info Holstein

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PRAIRIES

CONGRÈS NATIONAL HOLSTEIN CONVENTION 2022

Thank You

The 2022 National Holstein Convention was an overwhelming success and worth the wait!

We offer our heartfelt THANKS to...

- Our many many sponsors
- Everyone who volunteered or supported us in some way
- Holstein Canada staff and directors
- The farm tour hosts and their hard-working staff
- The exhibitors and their teams at the show and at home!
- The Sale team and buyers/consigners
- Everyone who planned and executed a tremendous program of events for the Convention and AGM
- Everyone who came to participate, attend and celebrate alongside all of us

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Thank you for supporting us and joining us in Saskatchewan -
we look forward to seeing everyone again soon!

2022 National Holstein Convention Committee

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ABOVE: 6-8, this edition's farm profiles showcase two herds that began genomic testing their females over a decade ago, when the technology was still obscure for many in the industry. On page 22, find out about the essential role of Holstein Canada's Registrar. On page 23, read about this Canadian cow that was nominated Star of the Breed South of the border.

ON THE COVER: Photo courtesy of Jess Martin from Margrove Farms, Elmira, Ontario. She enjoys sharing behind the scenes from their farm life on Instagram at @martin_jess_

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PRESIDENT'S MESSAGE

By Ben Cuthbert, President, Holstein Canada

AS DAIRY PRODUCERS, WE FACE OUR SHARE OF TRIALS AND TRIBULATIONS – with many being out of our control. Canadian producers were among the first to feel the impacts of Russia's invasion on the Ukraine as these two nations are among the world's largest wheat producers, the shock to the market was felt by Canadian producers everywhere, with high demand and prices for Canadian grain. Both Russia and the Ukraine are also amongst the largest exporters of fertilizers which has led to high fertilizer prices. Farm fuel prices have steadily been on the rise since last year, and is now priced around $2.00/litre. Beyond fuel, add in the increased cost of grain and fertilizer the average farm is seeing an increase in cost of approximately 40%.

Holstein Canada shares the hurdles our producers are facing and have you all top of mind. The association, too, has felt its share of burden with drastic increases to fuel, rental cars and accommodations for the classification services.

We want to mitigate some of your concerns, as such, the fees for our services will remain the same. However, the Board of Directors has approved a temporary travel surcharge of $30 to each classification visit. This is a temporary measure to alleviate the 30% increase in expenses we could not have predicted this time a year ago. To answer more of your questions on this, please visit www.holstein.ca/services/classification. Further to this, we are looking at opportunities for new revenue sources. Not only domestically but worldwide. By offering products and services, both multi-Breed and multi-Country, it will allow us to maintain pricing for our Canadian market, and ensure future sustainability.

Our Genomics tool is intended to help you, the producer, make more informed decisions earlier in an animal's life, which in turn increases profitability and efficiency. Like any tool, you have to use it correctly and at the right time, to reap the benefits. With all of the financial stress that the Canadian producer is currently facing, the right time is right now! In terms of economic benefits, in most herds, it is the gain in accuracy that yields the highest return on the investment of genomic testing.

The Board of Directors and Management Team continue to work diligently on the updating of our Strategic Plan. We are nearing completion and are excited to share the final version with you in the coming months.

On behalf of Holstein Canada, thank you for your continued support. Enjoy some time with family and friends over the Summer and much success on the farm!

SOMETHING NEW AT THE HEAD OFFICE

THE CHANGING ENVIRONMENT AMPLIFIED BY THE PANDEMIC HIGHLIGHTED AN OPPORTUNITY IN OUR 20 CORPORATE PLACE OFFICE, where we had unused space. Indeed, we estimated that we could optimize 40% of our office space. So, we started looking for tenants in collaboration with a commercial real estate agent.

This spring, despite a slow commercial market, we have concluded 2 leasing agreements. One is with Sharp Bus Lines, a growing local family business in the school bus industry. The second agreement is with the Brant Community Foundation, a not-for-profit organization that administers various funds for community improvement and development in the Brant area. These two new tenants join Holstein Ontario, which already leased space in our facility.

Despite these changes, we are able to provide individual workspace for all of our head office-based employees. The adaptations to the building to make this project possible are minor. All costs will be recovered within the first 6 months of the lease agreements. This will help reduce our infrastructure costs for the benefit of our members.

Welcome to our home! 🐄

SHARP *Bus Lines Limited*

Brant Community Foundation
Building our Community. Investing in the Future.

East

SUNNY POINT FARM (SUNNYPOINT)

OWNERS: Vroegh Family

PREFIX: Sunnypoint

 # COWS MILKED: 325 cows, 570 kg of quota

FACILITY TYPE: Sand-bedded free stall and parlour

 # ACRES FARMED: 1000 acres of alfalfa, wheat, corn, grass

HERD PRODUCTION AVERAGE: 44 L/cow 4.2% F 3.2% P

FEEDING SYSTEM: TMR

OTHER BREEDS IN THE HERD: Just a few Wagyu crosses

HOLSTEIN CANADA SERVICES USED: Registration, classification and genotyping

Sunny Point Farm (SUNNYPOINT)

by Murilo Carvalho, Extension and Education specialist

Listening to the Sunny Point team speak about how they have been improving their herd over the last decade illustrates very well the success they have been achieving. In their case, an analogy with crops works very well: the outcomes being harvested now are the result of carefully thought and well-made decisions made a while ago. If you talk to Phillip Vroegh, his son Logan, or their herdsman Tony Mumford, you can expect a very aligned vision on how they see the Sunny Point herd, their goals, and the type of cow they want to breed. All the aspects of the operation are looked after in detail, and when we talk about breeding cows, genomics has a very important role to play.

The adoption of genomics goes back to the time when the technology started to arrive at the farm level. After kicking off with genotyped bulls, they quickly jumped into testing females not long after the service became commercially available. When asked about the reasoning to start testing, they are very straight: too many heifers in their inventory. "We had too many heifers, and they were not making us much money, so we decided to trim down the numbers and keep the best ones", mentions Tony. Using this approach, the herd did a great job keeping healthy margins and thrive while the cow market declined and feed costs rose. Still, the genetic strategy has evolved throughout the years – for example, they began testing most of their heifers a few years ago, while a smaller portion was tested prior to that.

