



Genetic selection of females: 5 benefits to choosing milk recording for your herd

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It has long been recognized that milk recording provides essential data to improve the genetics of a herd. However, major changes in milk production over the past decade, such as the introduction of genomics and automated milking systems, are challenging this fundamental element. Comments published in social media such as “No more monitoring, I have all the data” or “A.I. centres only use genomics as selection criteria” testify to this.



In the current context and following the launch of Compass, a new genetic management tool, here are the five key advantages to enroll your herd on milk recording to optimize your female genetic selection strategy:

1. To monitor the genetic progression of the herd;
2. To identify the next generation of dams in the herd;
3. To identify genetic strengths and weaknesses and link unsatisfactory performance to genetic selection;
4. To provide a complete inventory of females in the herd for sire selection programs of A.I. organisations;
5. To facilitate the promotion and marketing of the herd (official indexes).

1. To monitor the genetic progression of the herd

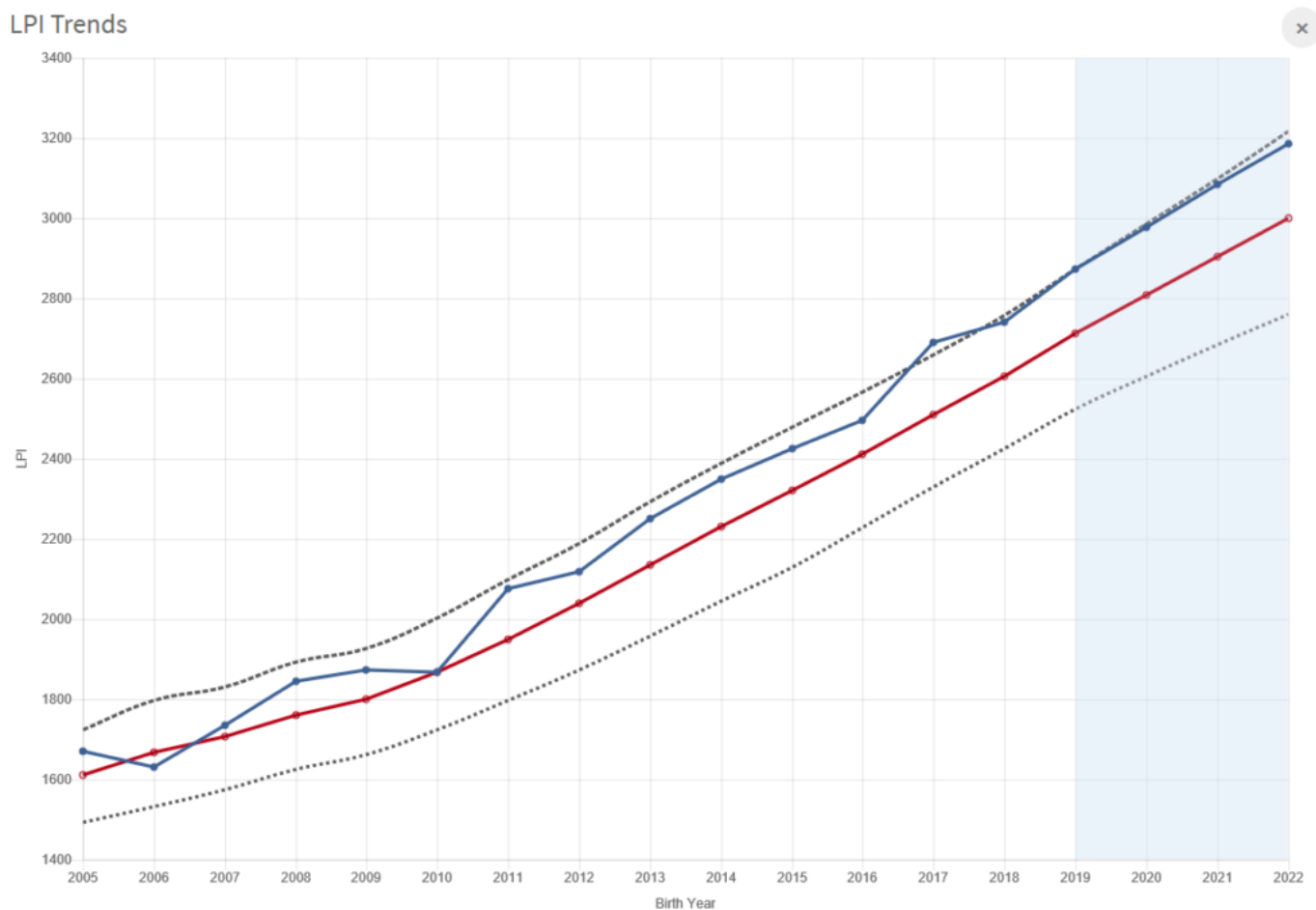
Tracking the herd's progress is essential to improve its performance. It is a basic management principle: to improve, you must measure.

