APR/MAY/JUNE ISSUE NO. 182

infoHolstein

A Holstein Canada publication providing informative, challenging and topical news.

MEET HOLSTEIN'S NEW PRESIDENT

Q&A with new President Nancy Beerwort (p. 4)

EPIGENETICS IN CATTLE

Research into advancing breeding strategies for healthier, more productive herds (p. 15)

2023 HOLSTEIN CANADA AWARDS

(p. 29)

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EDITOR Molly McMillan

CEO Sartaj Sarkaria

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VICE PRESIDENT Gilles Côté, QC 418-343-2597 GCote@holstein.ca

CHAIR TO THE BOARD

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Willem Vanderlinde, AB 403-302-1527 WVanderlinde@holstein.ca

Harold Sweetnam, SK & MB 204-362-8870 HSweetnam@holstein.ca

Brian Slaughter, ON 519-330-6062 BSlaughter@holstein.ca

Dennis Werry, ON 905-213-8228 DWerry@holstein.ca

Sylvie Mahannah, QC 450-921-0661 SMahannah@holstein.ca

Benoît Turmel, QC 418-390-2269 BTurmel@holstein.ca

Karen Versloot, Atlantic 506-461-3209 KVersloot@holstein.ca

Brian Hamming, BC 250-308-0539 bhamming@holstein.ca

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CONTENTS

- 4 MEET THE NEW HOLSTEIN CANADA PRESIDENT Q&A with new President Nancy Beerwort
- 5 CEO MESSAGE
- 6 ANNUAL GENERAL MEETING REPORT Highlights from the AGM in Hamilton, Ontario
- 10 UPDATES TO HOLSTEIN CANADA TECH
- 20 NEW CLASSIFICATION REVISIT RULES
- 21 GENETIC EVALUATIONS TO DAIRYCOMP An update from Lactanet
- 22 HOLSTEIN CANADA EVENTS REPORT
- 24 GENETICS 101 Tools for building a sustainable and profitable herd
- 27 2023 HOLSTEIN CANADA AWARDS
- 31 YOUNG LEADERS Q&A WITH AN EXPERT The young leaders talk data with Lactanet's Allison Fleming
- 32 YOUNG LEADER SCHOLARSHIP WINNERS

On the Cover:

Snapshot from the

National Convention

tour at Bosdale Farms



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APR/MAY/JUNE 2024 ISSUE NO. 182

President's Message

BY NANCY BEERWORT, CHERRY CREST.

NANCY IS HOLSTEIN CANADA'S INCOMING PRESIDENT IN HER 10TH YEAR ON THE BOARD





Welcome our New President: Nancy Beerwort

Nancy was brought up on a multi-generational farm in Quebec's Eastern Townships. A hilly, stony farm that encouraged stock farming over cropfarming, the farm operated under the Beervern prefix and Nancy's parents, John and Noella Beerwort, won their Master Breeder shield in 1976. She is one of six children, and her parents fostered the love of farming, and specifically cows, in all of the children. The kids spent as much time in the barn as the house and five of the six siblings are now involved with cattle.

Nancy has always been involved with Holsteins, 4-H, judging, cattle sales, and showing cattle. In fact, it was at a show in Montreal that Nancy met her husband, Don Johnston (fate, as Nancy skipped class at Bishop's University to attend the show). Although Don had spent his first ten years on a dairy farm, his father, for health reasons, had to sell and move the family to Ottawa. When Don and Nancy met, Don had just started farming again and was renting a farm near Ottawa. He was operating under his father's prefix, Cherry Crest Holsteins, with a good, but small herd of Holsteins and 31 kgs of quota.

Shortly after Don and Nancy married, they sold

the herd and bought a vacant 160-acre dairy farm in Martintown, Ontario, where they continue to operate Cherry Crest Holsteins to this day. The farm has grown to 145 kgs of quota, 250 head of cattle, 375 acres of owned land and 125 acres of rented. The Cherry Crest prefix was awarded a Master Breeder shield in 1961 and 1997. Nancy is also an accomplished dairy Judge, including judging the President's Cup (former Lawara) at the Royal Agricultural Winter Fair in 2008.

Nancy's son Kevin is now an integral part of Cherry Crest Holsteins, residing at the home farm with his wife Tammy Vander Linden and their two kids, Lynnden and Leni. Nancy's daughter Merina resides in Kingston, Ontario with her partner Matt and works in agricultural banking.

WHAT MOTIVATED YOU TO BECOME A HOLSTEIN CANADA DIRECTOR?

I have always had great mentors and help from people and Holstein organizations and so it felt natural to want to give back to the industry. I have been involved in many different organizations, including Dairy 4-H as a member and leader and our local Holstein Club as President and Secretary. Coming to Holstein Canada as a Director felt like the next step in supporting an industry that has given me so much.

WHAT IS YOUR VISION FOR HOLSTEIN CANADA?

To have Holstein Canada reflect the reality of our industry, working alongside all producers providing services and programs that will enable overall herd improvement and herd management efficiencies, strengthening the bottom-line and lifestyle of producers across Canada.

WHAT ADVICE WOULD YOU OFFER TO A YOUNG HOLSTEIN ENTHUSIAST WHO WANTS TO GET INVOLVED ON A HOLSTEIN BOARD?

The Holstein industry is very broad. Focus on projects that you have an interest in or areas of the business that you are passionate about. This will allow you to see the impact or value of your efforts more effectively. It will also enhance your own skillset and network, providing value to your home operations or future industry involvement. This industry is always appreciative of volunteers, so put yourself out there and approach every opportunity with an open mind. When looking to get involved in Holstein activities, it doesn't matter what size or scale, it benefits us all.

CEO Message

Holstein Canada Convention Celebrates Success, Eyes Future Growth



I want to take this opportunity to express my gratitude and admiration for the incredibly hard work that went into Holstein Canada's 141st National Convention in Hamilton. The success of the event owes much to the diligent efforts of the Ontario Convention Planning Committee. Their dedication and careful planning created an experience that showcased the best of our community. I also want to extend my heartfelt thanks to the internal team whose support made our AGM & Gala a resounding success.

Special congratulations are in order for all of our 2023 Master Breeders. Having all 20 winners present with us in person was truly a highlight, and I'm delighted to hear that celebratory fly fishing was part of the festivities!

Furthermore, I'm thrilled that "The Doors are Open in Halifax," and we eagerly anticipate experiencing their hospitality in 2025. On that note, let's not forget the opportunity to join Holstein U.S.A. in Salt Lake City this June. It promises to be an enriching experience that will further strengthen our ties within the industry.

Looking ahead, we remain steadfastly focused on the future. Currently, we are engaged in actively shaping our strategic vision for 2025-2028 with the Holstein Canada Board of Directors and working through our Holstein Canada sustainability roadmap. Financial stewardship continues to be paramount, and I assure you it remains a top priority for myself and the entire Holstein Canada team. We are committed to enhancing the services we provide to members, while remaining vigilant around expenses.