Everything started with a group of about 150 heifers that were initially genotyped. Looking to sell their bottom end, they wanted a more reliable tool than just parent averages. However, the results didn't seem very exciting in the first moments. "The genotypes were close to the parent averages, so we didn't see as much change to their rankings", affirmed Mumford. Still, it was a validation to the strategy they had adopted previously, using classification and milk recording data, but looking at the families that generated the best females. After an initial clean up to their heifer inventory, the next goal was to identify a few elite animals to use them as donors and boost the herd's genetics. Meanwhile, they developed their own herd index to select their best cows and their respective daughters. The index includes BCA

composites, LPI and classification data. The approach resulted in solid gains especially to production and functional traits.

The gains achieved on the genetics side resulted in better cows; analyzing the current herd, it is clear the strategy has been paying off. It is easy to lose count of their cows that have been milking for 5 or more lactations, which they are very proud of. With such a high caliber herd, they have been able to be very aggressive with their breeding strategy, while not using as much embryo transfers as they did before. Today, about 60% of the cows and 25% of the heifers receive beef semen – "it is all about the number of replacements we need. We aim for 6 or 7 heifer calves every two weeks", Tony precisely points out. They add they are not afraid to breed to beef semen a cow that has high LPI numbers but is not performing well either in terms of conformation or production. A similar decision may be made even for a long-lasting excellent cow that hasn't generated good daughters: "if they don't transmit to the daughters, their genetics are not the best".

Over the last couple of years, the Sunny Point team concluded their females were too close in terms of parent averages, so they began testing pretty much all the young females. By pre-selecting the cows and heifers that receive sexed semen, every female born has good potential, so they take a tissue sample. The groups of heifers are more homogeneous and have close numbers, so small differences in their result is enough to make drastic changes to the rankings when looking at them as a group. On the male selection side, the Vroegh's are very strict: most of them are young sires because they must exceed 100kg of fat, have positive deviations for fat and protein, 500kg of milk, and at least 3 or 4 for type. Besides that, they have been watching for rear leg curvature due to a few young cows they had to cull during the last few years as consequence of mobility issues. In addition, they try to use groups of bulls for not very long, which reduces the risk of having too many calves from a bull that end up not working the best in their herd. After the bulls are pre-selected, their AI rep does the mating using the genomic results to optimize the gains and avoid any haplotype or recessive.

Looking ahead, the main goal for the Sunny Point herd is to continue improving the amount of fat produced per cow, especially among the first lactations cows. According to them, the production gap between the heifers and the 3rd+ lactation cows is more than they would like, so being able to get more fat and protein from the young ones will help boost the overall production. Logan adds that to achieve better results "you really need to pay attention to details because small things matter at the end of the day. Collect as much useful information you can, and use it."

With the fourth generation involved at the operation, the Vroegh's are eager to keep improving their herd for a few more decades. To achieve that, they have a clear plan, that includes the aid of all tools they have available. From looking at cow families and pedigrees, production and conformation results, and genotypes, they make sure the dams of their next generation of cows are the cream of the crop – a solid female strategy to form their future herd. 🍁🐄

Family Picture (left to right): Phillip, Lori, Cole, Marissa, and Logan Vroegh enjoy some time off the farm.

Quebec

FERME DRAPEAU (DRAGON)

OWNERS: Michel Drapeau, Sylvie Bélanger, Dominic Drapeau and Célia Neault

PREFIX: DRAGON

 # COWS MILKED: 800 cows for 1270 kg of quota, a total of 1600 head

FACILITY TYPE: Free stall, 36 stall rotary parlour. Milking 3x/day

 # ACRES FARMED: 4580 acres (soybeans, corn, feed grains, hay, wheat

HERD PRODUCTION AVERAGE (L/COW): 37.2 L/cow 4.33%F 3.33%P 106 scc

FEEDING SYSTEM: TMR (one group)

OTHER BREEDS IN THE HERD: Holstein only

HOLSTEIN CANADA SERVICES USED: Registration and Genotyping

Ferme Drapeau (DRAGON)

by Melissa Marcoux, Bilingual Extension and Education Specialist

At the end of the 2000s, Ferme Drapeau found itself at a crossroads. Dominic Drapeau, co-owner of the farm, admits that they had lost control. Absorbed by the amount of work they were behind with their registrations, had stopped milk recording and were using a barn bull. By wanting to do everything by themselves, the performance of the herd had been negatively impacted. Something had to happen to get back on the path to productivity and profitability. At the same time, a new tool was available to producers, genomics.

The Drapeau's had already begun a process of restructuring their methods when studies and works on genomics as a management tool began to be published. "The timing was good!" mentions Dominic.

Initially, they started by using high genetic merit young genomic bulls' semen and then continued by genotyping all their females in 2009, taking advantage of a genomic catch-up program. It was therefore more than 350 females that were genomic tested which enabled them to identify those to cull and those to invest in raising.

With genomics having helped them to identify their best animals, it was then an intuitive next step for the keen breeders to implement the strategy of using sexed semen and beef semen. They are now more aggressive than ever: only 20% of cows are bred with sexed Holstein semen, the rest are terminally crossed to beef. As for the heifers, 85% of them will calve with sexed semen since their genetic potential is generally superior to the rest of the herd. From generation to generation, it is therefore always only the best individuals who are allowed to reproduce. Consequently, each of the heifers born on the farm has high potential and is genotyped. Immediately after ear tagging at birth, a TSU sample is taken to be sent to the laboratory.

Animal performance and phenotypic monitoring is also essential at Drapeau; for 3 years, every Saturday, heifers of 0, 2 and 4 months of age are weighed. Their growth curves will then be analyzed and those with the poorest weight gain will be culled. Over time, the producers have concluded that animals who do not grow well as calves, do not perform well as cows in milk. The tangible and fixed data collected with growth rates allows them to sort their females while genomics allows them to build their genetic strategy. This collection of measurements allows them to validate the genomic predictions of their animals!