With Compass, herds enrolled on milk recording have access to data that

is much more complete for their herd because the milk recording data is integrated into the herd's genetic data. The genetic values provided are therefore more accurate and the genetic inventory better reflects reality.

Compass provides a wealth of graphs showing progression by genetic criteria. This allows a producer to compare his herd to other Canadian herds to define his selection objectives based on clear indicators.

Example of a graph from Compass which shows a herd's evolution based on LPI (blue line) compared to all Canadian herds (red line).

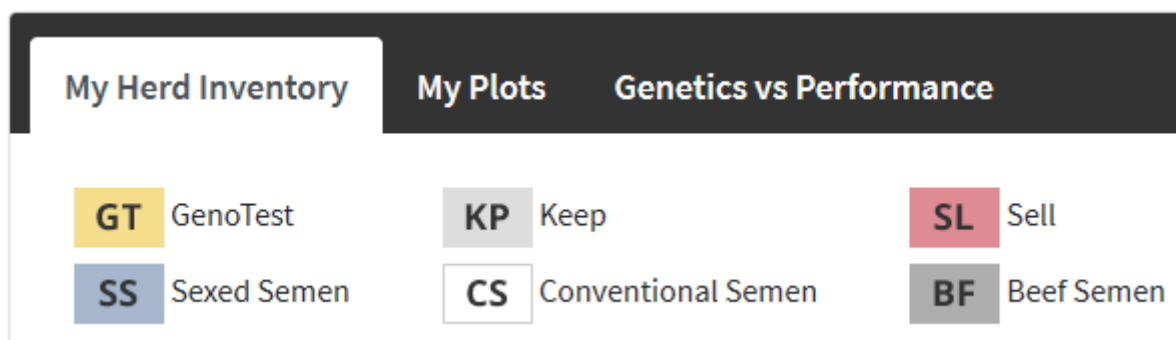


2. To identify the next generation of dams in the herd

With the introduction of sexed semen, producers can determine which females will be bred for the next generation and which females they will use beef semen on. The use of more accurate genetic indexes through milk recording, classification and genomics is important. One of

Compass's main objectives is to help producers select not only the dams but also the females that need to be genotyped in order to make this choice more precise.

The Herd Genetics module of the Compass offers choices for each female in the herd. For females up to one year of age, it suggests that the animal be genotyped, kept in inventory or sold. As for females over a year old, it suggests the use of sexed semen, conventional semen or beef semen.