As we dive into 2024, I am energized by the prospect of expanding partnerships with industry stakeholders, strengthening sponsorship opportunities, and fostering greater staff engagement. Together, we will continue to build a cohesive team that drives our organization forward.

Thank you all for your dedication and commitment to our shared goals. I am excited about the opportunities that lie ahead and confident in our collective abilities.

Warm regards, Sartaj 📣

Annual General Meeting Report



Holstein Canada's 141st Annual General Meeting (AGM) was held April 27th, 2024 in Hamilton, Ontario, in conjunction with the National Convention, titled 'Experience the Escarpment' by the convention planning committee. The events leading up to the AGM certainly embodied the narrative; an abundance of passion, dedication, community, and fellowship. The meeting opened with highlights from the 2022 AGM, presented by Jodi Zettler, Senior Executive Assistant to CEO and the Board, and was then passed to President Ben Cuthbert to address the membership with his final President's report. Reflecting on 2023, he highlighted many successes that were coupled with challenges. President Cuthbert spoke about how, in a time of economic uncertainty, Holstein Canada has been able to continue providing services to members that can create the data they need to make informed decisions about their herd. He also looked back on almost 10 years as a director and standout achievements of the association over that time.

Addressing the membership from the operational vantage point was CEO, Sartaj Sarkaria. She reflected on her first year with Holstein Canada while outlining projects and goals for 2024 including a research project to understand membership needs as well as plans to relaunch the ConneXXion app and a pilot project to explore the use of Artificial Intelligence in Classification.

Various committee reports were also presented via pre-recorded video to ensure a seamless and transparent delivery of information about decisions and activities throughout the fiscal year. Committee chairs were on hand to answer questions in relation to each respective committee report. The 2023 financial report was presented, highlighting a year of challenge for Holstein Canada as the world dealt with unprecedented inflation but illustrating improvement over 2022 results. The presentation of the 2024 budget summarized the planned expenses and revenue the association expects in 2024. input session was held where members were openly invited to voice their opinions and ask questions outside of the topics addressed with resolutions. The AGM ended with an invitation to the 2025 National Holstein Convention in Halifax, Nova Scotia!

A significant highlight of the day was the celebration and recognition of two 'Century of Holstein Award' recipients.

It is truly a testament of these families' (and their ancestors) dedication and commitment to Holstein Canada and its larger community. Accepting the award:

- The Descendants of C.O. Peart, Ontario
- The Descendants of Raymond Anderson, Ontario

Each family boasts awards and recognitions decadeslong for their active roles in the association and their own communities. Both recipients of the Century of Holstein Award can trace the lineage of their current herd back to their respective families' original herds, signifying 100 years of home breeding.

Dairy Farmers of Canada, Jersey Canada, Holstein USA, Holstein Mexico, Senator Rob Black and the Ag Minister of Canada offered personal greetings, signifying continued collaboration within our great dairy industry.

Holstein Canada is truly member-driven, a message that rang true once again as members brought forward 13 resolutions voicing ideas for improvements or change in several different areas. Of the 13 nonbinding resolutions, 10 were approved to pursue further. Following this, a member The 2024 Holstein Canada National Convention was a huge success. Celebrating elite genetics with an outstanding 239 head at the Ontario Spring Discovery Show. Other events included farm tours, and a canvas and cocktails evening where members were welcomed to a local art gallery to view the Holstein Canada archives. To wrap up the weekend, attendees from across Canada gathered at the Canadian Heritage War Plane Museum for the Master Breeder Gala celebrating the 20 farms receiving their Master Breeder Shields.















LEADER LEADERS



Young Leaders Program at the 2024 National Convention: Empowering Tomorrow's Dairy Industry Leaders

More than 30 aspiring young adults from across Canada converged in Hamilton for a week filled with learning, networking, and immersion in the dairy industry during the National Convention. Aged between 19 and 30, these enthusiastic individuals participated in the Young Leaders program, a dynamic initiative aimed at nurturing the future stewards of the dairy industry.

The program kicked off on Tuesday, April 23rd with a warm welcome reception and an insightful introduction to the Young Leaders program and Holstein Canada services by the YL advisory committee and staff.

Wednesday, April 24th saw a packed conference day, starting with a discussion led by dairy farmer Robert Chadwick, sharing the intricacies of his successful succession plan. This was followed by sessions on the financial steps of transition and succession planning by RBC, and insights into vaccines and health by Boehringer Ingelheim. A highlight of the day was the Master Breeder panel featuring two of our new 2023 Master Breeders, Hanalee and Clarkes. In the evening, participants had the invaluable opportunity to network with the Board and representatives from Holstein Canada's provincial branches.

Thursday, April 25th offered hands-on learning with a judging clinic ringside at the Ontario Spring Discovery Show. The day concluded with the lively Toss & Taste Night, featuring a spirited cornhole competition alongside a good old fashioned BBQ.

Friday, April 26th was dedicated to farm tours, where Summitholm, Walnutlawn, and Bosdale farms were visited. The day also included an extensive classification demo by classifiers Veronique Jaquet and Matt Lange. The evening brought forth the sophisticated Cocktails and Canvas Soirée, blending gastronomy with artistic expression. Saturday, April 27th marked the culmination of the week with the Holstein Canada AGM. Jodi Crack, delegate from Quebec, expressed gratitude on behalf of the Young Leader group for the enriching experience and urged continued investment in Young Leaders and convention programs. The evening concluded on a celebratory note with the Master Breeder Gala, where Young Leaders mingled with esteemed breeders and danced the night away in a splendid venue.

As usual, the Young Leaders program at the National Convention equipped participants with invaluable knowledge and connections, fostering camaraderie among future industry leaders. As they return home, they carry newfound inspiration, poised to make meaningful contributions to the dairy industry's growth and sustainability.



OUR 2023 WINNER

Mystique Extreme Abricot



The 2023 Cow of The Year title was awarded during the 141st Annual General Meeting to **Mystique Extreme Abricot EX-93-4E-CAN 6***, Bred and owned by Ferme Mystique S.E.N.C. of Mirabel, Quebec. Abricot has achieved four Superior lactations and has proven herself as a brood cow with nine Daughters Excellent or Very Good and six Grandsons in Artificial Insemination units.

CONGRATULATIONS TO THE 2023 FINALISTS



ROTALY GOLDWYN fllegria



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Holstein canada to explore the use of Artificial Intelligence

As Holstein Canada looks forward to the future of dairy farming in Canada, we find ourselves at the crossroads of tradition and innovation. We would like to share some exciting insights about potential enhancements to our traditional type classification services through the integration of camera technology and artificial intelligence (AI).