Over the years, their breeding criteria have leaned heavily towards health and fat-producing traits. Creating their own genetic index, the Drapeau Index, specific to their needs and their reality, has therefore become a must. Using their genetic data in the Excel format available on their Holstein Canada web account, Dominic classifies his animals according to this index which is made up of production data in Kg of fat (40%), Herd life data, mastitis resistance, somatic cell, daughter fertility, to which are added conformation traits such as feet and legs and mammary system. When the time comes to choose the matings the index makes it easy to identify what there is to improve on a female and to choose the best bull to rectify the situation. This approach also allows them to use some very interesting bulls that have faults that do not match their breeding objectives. Indeed, their thorough analysis of the female side authorizes such a cross by protecting it: by using it with a particularly strong female for this trait. Ferme Drapeau always tries to work with the most reliable data possible to avoid unpleasant surprises. On the female side genotyping assists, while on the male side Drapeau chooses to work with progeny proven sires; being more patient here allows them to protect the next generation. As Dominic says, this is their current strategy but it is still evolving!

Indeed, it is evolving, since in the coming months Ferme Drapeau will begin a new, even more aggressive genetic strategy with the implantation of genotyped and sexed embryos from BOVITEQ. These embryos will be implanted in the animals making up the bottom 20% of the herd. Consequently, the percentage of cows and heifers that will be bred with beef semen will also increase.

The current rotary parlour is already 19 years old and will have allowed the Drapeau to go from 140 kg of quota in 2001 to 1270 kg today. The family project is to build a new carousel of 60 or 72 stations within 5-6 years in order to allow the eventual growth of the herd. Having focused on cow longevity, the number of cows in 3rd lactation and above is around 48% and Dominic is aiming for an average lifetime production of 50,000 kg for the entire herd, when quota availability allows it. "The cows are fertile, healthy and functional at the conformation level, which allows us to achieve our objectives. Of course, there are several factors: feed, cow comfort, but also genetics."

Economically speaking, the cows that currently make up the Dragon herd are very advantageous. Dominic compares them to "little jeeps"; they are hardworking and constant, which allows to have a high forage ration without impacting production and reproduction performance. "The costs of breeding and building are higher than ever, we can no longer afford to keep more cows just to meet the quota. We must only keep and breed the best ones. »

Genomics has helped the Dragon herd significantly, allowing it to straighten out its pedigrees, establish genetic strategies and identify its best animals from which to breed from. Sexed semen then arrived, allowing breeders to amplify their strategies by using it with their best individuals. Without purchasing new animals or having embryo transfer, genomics allowed the Drapeau family to progress rapidly from the "inside". The next generation is coming to the farm soon and genomics allows the Drapeau to place their paws advantageously in the industry.

The Drapeau family (left to right) Mavrick, Alicia, Dominic, Kelly, Célia Neault and Liam Drapeau.

Featuring Canadian Genetics in

ITALY

ZIAL Holsteins and Jerseys - Mantova & Reggio Emilia, Italy

What feeding system do you use?

We use Unifeed (same concept as TMR in Canada), without silage, fed twice daily. To comply with the rules for milk production intended for processing into Parmigiano-Reggiano DOP, at least 50% of the dry matter must come from hay, the forage-to-concentrate ratio must not be lower than 1, and we cannot use any type of silage because it may affect the cheese aging process.

Three generations of the Zilocchi's, owners of Zial Holsteins and Jerseys

Do you produce your own crops? If so, what do you produce?

Yes, we produce Alfalfa and do crop rotation with grain corn. Also because of compliance with cheese production standards, over 90% of the fertilizer must be from natural origin.

How does selling your milk work? (Processing, who buys? Price negotiation):

We are in a cooperative that produce Parmigiano-Reggiano cheese PDO, which is a Product of Designated Origin, so it can only be produced in our region. It is a very famous cheese worldwide, produced from raw cow milk. The milk price is agreed between producers and the cooperative, which generates income by selling the Cheese after 12 months of aging.

Are you using genomic test on your farm? Yes

Are you using classification on your farm? Yes

What is your breeding philosophy and goals, and which traits have you been focusing on recently?

Our philosophy is based on functional, long-lasting and productive cows. With that in mind, one of our focuses has always been the percentage of protein and kappa casein, as well as high fertility. Regarding other traits, in order of importance we emphasize udders, feet and legs, and conformation as a whole.

Tell us a little bit about your farm history, when/how did it start?

Our farm history began in 1960 with our grandparents. Now, the management team overlooking the operations is composed by the third generation, with the cousins Corrado, Massimo and Mauro. In 1998, we bought our second barn in the province of Reggio Emilia, about 20km away from the main herd. In the last ten years, we have renewed all the facilities in our main barn in province of Mantova.

How has Canada and Canadian genetics impacted your herd?

We have extensively relied on Canadian genetics to improve our herd for a long time. In the 80's and 90's we started with Canadian sires to strengthen conformation traits. Since

ITALY

ZIAL HOLSTEINS AND JERSEYS
Mantova & Reggio Emilia, Italy

OWNER: Zilocchi Family

PEOPLE INVOLVED ON THE FARM:
8 full-time, 5 part-time

CITY/REGION: Mantova (Lombardia) and Reggio Emilia (Emilia-Romagna), Italy

HOW MANY COWS MILKED: 500

HERD PRODUCTION: 11,200kg

OTHER BREEDS: Jerseys

MILKING SYSTEM (PARLOUR, ROTARY, ROBOT, TIE STALL): Both are free-stall barns with double-9 parlour

then, we have used bulls like Rudolph and Titanic to push on production. In the 2000s, we used a lot of Goldwyn and Atwood bloodlines, especially for show animals. In the last couple of years, we have used a variety of bulls from Canadian bloodlines, including Perseus, Password, Machone, Manhattan, Discjokey, Seaver, Royalflush, and Dropbox.

In terms of breeding strategy and genetics, what do you think differentiates your herd from others?

