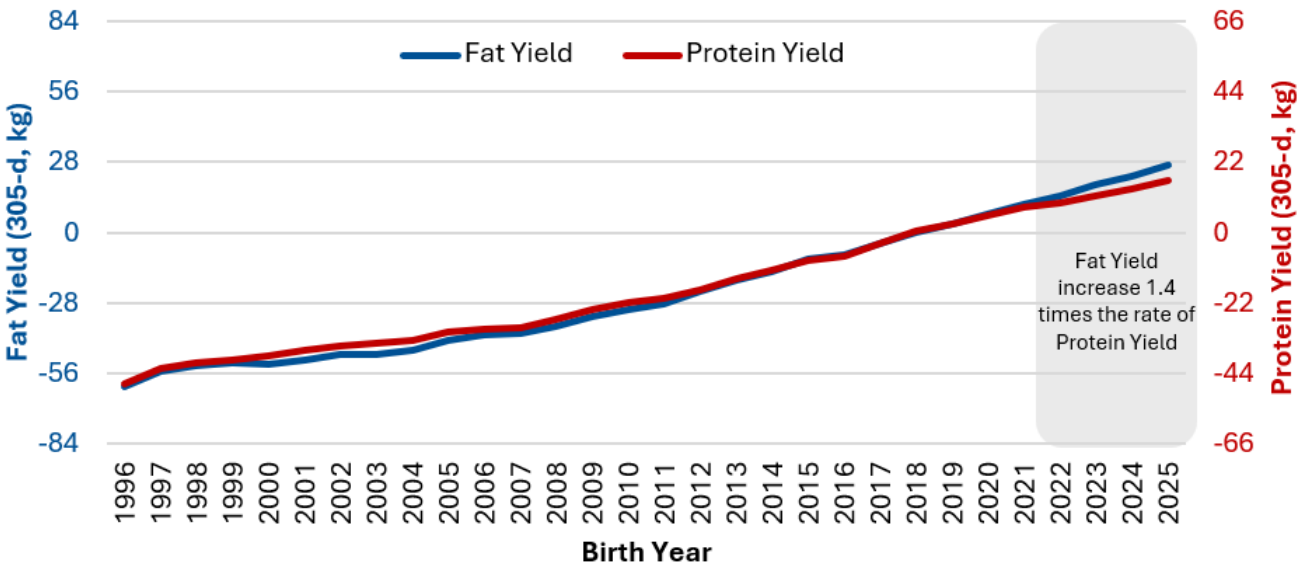
Figure 1: Genetic Trend for Fat Yield and Protein Yield in the Holstein breed



In 2025, the genetic merit for Fat Yield in the Holstein breed reached roughly 56 kg, while Protein Yield reached 34 kg, relative to the base group. Both traits have improved substantially over the past 30 years, reflecting continued emphasis on component yields, particularly fat, in