We recognize the immense impact that technology has had on improving and streamlining various aspects of the dairy industry. Animal sensors, automated milking and feeding systems, and more have granted producers new efficiencies, and previously unknown insights into their dairy operations. A commitment, for the sake of our members, to stay at the forefront of these advancements is leading us to explore the possibilities offered by AI and camera technology in the realm of animal measurements, and type classification services.

The emergence of AI and camera technology has the potential to enhance or augment

the way we assess and classify cattle. These technologies may be able to provide new and unique insights in the evaluation of conformation traits that have previously been unavailable. Perhaps we would be able to provide measurements on new, valuable traits. This technology, and the reporting it can produce may lead to more in-depth consultations on farms from our expert Classification team, giving them more resources in their position to add value to visits in your herds. However, it is crucial to approach these innovations with caution and discernment.

We want to reassure our members that Holstein Canada envisions a future where these advancements enhance the value, accuracy, and efficiency of our classification services, but do not replace our current classification service.



It is imperative to emphasize that we are in the preliminary stages of beginning to trial these technologies. It is essential to ensure that any adoption of new systems aligns with our commitment to maintaining the highest standards of accuracy and reliability. Breed associations must always hold data quality, integrity, and validation to a superior standard.

Unvalidated services in the market may promise quick solutions, but Holstein Canada places a premium on the thorough verification of any technology we consider. We understand that the reliability of AI scoring systems is directly proportional to the quality and quantity of the data collected and will influence the training of computer models. Holstein Canada prides itself on holding an exceptionally high standard for the quality of your data. We want our members to be confident that any technological advancement we embrace meets or exceeds these trusted standards. As we explore the potential of AI and camera technology, rest assured that our commitment to providing accurate and dependable classification services through our respected, professional Classifiers remains intact.

Only if these innovations meet our stringent criteria and increase the value of our offering for you, will we consider them for approval and integration into our current classification services.

We are excited about the possibilities that AI and camera technology offer for the future of dairy farming in Canada. Holstein Canada remains dedicated to staying ahead of the curve, but we do so with a cautious and discerning approach. Your trust is paramount to us, and we want to assure you that any adoption of innovative technologies will be done with care, to not disrupt a Classification system that is relied on locally and envied internationally.

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	Schedule
April 1	 13:00 Dairy Focus - Speakers & Tradeshow Holstein Canada Young Leaders - Arrival
April 2	 Dairy Focus - Speakers, Tradeshow & Hospitality HC Young Leaders - Master Breeder Panel Explore Halifax Attractions & Restaurants
April 3	 Farm and Alternative Tours <i>Tour 1</i> Bokma, Ballam & Browntown Farms, Coldstream Clear Distillery <i>Tour 2</i> Scothorn, Lellavan & Sunny Point Farms, Coldstream Clear Distillery <i>Tour 3</i> Expo, Trivee and Lindenright Farms <i>Tour 4</i> - Magic Wine Bus Explore Halifax Attractions & Restaurants Meet & Greet Social HC Young Leaders - Farm Tours
April 4	 Atlantic Spring Show HC Young Leaders - Judges Ringside Panel East Coast Kitchen Party - Maritime food, music, refreshments & Tour Canada's Museum of Immigration at Pier 21
April 5	Holstein Canada AGM Master Breeder Gala
April 6	 Homeward Bound Post Tour to Newfoundland (if there is enough interest)



The NS/NL Holstein Branch looks forward to welcoming visitors to National Convention & are eager to join with industry partners to make this a fantastic and affordable event for Holstein Canada members & families. Contact: holsteinconvention2025 @gmail.com





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You've Heard of Genetic Selection, but What is Epigenetic Selection?

By: Marc-André Sirard, D.M.V., Ph. D. Animal Science Department Faculty of Agricultural and Food Sciences Laval University, Quebec

The expression of traits in an animal depends on the expression of genes in different tissues. The genetic makeup varies from cow to cow and is the basis of the differences observed in their phenotypes (their specific characteristics). For hundreds of years, selective breeding has been based on these measured phenotypes which, in the case of dairy cows, are milk production, conformation, and so on. Over the past fifteen years, knowledge of genomics has made it possible to establish links between these traits and related gene sequences in order to predict future phenotypes, a technique that is known as genomic selection. However, the gene sequence only accounts for a portion of the observed phenotype, with certain traits having low heritability and therefore are modulated more by the environment. So, in other words, the expression of traits (i.e. an animal's phenotype) is a function of both their genetic makeup as well as the impact of their surrounding environment. Fertility and disease resistance, for example, are largely determined by the impact of the environment on the functioning of genes, and this area of study is known as epigenetics.

The prefix epi in epigenetics means "over" the gene and represents the changes that influence gene expression. The best example of this is that all our cells contain the same genetic information, but are divided into over 200 different tissues at birth. So, even though the epigenetic makeup of an animal that is acquired during embryonic and fetal development, was programmed during evolution, certain genetic sequences are sensitive to the chemical, metabolic, and hormonal environment after fertilization.

This can lead to changes in gene expression at birth that can last afterward. While identical twins share the same genome, they are born with certain differences that become more pronounced with age, depending on their environment. A fascinating example of this phenomenon is the queen bee, which has the same genome as a worker but develops differently thanks to royal jelly. The special food she consumes enables the transformation of the queen, who then has a very different body, but retains the same genome as the workers.

When it comes to cows, there are many parameters to explore how the post

fertilization environment may impact the genetic programming, and no clear answers have yet been found for most of them.

Here are just a few of the parameters that may influence daughter production, health, and fertility:

- Dam's age at calving and parentage
- Impact of the recipient dam for ET calves
- Age and metabolic status of the bull before semen collection
- Dam's metabolic status at conception (high or low BHB)
- Quality, quantity, and timing of colostrum intake
- Thermal stress during gestation



As the animal ages, the influence of the environment on the phenotype decreases. The metabolic status of the mother at conception or the early embryo environment have a greater influence on the future phenotype of the animal than the events after calving. Although, the interaction with various microbes in the environment during the pre-weening period also plays a role in determining the future health of the animal and together these influences are considered epigenetic.

Research has shown that these factors may affect heifers by modifying the phenotype and possibly influencing genomic prediction. For some years now, within the research setting, it has been possible to monitor epigenetic influences by measuring DNA methylation in blood, embryos, or semen.

A DNA sequence is a combination of four letters, A, C, T, or G, where the letter C can be methylated and affect the expression of the genes located near this mark without changing the sequence itself. By sequencing a cow's genome from cells in the blood, researchers can obtain an epigenetic profile of the cow, observing where these marks are located in the genome and see whether this profile is associated with a risk of disease or lower-thanexpected production. As early as birth, certain cells in the blood can show visible changes in programming, for example, heat stress during pregnancy can cause changes to the way genes are expressed and can result in reduced production in the offspring and a shorter life.