In general, we find that our herd is very homogeneous when compared to others, which we achieved through consistent breeding over the years.

What is the biggest challenge at your farm right now? What is the plan to overcome it?

The main challenge right now is having the herds in two different operations, which are not that close. For this reason, the primary plan is to bring all the cows under the same roof, and then be able to invest in automation systems. This is an important step to facilitate the succession to the fourth generation in front of the herd. To make it possible, we are looking for specific funding and resources for this type of investment.

How do you see your farm in 10 years from now? What are the main projects in mind?

A farm where the animal welfare and the high-tech standards will be appreciate by the consumers. In other words, a farm that people want to come and visit.

Are you involved in the dairy industry other than directly on your farm? If so, how is your involvement? (committees, boards, etc)

Two members of the family are in the board of the cooperative that buys and processes our milk into cheese. Also, Corrado is the head of the classification evaluation team for the Italian Holstein, Jersey and Brown Swiss Associations, respectively.

Any other things you would like our Canadian breeders to know about your farm or the dairy industry in Italy?

We invite all the Canadian breeders, whenever in Italy, to visit our farm and to taste the best cheese in the world, the Parmigiano-Reggiano!

Driving the future of your herd pt 2: Implementing a plan to improve your herd and achieve goals

In the last edition of Info Holstein (check it on this link https://bit.ly/3Ok9YJ8) we discussed the first steps in creating a genetic strategy to maximize the return on your genetic investment. We covered aspects of identifying needs and opportunities for improvement, setting up clear goals, and creating an action plan that highlights how you are going to reach your objectives. Plans can vary among different herds depending on your goals and which tools you are comfortable using.

However, in the end, no matter the tool or the information used, they must be consistent and reliable to achieve genetic gain quickly. From there, it is time to evaluate and identify the animals that will contribute the most to your genetic plan. At this point, utilizing all the data you have available (pedigree, genomic, production, conformation) increases accuracy, and returns.

There are 3 central questions leading to the implementation of the plan:

1. Which animals do you want in your herd?
2. How many replacements do you want from each female?
3. To which bull will each female be bred?

With the answers to these questions, it is time to actually make the decisions; culling, breeding and mating. Looking at the flowchart on the next page, we have reached the point of implementation, that will be followed by an assessment of the progress made, as well as possible revisions of the plan. These are the topics we are discussing today – focusing on the action and monitoring the points of the genetic strategy. Let's get into them!

## Making it happen: Implementing the Genetic Plan

Once goals are set, you have designed a game plan and have identified the animals that will contribute the most, it is time to act! With all the information on individual animals and a detailed picture of the herd strengths and weaknesses, the focus is now speeding up the genetic gain.

The word now - stick to the plan - following what was previously planned or designed is key to achieving success.

You have to make sure you have enough replacements to fulfill your needs over the next few years, filling your quota is your primary objective.

You may do small adjustments to the plan, such as deciding to get another female from your best cow; or not keeping a heifer because she has been a problem from birth. This is totally acceptable, but remember that you made a commitment – if you genotype the heifer from your oldest cow, she will probably have lower genetic numbers than her pen mates; still, if this is part of your plan - breed her. It doesn't mean the test is wrong and you should ignore it, but in

ENTRY POINT: Identify the need for improvement, or opportunity for better return from improved genetics.
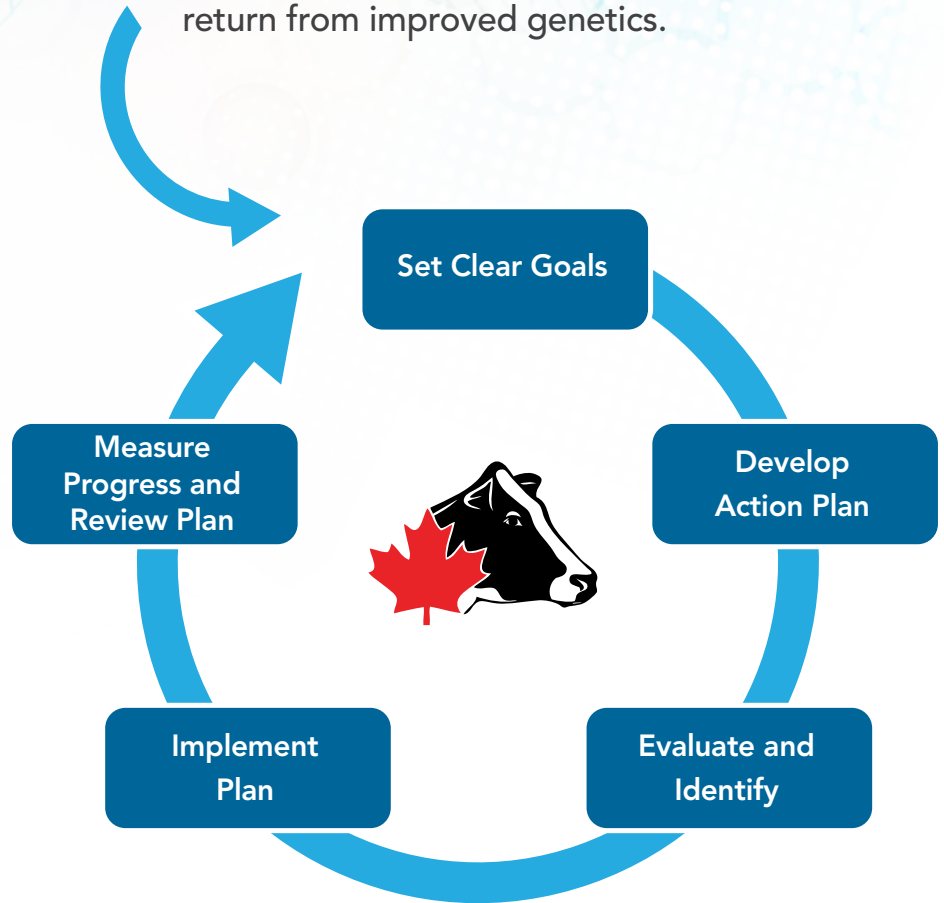
this case, you decided to take a different route. Overall, it is highly recommended that you follow a thorough approach with solid information from all tools, otherwise you end up in a guessing game that will challenge your genetic plan. Remember that the gains are additive over generations – a few wrong decisions or below average animals that are kept and bred may be less profitable and will likely generate females that are also below average.