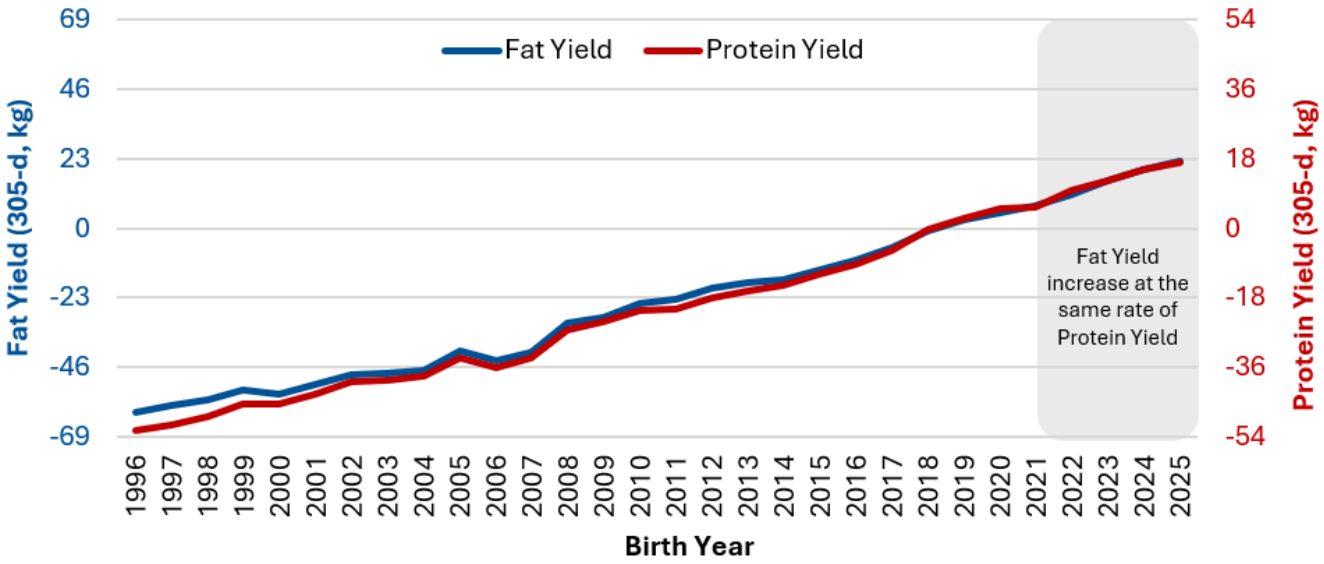
selecting and breeding decisions. Over the last five years, the rate of genetic progress in Fat Yield has been 20% greater than that observed for Protein Yield, highlighting an increasingly uneven response between the two traits.

Figure 2: Genetic Trend for Fat Yield and Protein Yield in the Jersey breed



For the Jersey breed, the genetic merit for Fat Yield reached 27 kg and Protein Yield reached 16 kg in 2025, relative to the base group. Similar to recent trends observed within this population, gains in Fat Yield have outpaced those in Protein Yield in recent years. Over the past five years, genetic progress in Fat Yield has been approximately 40% greater than that achieved for Protein Yield.

Figure 3: Genetic Trend for Fat Yield and Protein Yield in the Ayrshire breed



For the Ayrshire population, genetic merit for Fat Yield reached 22 kg and Protein Yield reached 17 kg in 2025, relative to the base group. Both component traits have shown steady improvement over time, reflecting balanced selection for milk composition. Over the past five years, genetic progress in Fat Yield and Protein Yield has occurred at a similar rate, indicating a more aligned response to selection between the two traits and a relatively stable relationship in their genetic trends.

Using Genetics to Improve Protein Yield

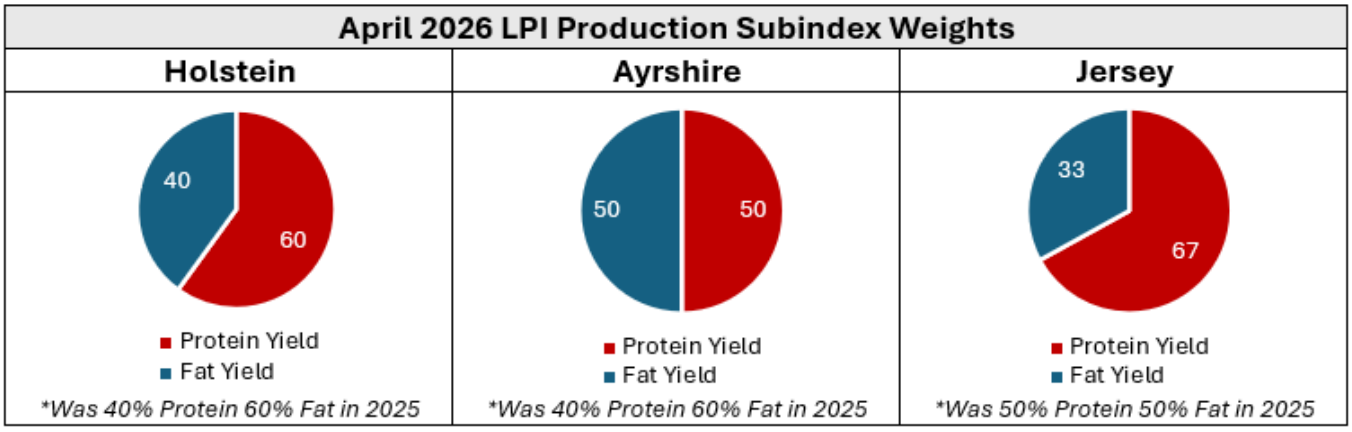
Phenotypic trends closely mirror these genetic patterns, with Fat Yield increasing at a faster rate than Protein Yield. While trends may vary among individual herds, both Fat and Protein Yield have a moderate heritability of 26% for the Holstein breed, meaning that they are influenced by genetic selection. Additionally, a genetic correlation of 64% exists between Fat and Protein Yield indicating that we can improve both traits simultaneously. This relationship should be considered when making mating decisions, as selecting for increased protein will also increase fat.