By researchers evaluating these marks, it is possible to determine, early in an animal's life, whether it has undergone a good or bad environmental influence, and to see how these marks are associated with production, health, fertility, or longevity.

Cows resulting from in vitro fertilization are an example of epigenetic programming. Some of these animals, which genetically should have above-average milk production, do not necessarily reach their full genetic potential and may have slightly lower fertility (Lafontaine et al., JDS 2023). This could be due to the conditions under which embryos are cultured before they are transferred to recipients and may indicate that in vitro fertilization techniques could still be improved. Additionally, it also indicates recipient dams should be carefully selected to minimize any negative impacts from the recipient dam herself on the fetus during gestation. Further analyses are underway using Lactanet's data to calculate the influence the dam's environment may have on the gene expression in their offspring. In particular, researchers are evaluating how a negative energy balance at the time of conception affects the production, health, and fertility of heifers born to these dams.

Canada is now a leader in epigenetic research in dairy cows, with several projects underway to identify epigenetic markers associated with production, health, fertility, or longevity. An extensive study is currently being led by Dr. Christine Baes from the University of Guelph, in collaboration with Dr. Ronaldo Cerri from the University of British Columbia, that looks to evaluate the epigenetic marks associated with production, health, fertility, or longevity in a model herd. These marks will then be validated in a second herd in Guelph to assess if they are universally valuable. The resulting data could be used to determine whether it is possible to predict the expression of traits in a future cow at weaning, and if this is the case it may potentially further improve the reliability of predictions in terms of traits like health, fertility or longevity. This research aims to potentially complement the current genetic information by including factors that have an impact from conception to weaning. Only time will tell, but if the results from this research prove to be favorable it could improve dairy cattle selection even more by advancing the accuracy of predictions even further. 📣



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FARM PROFILES





By Claudia Perdomo, Atlantic Field Service Representative



Clarke Farms

Located amidst the picturesque landscapes of southeastern NB in New Canaan, Clarke Farms stands as a cornerstone of the region's agricultural legacy, embodying the essence of rural charm and dairy tradition.

in heifer and dry cow facilities to

enhance animal comfort and welfare.

Today, with 70 cows, he fills 125 kg of

quota daily. Looking ahead, Matthew

targets an increase to 140 kg of quota

cows, underscoring a commitment to

Matthew meticulously selects bulls for

breeding, placing significant emphasis

mammary system. Matthew perceives

on conformation and butterfat

evaluating rump structure, and

content. Specifically, he prioritizes

rump structure as fundamental to

the overall health and mobility of

a cow, even in tie-stall production.

He emphasizes the importance

of width in various aspects of the

cow's anatomy, such as chest width,

Ultimately, Matthew's goal is to breed

rump width, and rear udder width.

cows that excel for production. For

him, this is achievable when there

is a balanced combination of traits:

in the coming years by milking 80

growth and efficiency.

Matthew's family has deep roots in farming, with his father's venture into dairy marking a significant turning point. In 1997, they transitioned their former beef barn into a dairy barn, rekindling their dairy farming legacy after a 20-year hiatus. Joining Holstein Canada that same year, they embraced practices like registration, classification, and milk recording. Matthew's passion for farming blossomed during his teenage years, leading him to delve into pedigrees with the goal of herd improvement. Engaging with peers through the Young Leader program, Matthew found a supportive community to exchange ideas and insights, nurturing his love for dairy farming and dedication to excellence.

Upon purchasing the farm in 2003, Matthew faced the challenge of sustainability with only 20 kg of quota and 25 cows. Recognizing the need for a productive herd, he invested

Quick Stats

OWNERS: Matthew and Gillian Clarke PREFIX: Clarkes LOCATION (TOWN): 6052 Route 112 New Canaan, New Brunswick # OF COWS MILKED: 72 cows TOTAL NUMBER OF HEAD: 165 FACILITY TYPE: Tie Stall # OF ACRES FARMED: A total of 230 acres of land is currently cultivated, with 170 acres dedicated to grass and 60 acres to corn silage production.

HERD PRODUCTION AVERAGE (L/COW): 4.5% FAT, 3.3% Protein 13,500 L BCA (305M) (372F) (312P)

good legs, good rump, good udder, and good strength, aligning with his objective of selling animals adaptable to various production systems.

When selecting bulls, another important consideration is verifying the inbreeding levels before each mating. Thanks to the registry of his animals, he can control inbreeding and keep it as low as possible. This helps to ensure optimal reproductive efficiency and reduces the risk of hereditary abnormalities.

Matthew firmly believes that it's possible to find bulls that offer all the combinations of characteristics necessary to maintain the criteria he needs on his farm. "There are many bulls with great genetic potential, but genetics can only take you so far," he explains.

"Management is key to having an excellent herd that makes money. You have to know how to differentiate when it is a selection problem or a management problem."

Passionate about pedigrees, Matthew understands the significance of classification data in completing a full pedigree. He dedicates himself daily to maintaining a herd of high scoring cows, and places great emphasis on an animal's pedigree when making genetic investments. This, coupled with genomic tests, serves as a guide for Matthew to identify areas for improvement, as he believes there is always room for enhancement even if the cow is Excellent. His herd is mainly comprised of Very Good and Excellent animals, with Good Plus cows primarily being 2-year-olds. He prefers an animal that makes improvements in conformation and production with each successive lactation. "Many young cows simply need time to develop; as they calve again, they gain more strength, fill out their bodies, and develop more capacious mammary systems, inching closer to excellence."

In terms of production, "you can't manage cattle when you don't know what they are giving to you," as emphasized by Matthew. He



relies on milk recording to obtain crucial information such as somatic cell count (SCC), butterfat percentage, and butterfat kilograms. This data enables him to discern which are the most profitable animals and greatly influences mating and culling decisions. Therefore, leveraging available data is essential to optimize farming practices and elevate performance to new heights.

Matthew underscores the significance of employing data efficiently to boost the overall farm productivity. "When you have built a cow through good genetic selection," he remarks, "the extent of that work is management." He believes that investing in services like genomic testing, classification, and milk recording yields a significant return on investment. Matthew asserts that successful farmers capitalize on genetic advancements, a principle relevant to both breeding cattle as well as forage production. "We wouldn't plant crops without first obtaining a soil sample and determining the appropriate fertilizer for every acre of land. Each acre holds significant value necessitating the harvesting of the highest-quality crops possible." For this Master Breeder, the dairy industry embodies his passion, his hobby, and his livelihood. Over the past decade, he has committed himself to increasing the worth of his animals, resulting in one of the most productive farms in the region.



Classification Revisits

Revisits serve as a crucial component of our classification process, offering a second look or a second opinion on a cow's assessment, especially those boasting a high score. While we have set guidelines for revisits, it's essential to note that a classifier may request a revisit when necessary, even in situations where the original score does not require it.