Measuring to make sure the goal is closer

Now that the plan has been implemented it is time to understand how you are going to achieve your goals, and measure these gains. Let's go back to the most basic genetic gain equation.

$$\text{GENETIC GAIN} = \frac{\text{Selection Intensity} \times \text{Selection Accuracy} \times \text{Genetic Variation}}{\text{Generation Interval}}$$

Simply speaking, a higher gain is achieved by higher selection intensity, selection accuracy and genetic variance, and by a lower (shorter) generation interval. Meanwhile, we cannot easily change the genetic variance at the farm level, so it is in black on the equation. The blue variables, however, are the factors you can control.

To raise selection intensity, you have to become more selective of what animals you are breeding in order to generate females. For example, if you want to improve your udders, using sexed semen on your highest ranked females for Mammary System instead of all your females. The more intensity, or "pickier" you are, the higher the gain expected - and this is true when selecting both sires and dams of your next crop of heifers. That way, you can expect your new replacement crop to exceed the previous generation. Measuring progress is crucial to ensure the plan continues to work, classification and genomic testing are linked together in this way.

As highlighted in the equation, just being selective does not do it all. Using a crop analogy, the most modern seed will not make your crops better if you don't calibrate it to work on your field. Back to the udder example, you may think about breeding the cows with best udders. But, do you know which of your cows really have the best traits? It is easy to only think about the best rear udders if you milk them in a parallel parlour. In doing so, you would be ignoring udder depth and fore attachment, the most relevant traits within Mammary System due to their relationship to longevity and profitability. Here is where classification is a very valuable tool for measuring and benchmarking.

When looking at your heifers you are reducing the generation interval by breeding them all to sexed semen, but there is limited selection intensity. In addition, just looking at how the dam's udder looks gives a reliability close to zero. This is a very important point - solid selection intensity with good accuracy when breeding your young stock is where you set the foundation of your genetic program. This is where genomics can drastically improve the rate of gain. Combining the dam's information with the actual prediction of the heifer (and her

history too!) can be a tie-breaker when you have females that are very close together. Altogether, you can actually measure the progress you are making and set the bar higher.

Reviewing the plan

Once the plan is implemented, you may see results in different timeframes. For example, if you choose to reduce your heifer inventory by selling the bottom end excess, you will have an immediate reduction in feed costs and boost the performance of your remaining young stock. Also, the genetic values of the group will increase drastically. Thinking a bit longer-term, the possibilities to capitalize on a good strategy become broader – either by extra income from beef crossbred calves, or by reducing inventory due to more productive cows. Even further, the gains will compound generation after generation. Every new crop of heifers should be, on average, better; and they are going to be the dams of the next generation. That way, you expect to adjust the plan as you go – say, you reduced your inventory, so now you don't cull as much and breed more animals to sexed semen. Also, with genomics you have a quick tool to identify the progress made every year. You may identify that your heifers already have better prediction for udder conformation, so it may be the time to adjust the plan and focus on another trait.

Take home message

A genetic strategy is dynamic, and having a plan that is clear and brought to action is essential to achieve long term success. Remember, the gains keep compounding year after year as the average of the herd increases, and to keep it going it is necessary to use reliable tools that provide enough information for decision making. A few decisions in the wrong direction can hurt your herd's genetic progress over a long period, so sticking to the plan and thinking long term is key.

When good is not enough

Farm software data or full pedigree, genomic
and phenotypic data for precise breeding strategies

**AMONG THE HUNDREDS OF
TECHNOLOGIES** and modernizations
we can find on dairy farms today, on-farm
management software is very well diffused,
especially among large herds. The most
basic features of each software include
functions that are essential for the herd,
recorded events of each individual cow
through her life compiling enormous
amounts of information on repro (breeding
and calving), health events, treatments and
more. This information plays an essential
role in dairy farm management, being a true
revolution since implementation. However,
when it comes to recording lineage and
its use for a farms breeding strategy, on-
farm software does have limitations, that
although at the outset may not look too
problematic, these limitations do make
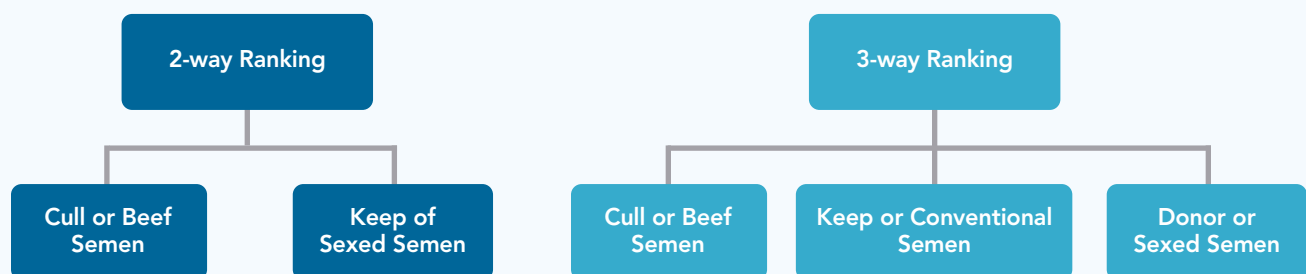a significant difference to your genetic
strategy.

**DIFFERENT STRATEGIES AND THEIR
OUTCOMES**

Over the last several years breeding
strategies have changed. With the
significant cost of heifer rearing more and
more farms are opting for a more selective
path forward; sexed semen on top end
animals, conventional on the mid-pack, and
beef semen on the bottom end. This type
of approach may or may not be combined
with strategic culling of cows (whenever
there is excess milk) and heifers. No matter
which path you take, selecting which
animals are going to be assigned to which
action is a major piece of the puzzle – just
using sexed semen on the ones you believe
are better can permit a lack of objectivity
and accuracy. For that reason, establishing
a foundational, reliable and accurate
ranking system is vital, raising the question
on whether or not the 2-generation parent

average information from on-farm software
can give you the accuracy required for such
a vital strategy. More probable, using only
on-farm software lineage will be limiting to
the genetic gain of your herd.