It is important to remember, however, that genetic change is a long-term investment. The breeding decisions made today will not appear in a

herd’s bulk tank for roughly 5 years or more, once daughters are born, raised, and enter the milking herd. For this reason, the industry must be forward-thinking in breeding programs, ensuring that selection decisions align with long-term production and profitability goals. In a message delivered at the February 25th, 2026, Open Industry Session, the Canadian Dairy Commission advised the industry to stop further improvement of butterfat content relative to protein. This adjustment must be approached carefully to avoid overcorrection, with the objective of achieving a more balanced relationship between fat and protein. Therefore, as the value of protein increases, it is important that selection indexes reflect economic realities and industry priorities.

What’s Changing?

To meet industry goals, changes to the weighting of Fat Yield and Protein Yield in the Production subindex (PI) of the LPI for the Holstein, Jersey, and Ayrshire breeds will be made for the April 2026 proof release. The current PI places a 60% weighting on Fat Yield and a 40% weighting on Protein Yield (60F:40P) for the Holstein and Ayrshire breeds, and 50% Fat Yield 50% Protein Yield (50F:50P) for the Jersey breed. After thorough consultation with breed associations, the Genetic Evaluation Board (GEB), and the Lactanet Board of Directors, the weights will be modified to 40F:60P Protein Yield for Holstein, 50F:50P for Ayrshire, and 33F:67P for Jersey. These modifications will lead to minor reranking of top bulls, favouring those with higher Protein. For each breed, the weights of Fat Yield and Protein Yield are reverting to those from previous Production component of LPI. For example, in 2015 there was a 40% emphasis on Fat Yield and 60% emphasis on Protein Yield in the Production component of LPI for Holsteins.



Other LPI Changes

In addition to modifications within the Production subindex of LPI, the following changes will be implemented to the Health and Welfare subindex:

- For the Holstein breed, Calf Health will be introduced at a weight of 30% resulting in modifications to Mastitis Resistance at 40%, Metabolic Disease to 14%, Hoof Health to 11%, and Cystic Ovaries to 5%
- For the Brown Swiss, Guernsey, Milking Shorthorn, and Canadienne breeds, Metabolic disease will be introduced into the HWI

	Brown Swiss	Guernsey	Milking Shorthorn	Canadienne
Metabolic Disease	10%	50%	25%	50%
Somatic Cell Score	90%	50%	75%	50%

Summary

In summary, long-term genetic trends for Fat Yield and Protein Yield across Canadian dairy breeds demonstrate the success of past selection decisions and the need to periodically reassess index weightings as industry priorities evolve. While fat and protein have both shown gains over the past 30 years, recent trends highlight differences in the rate of genetic progress between these components.

The April 2026 adjustments to the Production subindex of the LPI are intended to better reflect anticipated changes in milk pricing and processor demand, particularly the growing emphasis on protein. These refinements are expected to result in only minor reranking among top animals, while providing breeders with a selection index that remains relevant.

By Hannah Sweett, Ph. D.

Hannah discovered her passion for agriculture during her undergraduate degree at the University of Guelph and through work experience in the dairy industry. She holds a B.Sc. in Molecular Biology and Genetics and a Ph.D. in Animal Genetics, focusing on the genetic improvement of dairy cattle fertility.