Why do we emphasize revisits?

First, they provide an opportunity to view the animal in a different state during the day. As classification is inherently subjective, seeing the cow under various conditions aids in ensuring a fair and accurate assessment of their score. During revisits, classifiers may also ask to milk the cow to evaluate the natural state of the udder.

In addition, revisits are an excellent training tool for our more junior classifiers and those who are in-training. Having the second opinion of an experienced classifier is key to helping them score animals more accurately, especially high-scoring and those that may be difficult-to-score. Revisits also offer valuable learning opportunities for any level of classifier, particularly for colour breeds. Welcoming a second pair of eyes allows for collaborative validation of functional conformation, fostering continuous learning and skill development within our team.

In essence, revisits are not only about adhering to protocol but also about ensuring the integrity and reliability of our classification process. By embracing revisits, we uphold our commitment to excellence in accurately evaluating a herd's quality and genetic potential.

Genetic Evaluations to DairyComp!



By: Hannah Sweett, Knowledge Transfer Specialist – Genetics Portfolio Jeromy Ten Hag, Senior DairyComp Product Specialist



Many dairy producers across the country trust **DairyComp** as their go-to herd management software. It is the hub for storing and organizing information on herd production, health, reproduction, replacements and more. Now, with the integration of Canadian genetic and genomic evaluations, users can view genetic data simultaneously with other herd data all in one place!

This new feature of DairyComp provides our customers enrolled on milk recording services with monthly updates and the most accurate genetic information for all heifers and cows. The net benefit is more timely culling and breeding decisions for improved herd profitability.

Following the April 2024 official genetic evaluation release, DairyComp customers now have quick and easy access to their genetic and genomic evaluations. This feature provides the ability to import data for over 30 selected genetic values into their DairyComp system. The user can choose to import the genetic values that best meet their breeding and herd management goals. The genetic fields available for importing include LPI, Pro\$, Production, Type and Functional traits, along with polled status, inbreeding, and milk casein gene test results. Moreover, for existing or newly genotyped females, genomic evaluations will be imported, denoted by a "G" in the Genomic Status column.

As with all DairyComp data, a variety of reporting options are available to meet your needs. This includes reports on cows, heifers, or the whole herd. With the ability to rank animals, accurate culling and breeding decisions can be made, including which type of semen to use. By having genetic information stored with herd performance data, an opportunity to compare actual performance with the genetics of your herd is also possible, providing valuable insights.

Lactanet currently has two sets of cow

evaluations for production traits, official indexes that are released three times a year and management indexes, which are updated every month based on each cow's new data such as milk recording, type classification, reproduction, etc. The genetic evaluations uploaded to DairyComp are management indexes, like those included in your DHI Genetic Herd Inventory report and our Compass software. Management indexes are updated regularly with new performance data making them the most up to date for herd management and genetic selection decisions! Once your DairyComp program has been set up, the genetic and genomic data will be automatically updated on the

first Tuesday of every month for all registered animals in your herd inventory at Lactanet. As this new service expands, genomic updates will be provided on a weekly basis for newly genotyped heifers.

This new feature is currently only available for registered females in herds enrolled on any of Lactanet milk recording services, including eDHI. Lactanet is looking into additional options to be offered in the future for non-DHI herds using DairyComp. Do not hesitate to contact the DairyComp support team to get set up!



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BDAT	NOLE	DD	LACT	DOM	MEA	PAT	OENOS	écencis	OMILK O	TAT	OSCS	OCONT	ODE	OFE	OBET
25/4/20	PARACHUT	8074	2	384	22	1.1	G	\$617	1011	72	105	3	98	97	A1A1
3 5 20	ZEBRA	8976	2	329			G	1720	1197	83	101		100	101	ALAZ
4 5 20	MITTERFL	5958	. 2	87	45	2.8	G	1420	1315	65	98		101	99	A2A2
22/5/20	FUEL	7971	2	314	38	1.8	G	1197	369	83	97		92	92	A2A2
29:520	ZEBRA	8206	2	357	19	1.0	G	1505	1539	- 5	100	. 4	105	102	A2A2
3/6/20	GREATLAK	2063	2	216	42	1.6	G	664	1239	39	94		102	93	A2A2
6 6 29	MARK	3991	2	325			G	504	1317	28	95	-1	193	18	A1A2
19:620	MARK	5100	. 5	15		. 0	G	540	.336	- 6	101	. 0	106	98	A1A2
17/6/20	ZEBRA	8124	2	321	13	0.5	G	\$379	1241	2	107		102	99	A1A2
22/6/28	MARK	5114	2	310	. 36	1.6	G	1092	760		191	- 2	105	100	ALAT
24 6 20	ALLIGATO	5059	- 3			. 0	G	81.70	768	19	101	7	102	103	ALAZ
34 6 20	PRACTICA	5961	- 2	316	33	1.7	G	1081	505	- 64	97	3	100	104	ALAZ
12:720	HOMEGROU	6929	2	282	35	1.4	6	\$152	-879	21	101		106	108	ALAL
14 7/20	HOMEGROU	6960	2	332	31	1.7	G	1563	.97	48	105		163	104	ALAZ
18/7/20	GREATLAK	6979	2	291	38	1.5	G	1155	2418	18	102	7	00	.97	ALAI
26/7/28	ZEBRA	8111	2	293	47	1.8	G	1159	1499	35	101	12	102	97	A2A3
5 8 20	MARK	5063	2	175	46	1.5	G	1374	-60	7	101		109	100	ALAS
3/8/20	POSITIVE	8143	2	301	31	0.5	G	1839	621	1.54	103			101	ALA2
6 8 20	PRACTICA	6061	2	310	42	2.2	G	1839	836	\$1		1	105	101	A2A2
\$ \$26	POSITIVE	8131		282	47	1.5	6	2304	1785	- 78	183		94	- 85	ALA2

What has Holstein Canada been up to so far in 2024?

February Dairy Dynamics Workshop

JUNO DAIRY IN DIAMOND CITY, ALBERTA

In February, Holstein Canada hosted its first Dairy Dynamics Workshop at Juno Dairy in Diamond City, Alberta. Despite the weather, a total of 54 local dairy producers and industry partners were in attendance. Additionally, joining them were panel participants Garry Vanderpost (Blondin Sires), Erik Klugkist (Select Sires), and John Muller (WestGen) representing their genetics companies and local dairy producers Tim Hummel (Marylander), Ard Van der Kooij (Nifera) and Bart Schuiling (herdsman at Southern Skies and own prefix Eastview), with Lactanet's Western Manager Bob Reck moderating the panel. The main goal of the workshop was to educate and inform producers on the various services offered by Holstein Canada and how the information from these services works with the services offered by

genetics companies and Lactanet. The aim was to provide producers with different management tools and strategies to help improve the performance and profitability of their herds.