To better understand the benefits of using
complete genetic predictions, we looked at
real data from 4 herds to rank the animals
based on a 2-way or a 3-way ranking
system. We compared the prediction using
all information available (full pedigree +
genomics + classification/milk recording
when available) against the on-farm
software parent average to rank the
animals, and then split the herds in either
2 (top and bottom 50%) or 3 (top, mid and
bottom tercile) groups. Then, the groups
would be assigned to different actions. You
can visualize on the chart below possible
ways that we could split the animals – these
are examples of genetic strategies.

Ranking Methods

2-way Ranking
- **Cull or Beef Semen**
- **Keep of Sexed Semen**

3-way Ranking
- **Cull or Beef Semen**
- **Keep or Conventional Semen**
- **Donor or Sexed Semen**

After ranking the whole herd with both methods (Full Pedigree and On-Farm Software), we compared how alike the rankings were in order to understand the accuracy of the farm software pedigree data. Using the "full package" information as the most accurate genetic evaluation, we looked at how many animals were in a different group (therefore a different action suggested) versus using just farm software genetic predictions. The results from farm software lineage were surprising: no matter the ranking system, at least 1 out of every 5 animals – 20% of a herd - were assigned to a wrong group. Additionally, if we consider that genotyping solves any parentage errors and about 15% of the non-genotyped animals have some sort of error, the accuracy using just on-farm software is even lower. The table below summarizes the number of animals that were assigned to a different group with or without considering parentage mistakes.

BREEDING BY AGE

Sexed semen is not new to most herds, but the frequency and how it is used has changed over the years. One of the first strategies adopted by many herds was using sexed semen broadly among heifers. Even though its use has been expanded to cows due to conception rates similar to those achieved by using conventional semen, we still see many farms breeding all young animals to sexed semen. This is another important missed opportunity - in any given herd, the best cows will have higher genetic merit than several heifers.

Using the same 4 herds that we did the analysis described above, we looked at the average genetic merit of all the heifers, and the genetic merit of the top animals that would account for the same number of heifers. For example, if the herd had 150 heifers, we used the 150 highest ranked animals, and then compared the average Pro$ of their offspring. That gives us a simulation of a herd that is using sexed semen in all heifers against a herd that just generates females from their top animals,

	Average progeny Pro$
All heifers	$1603
Top animals from the whole herd	$2049

no matter the age.

The result indicates that by just properly selecting which females will be the dams of the next generation, you can increase the predicted profitability of your future cows by about $450. Clearly, using sexed semen just on heifers without any filter presents a missed opportunity to produce females from the very top cows, cows that have a higher genetic merit than the bottom end young females.

TAKE HOME MESSAGE

Several technologies and improvements have given the opportunity for new approaches to farm management and breeding strategies. Similar to other management aspects, the genetic improvement rate is happening at a large scale and much more rapidly, mostly because of information accuracy and decreased generation interval. It is known that a precisely formulated diet has positive impacts on the cows' performance, the same applies to a detailed and accurate breeding strategy. Using every piece of information from genetic predictions does have a positive influence on genetic gain. Although the limited information from on-farm software does contribute to some genetic gain, there is money left on the table when not using more detailed data to create a sound breeding strategy.

3-way Ranking		2-way Ranking	
No parent error	With parent error (15%)	No parent error	With parent error (15%)
33.4% (1 every 3 animals wrong)	**39.1%** (2 every 5 animals wrong)	**23.4%** (1 every 4 animals wrong)	**26.9%** (2 every 7 animals wrong)

Good Luck Team Canada!

From August 31 to September 4th , 6 young leaders from Canada will represent the country at the 20th edition of the **European Young Breeders' School.** Young enthusiasts from 20 countries are expected in Belgium to perfect their knowledge of the show world. Among other things, they will attend a conference on marketing given by **Marc Comtois** of *Comestar Holstein.*

REPRESENTING THE

ONTARIO BRANCH

Derrick Knill, 23 years old
Bornholm, ON

REPRESENTING THE

ONTARIO BRANCH

Matt Lange, 24 years old
Utopia, ON

REPRESENTING THE

WESTERN BRANCHES

James Pruim, 22 years old
Osler, SK

REPRESENTING THE

QUEBEC BRANCH

Savannah Crack, 20 years old
Cleveland, QC

REPRESENTING THE

QUEBEC BRANCH

Alexandra Labbé, 20 years old
Saint-Lambert-de-Lauzon, QC

REPRESENTING THE

EASTERN BRANCHES

Madison Larade, 20 years old
Truro, N.S.

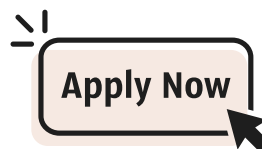## young LEADER PROGRAM

Scholarship

Each year, Holstein Canada is proud to invest in the future of six exceptional students from across Canada (one student from the west, two from Ontario, two from Quebec, and one from Atlantic Canada). They will be awarded $1,000 each as recognition of their achievements.

Apply Now

Submit your application by December 5, 2022.

Share your passion for agriculture and breeding for a chance to receive this scholarship!

Visit: **www.holstein.ca under Membership-Programs/ Young Leaders Program / Awards & Recognition** to find out the full criteria and to fulfill a apply online today.

Dairy Programs Across Canada

The Holstein Canada Young Leaders represent post-secondary programs across the country that are particularly focused on the dairy industry. Find out about these unique programs that will differentiate you and prepare you for a bright career ahead!