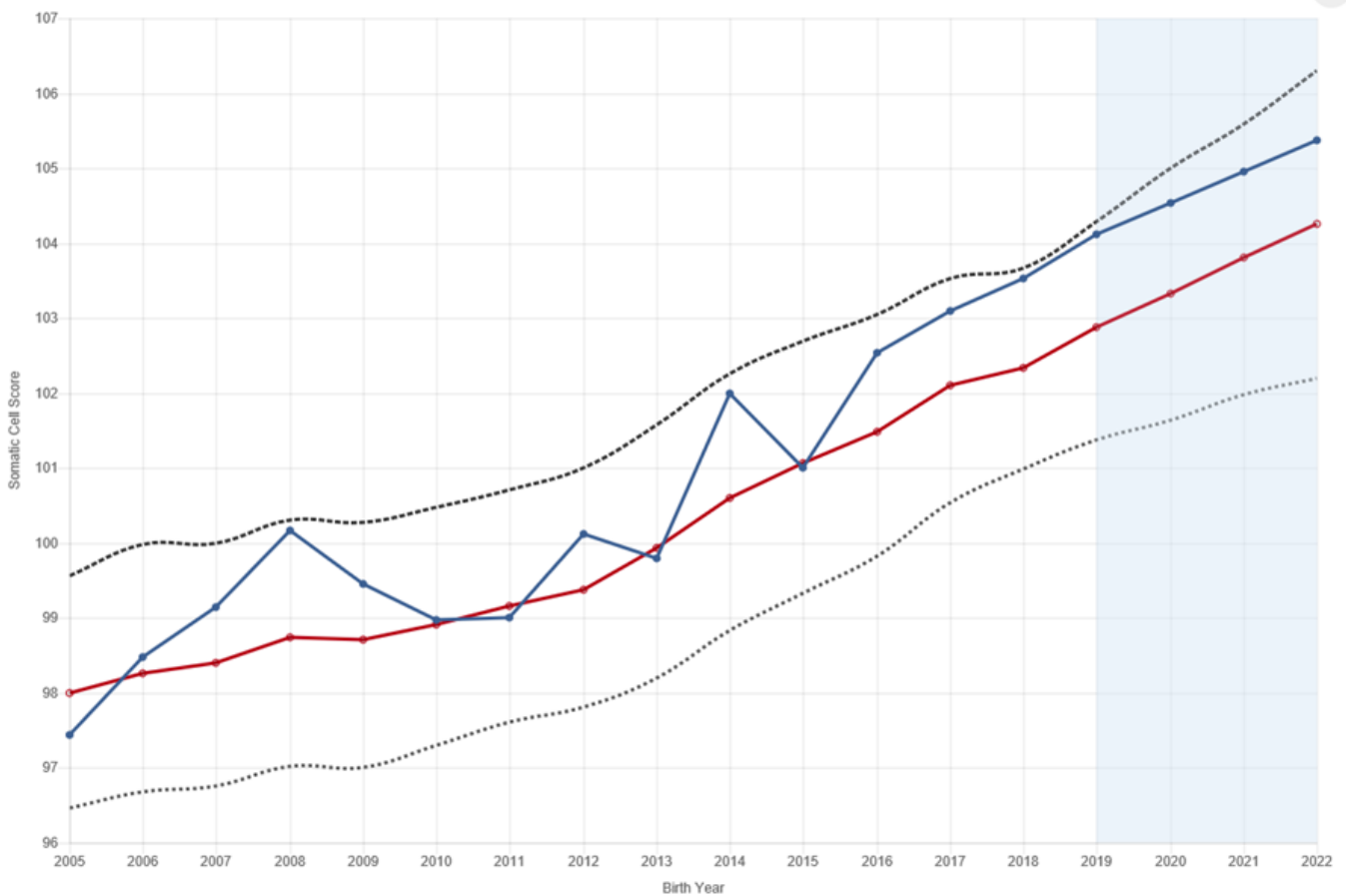


3. To identify genetic strengths and weaknesses and link unsatisfactory performance to genetic selection

Milk recording data is used for herd management, but also to provide input to the calculations of genetic values for many traits such as health and reproductive traits. For herds with unsatisfactory performance (or to explain good performance), comparing the data with the genetic averages of the herd can be part of the solution. For example, a herd whose average SCC of first lactation females is 100 or less will mean that selection requires improvement for this parameter, especially if the herd's SCC is unsatisfactory.

Below is the graph of a herd, selected to reduce SCCs, which has recently risen near the top 10%. For females born in 2017 (first lactation in 2019), herds in the bottom 10% had an average of 100 and less.

Somatic Cell Score



4. To provide a complete inventory of females in the herd for sire selection programs of A.I. organisations

A.I. facilities receive herd files – according to their specific clientele – that allow them to make the best choice of bulls for each female in the herd. These files provide a verified inventory of females in the herd with up-to-date genetic values and include the incidence of undesirable genes and haplotypes.

Some A.I. facilities build an inventory of the herd based on milking software data. With the exception of genotyped animals, the genetic values given are usually based on the average of the parents and in many cases, only the sire's test contributes to this. The inventory is not verified (identification errors are not corrected) and there is no information on recessive genes and undesirable haplotypes to avoid inappropriate sire selection.

5. To facilitate the promotion and marketing of the herd (official indexes)

The official publication of genetic indexes allows the calculated indexes of females rather than the average of the parents to be posted on the Lactanet (cdn.ca) and breed association websites. The publication provides marketing and recognition opportunities for exceptional animals or herds. Improving genetics to have a herd or individuals that rank among the elite is often an important source of motivation for producers.

Milk recording data, both publishable and non-publishable, is used to develop genetic strategies in the Compass tool.

All producers whose herd is enrolled on milk recording, whether or not it meets the requirements to be publishable, have genetic “management” indexes for females that are used to specify genetic strategies in Compass.

A new exclusive Compass web page displays the most recent genetic indexes calculated monthly for all females in inventory, whether or not they come from a herd with publishable indexes.



The information presented here is the most up to date genetic data available based on the latest monthly genetic evaluation release.

**Image from the Compass software.*

To create your own Compass account, go to www.compasscan.ca and enjoy the benefits of this new management tool for your herd today.



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