The workshop started with opening remarks and a presentation from Holstein Canada. The focus of the presentation was to inform participants about the various breed improvement services available and how utilizing these services can help improve the reliability of your mating decisions to advance your genetic gain in future generations. It also touched on how the data from these services feeds into Canadian genetic evaluations as well as how it can be used as a benchmarking tool to see progression in a herd or identify areas that could be improved. This was followed by a producer/genetics representatives panel discussion moderated by Lactanet. Several great discussions occurred during the panel with producers focusing on various management strategies and tools that work for their farm and how the services offered by Holstein Canada, genetics companies, and Lactanet feed into



these strategies. Genetics representatives provided insight into how the services from Holstein Canada and Lactanet integrate with the services they provide and the return on investment their customers see when implementing the various tools offered by Holstein Canada, Lactanet, and the genetics companies themselves. Overall, the workshop was a huge success, with a lot of positive feedback received from those in attendance. Many producers indicated interest in implementing the strategies discussed or having further conversations about what was discussed. All in all, it was a great day with lots of informative discussions and valuable networking opportunities.



March

Western Canadian Dairy Seminar

RED DEER, ALBERTA

The 2024 Western Canadian Dairy Seminar took place in Red Deer Alberta March 5th to 8th. There were close to 900 participants registered with additional producers that attended just for the trade show portion. The seminar hosted several great speakers discussing various topics including sustainability, nutrition, transition management, and animal welfare. The trade show provided producers with a different educational opportunity by hosting various industry professionals including nutritionists, genetics companies, milk boards, barn construction, and breed associations all under one roof. The Holstein Canada booth was extremely busy throughout the week with several great discussions that took place. Multiple producers tried and proceeded to download the mobile ConneXXion app as well as several others that signed on to try some of the services Holstein Canada offers. On the whole, it was an extremely successful week!



April 2024 Canadian Dairy Expo

STRATFORD, ONTARIO

The 2024 Canadian Dairy Expo took place on April 3rd and 4th this year in Stratford Ontario. The Canadian Dairy Expo is Canada's largest dairy trade show with over 350 exhibitors participating and dairy producers and industry professionals attending from across Canada. The Canadian Dairy Expo provides producers with the opportunity to network and learn from industry professionals in all sectors including various genetics companies, nutrition companies, equipment dealers, Lactanet, and breed associations. Holstein Canada has been an exhibitor at CDX since it started 10 years ago and this year was no different.

Holstein Canada's booth was located in the Cow Coliseum which was home to many exciting events this year including the Genetics in Motion display, which featured cows and heifers sired by bulls from various genetics companies including ST Genetics, Select Sires, Eastgen, and Blondin. Additionally, on Wednesday evening the coliseum hosted cheeseFEST, which allowed producers to sample several different varieties of cheeses throughout the evening, and the Calves for a Cause sale, which is a sale of live heifers and embryos where all the proceeds go to support the Children's Hospital in London. The Cow Coliseum was a hub of activity throughout the two days which allowed for many great networking opportunities and conversations with producers throughout the tradeshow.

In addition to the tradeshow itself, on Tuesday, April 2nd, CDX also hosted the first Canadian Dairy Business Summit where Holstein Canada was one of the sponsors. This one-day workshop provided the opportunity for dairy producers to learn from CEOs of various companies about strategies for moving their business forward. All in all, this year's CDX was another great success for those involved!





GENETICS 101

Tools to Build a Sustainable and Profitable Herd that Will Last for Generations to Come

PART 2

By Shannon Cartwright, Education and Extension Specialist

In the previous article the value of registration, genomics, and classification was discussed along with how implementing these services on farms can provide increased profitability in dairy herds. This article will delve further into the information genomic tests and classification offer and how to best utilize this information on farms.

GENOMIC EVALUATION

When producers genotype their animals, they receive an individual genomics report for each animal they test. This report contains information on the recessive traits the animal possesses, allowing producers to use this data for marketing purposes and/or future breeding decisions. Additionally, these reports will also include genomic evaluations for each trait. When an animal is tested as a heifer, the genomic evaluation will be based on the genomic information from the animal itself and the average for traits from their sire and dam (GPA). This information is continually updated at each proof round and as the animal starts lactating and/or receives a classification assessment this data will also be added to the genomic evaluations for that animal (GEBV).

Looking at a snapshot of an example genomics report, it can be seen that conformation traits receive an evaluation anywhere between -15 to +15, with 0 representing the breed average for the base population of animals for each trait in the conformation evaluation. Therefore, any animal with an evaluation below 0 indicates they are below the breed average for that trait and any animal with an evaluation above 0 indicates they are above the breed average for that trait. For most traits, a positive evaluation above 0 is what is desired, however the exception to this would be for intermediate optimum traits where an evaluation around 0 would be most desired. Each interval of +/- 5 represents 1 (+/-5), 2 (+/-10) or 3 (+/-15) standard deviations above or below the breed average. Therefore, an animal with a proof of +/- 5 will fall in the top 68% (+5) or bottom 68% (-5) of the breed for that trait



and will fall within +/- 1 standard deviation from the breed average. An animal with a proof of +/- 10 will fall within the top or bottom 5% of the breed and within +/- 2 standard deviations from the breed average and an animal with a proof of +/- 15 will fall within the top or bottom 0.3% of the breed and within +/- 3 standard deviations from the breed average. In other words, looking at the example genomic evaluation it can be seen that this animal has an evaluation of 5 for foot angle and 7 for heel depth which indicates she is amoung the top 68% of Holstein cows for foot angle and above the top 68% but not quite among the top 5% of Holstein cows for heel depth. To understand this in terms of how it would translate into improvement in specific conformation traits, Lactanet publishes an article every year on how to interpret sire proofs for linear type traits (https://lactanet.ca/en/ sire-proof-interpretation-table-lineartype-traits/). Specifically, looking at foot angle and heel depth from the 2024 table for interpreting linear type traits it can be seen that each 5 point increase in the genomic evaluation equates to a 0.15 increase in daughter performance for foot angle and a 0.12 increase in daughter performance for heel depth, meaning the animal's linear score would be increasing and moving closer to a steeper foot angle and deeper

heel depth. The same concepts also apply

to the functional traits on genomics reports however, in this case the breed average for these traits is at 100 with evaluations for traits ranging from 85 – 115. Additionally, producers can get an idea of the animal's expected performance for functional traits by viewing the evaluation for her sire on Lactanet's website, which includes a column on daughter performance for each functional trait.