BUSINESS MANAGEMENT DIPLOMA (DAIRY FARMING) DALHOUSIE UNIVERSITY

DURATION: 2 years
LOCATION: Dalhousie Agriculture Campus
Truro, NS

The Technology Diploma aims to prepare students to operate their own dairy or agriculture business, or work in sales and marketing within the industry. It helps develop a broad knowledge of business including skills such as accounting, writing, and decision making. Then, choosing to specialize in Dairy Farming (or Agriculture) allows them to strengthen skills within that specific industry by exploring it in detail both inside and outside of the classroom. Some required courses for graduation in Dairy Farming include training on feed and nutrition management and dairy milking systems and facilities.

For more information:

https://www.dal.ca/academics/programs/undergraduate/business-management.html or graduate.studies@dal.ca.

DAIRY HERDSPERSON APPRENTICESHIP UNIVERSITY OF GUELPH, RIDGETOWN COLLEGE

DURATION: 2 years
LOCATION: Ridgetown College Campus
Ridgetown, ON

The Apprenticeship program has a very unique format as it is a hands-on first program. Throughout the two years, the students have just 10% of their hours in the classroom, while the other 90% is composed by on-farm experience. The in-class portion occurs monthly in 4-day blocks, from September to April, covering a variety of topics related to dairy farm management such as milking and feeding, herd health, and equipment maintenance.

For more information:

https://www.ridgetownc.com/future/adh/ or rcadmin@uoguelph.ca.

Lakeland

McGill

Dalhousie

Ridgetown

FARM MANAGEMENT AND TECHNOLOGY – MCGILL UNIVERSITY, MACDONALD COLLEGE

DURATION: 3 years
LOCATION: MacDonald College Campus Ste. Anne de Bellevue, QC

The FMT program blends academic and practical knowledge to prepare students to manage and operate a modern agricultural enterprise or for a career in the agricultural sector. The courses cover a broad range of topics in soil, plant, and animal science, engineering, and business management. Along with them, two stages during the first and second academic semesters prepare the students for a 13-week internship during the Summer. The business knowledge is then extended on a second internship the following Summer.

For more information:

https://www.mcgill.ca/fmt/program-information or fmt.macdonald@mcgill.ca.

ANIMAL SCIENCE TECHNOLOGY, DAIRY SCIENCE MAJOR – LAKELAND COLLEGE

DURATION: 2 years
LOCATION: Lakeland College Vermilion Campus Vermilion, AB

The AST Dairy Science Major is another hands-on program that has a unique and special focus on student-managed activities at the student-managed farm. On the classroom side, the learning focuses on business management, animal health and welfare, feed production and management, genetics and herd management. What is taught in class is directly applied at the farm so the students can experience the implementation of different herd management practices and new technologies while measuring the results in real-time.

For more information:

https://www.lakelandcollege.ca/programs-and-courses/agricultural-sciences/ast-dairy-science-major or danielle.white@lakelandcollege.ca.

The Royal

AGRICULTURAL WINTER FAIR

100 — A CENTURY OF CHAMPIONS

2022 National Holstein Shows

RED & WHITE
Date: Thursday November 10th, 2022
Time: 7:30 am – 12:00 pm
Location: Semex Ring of Excellence
Judge: Blair Weeks, Pleasant Valley, PEI

ALL HEIFERS & JUNIOR CHAMPIONS
Date: Thursday November 10th, 2022
Time: 1:00 pm – 7:00 pm
Location: Semex Ring of Excellence
Judge: Paul Trapp, Taylor WI

ALL COWS IN MILK
Date: Friday November 11th, 2022
Time: 7:30 am – 5:00 pm
Location: Coca-Cola Coliseum
Judge: Paul Trapp, Taylor WI

2022 ALL-CANADIAN COMPETITION

MORE CLASSES!

1. Summer Heifer Calf
2. Spring Heifer Calf
3. Winter Heifer Calf
4. Fall Heifer Calf
5. Summer Yearling
6. Spring Yearling
7. Winter Yearling
8. Winter Yearling in milk
9. Fall Yearling in milk
10. Summer 2-Year-Old
11. Spring 2-Year-Old
12. Winter 2- Year-Old
13. Fall 2-Year-Old
14. Junior 3-Year-Old
15. Senior 3-Year-Old
16. 4-Year-Old
17. 5-Year-Old
18. Mature Cow
19. Longtime Production -70,000 kg
20. Breeder's Herd
21. Junior Breeder's Herd

22. R&W Summer Heifer Calf
23. R&W Spring Heifer Calf
24. R&W Winter Heifer Calf
25. R&W Fall Heifer Calf
26. R&W Summer Yearling
27. R&W Spring Yearling
28. R&W Winter Yearling
29. R&W Milking Yearling (Winter & Fall)
30. R&W Summer-Spring 2-Year-Old
31. R&W Winter-Fall 2-Year-Old + Jr 3-Year-Old
32. R&W Senior 3-Year-Old + 4-Year-Old
33. R&W 5-Year-Old+Mature+Longtime production

NEW!

34. Junior – Spring Heifer Calf
35. Junior – Winter Heifer Calf
36. Junior – Fall Heifer Calf
37. Junior - Summer Yearling
38. Junior – Spring Yearling

The Junior participant must be a member in good standing of a 4-H or a Jeunes Ruraux club. See the complete list of rules on the Holstein Canada website.

Entry Deadline via AssistExpo:
Wednesday November 30, 2022

Nominations Announcement:
January, 18th 2023

Results Announcement:
January 31st, 2023

Complete Rules:
https://www.holstein.ca/Public/en/Awards-Lists/All-Canadian_Contest/All-Canadian_Contest

For more information:
1-855-756-8300 or show@holstein.ca

www.holstein.ca

Holstein Insider

THE REGISTRAR

Our Canadian Herdbook's integrity remains a very important priority, both for our Board of directors and all our members. Accurate pedigrees with appropriate birth dates are the reputation of the Canadian Herdbook and my role as Registrar is to investigate with Holstein Canada staff any situations that compromise data accuracy and/or questions about on-farm management. On-farm visits have obviously been limited these last few years, which has prompted us to think outside the box.
Many of you have been asked to correct some birth or calving dates as we were seeing discrepancies of more than 3 days between these 2 dates for calves that were born naturally. This report has been prepared twice this year, and we want to do this more frequently so that producers can maintain data that is as accurate as possible. We were extremely surprised to see that more than 60% of corrections that were needed had to do with mothers' calving dates. We ask you to please pay attention to how milk recording technicians enter data as well as how you enter your own data into your farm software.

More than ever, genomic testing helps us to correct and maintain integrity in pedigrees.

Whether your genomic tests are done by your AI supplier, by your veterinarians or directly by Holstein Canada (which is offering a very interesting and complete option in CLARIFIDE® at Holstein Canada), all the results will go through Holstein Canada. Since all bulls are genotyped, we are able to confirm or find 100% of the animals' sires. The maternal grandsire can also be identified through genomics, which helps us validate or search for the right dam. Genomic technology proves to be 100% accurate for the first generation and very solid for the second one.

As the Registrar, I am also responsible for show ethics. The goal is to educate, to oversee the preparation of animals and to enforce rules in order to promote fair and just competition. The program is rolled out across the country and operates on 3 levels:

✓ Barn monitoring, which is done by a professional team who works for and with exhibitors on the Fairgrounds
✓ Analysis of all the animals that enter the judging ring, where they are assessed for hair length on the topline and several other criteria
✓ Mammary system exams using ultrasound machines.

Our code of ethics also works to protect our industry's image. A lot of work has already been done: limiting the use of electro-stimulators, better management of injections, etc. We continue our discussions about animal welfare during these events: from the preparation on the farm to the show ground and throughout the competition, we must assert our reputation as responsible farmers who respect animals and environment. The body condition of the animals showed, the over-uddering during competitions and repetitive injections are part of the ongoing discussions with the Show and Judging Committee as well as with the exhibitors.

Last but not least, the Registrar also deals with Awards at Holstein Canada. The Awards Committee is currently reassessing all of our awards so as to ensure that they are relevant with today's farms and young entrepreneurs' management styles. We wish to become more inclusive as to the information we accept regarding access to awards, in order to promote cow profitability and farm efficiency. New information will be shared when regional Holstein clubs from across the country have their Fall meetings.

Visit us

www.holstein.ca
Manage your account online

Customer Service

1-855-756-8300 or text us at 226-401-8305
Monday to Friday 8am to 5pm (EST)

STAR OF THE BREED

Each year, Holstein USA presents the "Star of the Breed" award recognizing one cow that has excelled in the show ring and the milking barn. For the second year in a row a Canadian bred cow has won the title! **BLONDIN GOLDWYN SUBLIMINAL**, finished first in the class of cows producing more than 150,000 lbs of milk at the Midwest Spring National Holstein Show and second in this same class at the WDE (Madison). **Subliminal** classified EX-97 4E, has produced over 141,000 kg of milk, 5,600 kg of fat (4.0%) and 4,476 kg of protein (3.2%). Congratulations to her owners, Budjon Farms and Peter & Lynn Vail, Lomira, Wisconsin, for this great honor and more specifically to her breeders, Simon Lalande and Kim Côté of *Ferme Blondin*, Saint-Placide, Qc.

Top 10 Sires for Rump Score with 100+ Daughters Classified in Three-Month Period

Sire	Daughters Classified	Average Daughter Rump Score
MIRAND	376	83.48
APPLE-CRISP	207	83.43
CRUSHABULL	154	83.25
SIDEKICK	437	83.23
CHIEF	211	83.22
IMPRESSION	925	83.19
DENVER	124	83.09
CONTROL	168	82.99
UNIX	771	82.98
DRASTIC-P	113	82.96

Top 10 Sires for Dairy Strength Score with 100+ Daughters Classified in Three-Month Period

Sire Name	Daughters Classified	Average Daughter Dairy Strength Score
DOORMAN	268	83.95
DUKE	293	83.78
SIDEKICK	437	83.71
DEMPSEY	178	83.66
FUEL	343	83.25
IMPRESSION	925	83.22
DOC	226	83.16
CRUSHABULL	154	83.10
APPLE-CRISP	207	83.08
DELTA-LAMBDA	146	83.08

Based on 1st Lactation Classifications Dec. 2021, Jan. & Feb. 2022

NOTE: Daughters are included in the statistics if they had their last milk test in the last three-month period.

CLASSIFICATION SCHEDULE

MID-ROUND **MR**

AUGUST

EARLY

ON	Wentworth, Dundas, Prescott, Russell
QC	Sherbrooke, Compton, Stanstead
NB	**MR**
NS	**MR**
NL	**MR**
PE	**MR**

MID

QC **MR** : Riviere-du-Loup, Temiscouata, Rimouski, Matane

LATE

ON **MR** : Bruce, Huron, Grey
ON Glengarry, Stormont, Carleton
QC **MR** : Arthabaska, Wolfe, Megantic, Matapedia, Bonaventure, Lotbiniere, Nicolet

SEPTEMBER

EARLY

QC **MR** : Yamaska, Drummond
QC **MR** : Beauce, Frontenac

MID

ON **MR** : Leeds, Grenville, Lanark, Renfrew, Pontiac
ON – Brant, Haldimand
QC – Dorchester
AB **MR**

LATE

ON **MR** : Perth

This schedule is subject to change within a 1-2 week period.
For the full Field Service schedule, see the Field Services section under Services on our website, holstein.ca.

Canadian cow joins the top 10 all-time lifetime production

Hyden Blitz Pizza recently joined the exclusive club of cows that have produced over 200,000kg of milk during their lifetime. Even more impressive, she's now the 6th highest producer of all-time with just over 214,000kg of milk and 7,383kg of butterfat. The ranking is led by another Canadian cow, Gillette E Smurf, who reached almost 248,000kg of milk in 2014. Bred and owned by Hyden Holsteins from Milverton, ON, Pizza had 10 lactations, with 8 of them above 15,000kg 305d. Unfortunately, she passed away a few months ago. She will certainly be remembered as one of the most productive cows of all time! Congratulations to the Zehr family of Hyden Holsteins for such an incredible accomplishment!

info Holstein

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