CLASSIFICATION REPORTS

Similarly, concerning classification, producers get individual classification reports for each animal they classify in that round. This report contains the linear score given for each classified trait, the overall score for each section in the classification system as well the overall final score and final class based on all the information collected in the classification assessment. Additionally, this report identifies traits that are strong in this animal and how her scores for these traits compare to the ideal for the breed and the current breed average. Similarly, it will also show traits that need improvement and how these compare to ideals and breed averages.

The information in the individual genomics and classification reports allows producers to identify areas of strength and weakness in the animal and provides the information that is needed to make more targeted selection decisions with a high degree of accuracy. This information also effectively feeds into mating guides, provided by genetics companies, through genetic evaluations to aid in selecting the best sires for improving the traits of interest in the next generation of offspring.

Not only is this information on genomics and classification useful on an individual breeding basis but it also, along with milk recording data, feeds into various reports and computer programs. This data is used in herd trend reports generated by Holstein Canada, which can be found on web accounts under the performance trend section. Herd trend reports can be used as benchmarking tools for the herd Herd Conformation Trends





by providing producers the information to track their progress in the herd for various traits over the years as well as see how their information compares with the national average. Additionally, these reports provide producers with information on how the genomics for production and conformation traits in their herd compare to what is actually being expressed by the animals in their herd. Another great tool this data will feed into is Compass (https:// www.compasscan.ca/welcome.php). Compass is a software created by Holstein Canada, Lactanet, and Zoetis that allows producers to set a breeding strategy and then, based on the information available for the herd (like milk recording, genomics and, classification) the program will provide suggestions on what type of bull to breed

each animal to (ie beef, conventional or sexed) or whether she should remain in the herd. The software will also provide the return on investment based on following the set breeding strategy allowing producers to see the increased profitability that can be gained by utilizing these tools and data in their management and breeding strategies.

Overall, the information presented provides insight into how to interpret the data genomics and classification reports provide and how this information can be utilized in breeding strategies. Ultimately, implementing these tools in breeding and management strategies allows producers to maximize genetic gain, increasing profitability and sustainability for their herd's future.



Updates and information on **HPAI** for Canadian dairy farmers

The progression of the Highly Pathogenic Avian Influenza (HPAI) in dairy herds across the United States requires heightened biosecurity measures on farms in Canada. As we still know little about this emerging disease and how it is spreading in North America, enhanced biosecurity measures aim to cover various possibilities of transmission.

At time of this writing, there have been no confirmed cases of HPAI in Canada. The Canadian Food Inspection Agency (CFIA) and the Public Health Agency of Canada (PHAC) are monitoring the situation closely, and Dairy Farmers of Canada is working closely with them and other experts on specific recommendations for heightened vigilance and biosecurity on Canadian farms.

What dairy farmers should know about HPAI

HPAI is primarily spread by wild birds to animals. It can be spread on farms by people carrying matter from infected birds - such as dust, dander, and bird droppings - on their clothing, gloves, soles of their shoes, vehicle tires, animal trailers and other equipment, in addition to contaminated water. If a farmer finds a dead bird on their property, they should avoid handling it. Contact the Canadian Wildlife Health Cooperative immediately.

Clinical signs of HPAI include:

- Decreased herd level milk production;
- Acute sudden drop in production with some severely impacted;
- Cows experiencing thicker, concentrated, colostrum-like milk;
- A decrease in feed consumption with a simultaneous drop in rumen motility;
- Abnormal tacky or loose feces, and some fever;
- Producers with impacted herds have reported older cows in midlactation may be more likely to be severely impacted than younger cows and fresh cows or heifers.

It is important to remember that pasteurization kills harmful bacteria and viruses without affecting nutritional properties. Pasteurized cow's milk and milk products remain safe to consume.

Farmers can protect cattle by heat-treating milk given to calves or any animals on farm and continuing to follow biosecurity measures. If a farmer or expert notices cows presenting symptoms, the animals should be isolated, and the herd veterinarian contacted immediately.

Heightened biosecurity measures on dairy farms will help prevent possible risks associated with this new disease. These measures also include restricting farm visits and ensuring that only people who need to be on farm are allowed and are following all recommended biosecurity measures. The recommendations aim to empower farmers to protect their operations and are based on proAction[®] biosecurity measures and universal recommendations to prevent an outbreak (Being Vigilant About Animal Introductions) and guidance from CFIA.

HPAI and animal movement

Preventing transmission from cow to cow will mean avoiding animal movements, indicating it's a good time to keep a closed herd. If introducing new animals to the herd is absolutely necessary, animals should be isolated and monitored for clinical signs of HPAI for 21 days, especially if there is a risk these animals were in contact with animals from affected areas. After moving cattle, farmers should disinfect the livestock trailer and isolate cows displaying symptoms, so they do not have access to the same feed, water and air as healthy cattle.

Farmers should closely follow heightened biosecurity practices and update their standard operating procedures for re-introduction of cattle from the proAction program. As the situation evolves, please check the CFIA website for updates.



All results are available on the Holstein Canada website only

EXCEPTIONAL COWS AND FARMS

Holstein Canada is pleased to announce the winners of the 2023 Electronic Awards for Daily Production Champion, Outstanding Production Champion and Herd of Distinction. Congratulations to all the herds, owners, and breeders who distinguished themselves in these categories. These herds and cows exemplify Canadian genetic excellence by demonstrating superior production, conformation, and most importantly - profitability. Below is a summary and highlights of each of the three awards.

HERD OF DISTINCTION

The Herd of Distinction recognition is calculated based on considering all cows that have completed a lactation in 2023. The lifetime production of each of these animals was recorded on the date of their respective end of lactation in 2023. The average for the herd was then calculated. The Herd of Distinction Award ranks farms based on the cows' average lifetime production by grouping them according to herd size. It is worth noting the accomplishment of Milky Lane (50-59 record group) maintaining first place in their category for six consecutive years. The Top 25 herds in the seven categories have a lifetime milk production average of 38,235 kg per herd, which is 1,177 kg more than in 2022. The best herd in all categories has a respectable lifetime milk production average of 52,050 kg for 51 records compiled; this herd belongs to Milky Lane (ON). Ferme Stejobec Inc. (QC) comes next with a lifetime average of 46,103 kg on 94 compiled records. Start by visiting:

holstein.ca on the menu, click on

> Awards-List scroll to

Holstein Canada Awards then

Select the desired award to visualize the winners

×

HERD OF DISTINCTION : Overview by province (based on top 25 numbers)

Province	# of Herds 2022	# of Herds 2023	Milk Herd Avg. 2022	Increase/ Decrease	Milk Herd Avg. 2023
British Columbia	10	6	38,430	504	38,934
Nova Scotia/ Newfoundland	5	6	37,581	1293	38,874
Quebec	94	103	37,123	1291	38,414
Ontario	55	45	36,813	1140	37,953
Manitoba	3	5	36,591	1239	37,830
New Brunswick	2	2	36,301	377	36,678
Alberta	5	1	36,180	4330	40,510
P.E.I.	1	2	35,549	1158	36,707
Saskatchewan	0*	2	Ø	Ø	36,359

*No herd in the Top 25

OUTSTANDING PRODUCTION CHAMPIONS

Outstanding Production Champions are the most productive cows, based on age, over their lifetime. For any lactation completed in 2023, and based on age at calving, the lifetime milk produced by each cow is calculated. With age groups from 2 to 15 years, the first five in each group are listed, and for 16-year-olds, two cows are listed. The list totals 74 animals. For the second year in a row, the Huntingdon Ormstown Holstein Club (QC) has the most animals on the list with a total of nine cows, thanks to Nieuwenholf and Associates Inc. and Estermann Farm Inc. In second place is the Waterloo Holstein Club (ON) with four animals from two herds, Milky Wave Inc. and Rose Vega Farm. There were nine different Holstein clubs with three finalists on the list including the Brant-Wentworth Holstein Club (ON), Bruce Holstein Club (ON), CarletonRussell Holstein Club, Central Fraser Valley Holstein Club (BC), Central Holstein Club (NS), Club Holstein Montmagny-L'Islet, (QC), Club Holstein Rouville, Club Holstein St. Jean (QC), and Perth Holstein Club (ON). The winners of each of the 16 age categories each belong to different owners. Check the results online to see if your club has any cows on this prestigious list.



OUTSTANDING PRODUCTION CHAMPIONS

FARM NAME	AGE GROUP	MILK	FAT	LACTATION	HOUSING	MILKING FREQ.	PROV
HATCHLEY LANDSLIDE SUE 174	2	22,632	776	1	F	R	ON
SILVERRIDGE FUEL CORA	3	39,888	1,466	2	F	3	ON
FROHLAND MODEL FABY DRAGNHEART	4	59,715	2,258	3	F	2	QC
SERIC DUKE SISI	5	77,933	2,673	4	Т	3	QC
JMJ BREWMASTER FLEUR	6	101,755	4,864	4	В	R	QC
COOPON ANTEUP AJAX	7	120,037	4,576	5			ON
LARELEVE BALISTO 570	8	123,760	4,358	5	F	3	QC
ALBADON LETITSNOW CARROT	9	147,033	5,142	7	F	3	ON
DRAHOKA PLANET PLURIELI	10	155,681	6,165	9	Т	3	QC
RONELEE SNOWFLAKE-ET	11	163,718	5,595	7	F	3	BC
SUMMITHOLM MANIFOLD JAVIERA	12	181,109	6,941	11	F	2	ON
HUSO HAYDEN 59	13	180,437	6,918	8	F	3	BC
KENMARANK BLITZ ATTACK	14	150,371	5,130	10	F	2	BC
PAQUET KOLYA GOLDWYN	15	175,462	7,313	7	Т	2	QC
SAYBECOISE LUCKYSTAR JULIE	16	163,171	7,251	11	Т	2	QC

LEGEND: HOUSING: T = TIE-STALL F= FREE-STALL

TIMES MILKED: R = ROBOT

DAILY PRODUCTION CHAMPIONS

We have an exceptional leader this year in our daily production awards. JMJ BREWMASTER FLEUR. Fleur has completed four superior lactations, producing 32,975 kg of milk in 441 days in her most recent lactation. While Fleur ties for average milk per day of life with the second ranked cow, ALBADON LETITSNOW CARROT at 42 kgs, Fleur has the highest average combined kg of fat and protein per day of life at 3.67. 2023 is unique in the fact there are no cattle returning to the top five from 2022. In 2023 there were six herds with over 20 or more cows in the top 1,000. Joe Loewith & Sons LTD has an impressive 64 cows in the top 1,000, followed by Ferme Estermann Inc. with 34, Stewartson Dairy with 27, Milk Wave Inc, 26, McGregor Dairy Farm LTD. with 25, and Albadon Farms LTD with 20. The lifetime production of these 1,000 cow's bypasses 100,000 kg of milk: at 101,306 kg, their average marks an increase of 1,843 kg of milk from 2022 and an impressive 3,233 kg of milk compared to 2021. The top 1,000 list is compiled of cows from 362 herds and can be found on the Holstein Canada website.



DAILY PRODUCTION CHAMPIONS: Top 5 of 2022

AVG./DAY OF LIFE										
Animal Name	Milk	Fat	Prot.	Age	Lacts	Farm Name	Prov			
JMJ BREWMASTER FLEUR GP-82	42	2	1.7	7	4	FERME J.M.J. INC	QC			
ALBADON LETITSNOW CARROT VG-85	41.8	1.5	1.2	10	7	ALBADON FARMS LTD	ON			
COOPON ANTEUP AJAX	41.3	1.6	1.3	8	5	MILKY WAVE INC	ON			
RINGO BEAUTY HOTROD VG-87	41.2	1.5	1.4	7	4	GILBERT TETREAULT	QC			
LARELEVE SPRING 610 EX-91	41.1	1.6	1.3	8	5	NIEUWENHOF & ASSOCIATES INC.	QC			

SOCOCO young LEADER & LEADERS

Young Leader Q&A with an Expert: Allison Fleming, Ph.D., Geneticist

By Cynthia Campbell, Young Leaders Advisory Committee President

Describe your job, your background and the relevancy to the Holstein industry.

I am a geneticist at Lactanet Canada. I joined CDN, now Lactanet, after completing a PhD and working at the University of Guelph in the area of dairy cattle genetics. I work on the development and delivery of genetic evaluations for all dairy breeds in Canada including Holstein. We deliver genetic and genomic evaluations for males and females for the Holstein industry.

What data are you looking at every single day?

We require a very large amount of data for many different traits and the animal itself. Data is the driver of what we do in genetics and data quality. Every day is spent working with data such as data collected on farm through milk recording like production, calving and inseminations, health and disease, as well as classification data, pedigree information, and genotypes.

What are you doing with this data?

This data is all used as input into our genetic evaluation systems in order to calculate genetic evaluations for over 100 different traits. The data collected on farm or the performance of a particular animal is influenced by many different factors and while these records are useful for management purposes, we look to isolate the component that is due to the genetics of the animal. We may look at how much milk, fat, and protein a cow produces in a day but then we need to account for many other elements like lactation, DIM, the age of the cow, region of the country, season, the herd, along with data coming from any relatives. Genetic evaluations and the related results and data produced are made available to producers and industry partners to help make selection decisions and create genetic improvement of the breed.

How does this data benefit Holstein producers? Are we gaining any efficiency?

This data helps ensure that genetic evaluations are as accurate as possible for all traits of interest to Canadian producers and the breed. An animal with its own data contributing or sires with many daughters with records will have more accurate genetic evaluations. Genotyping also provides accurate evaluations but relies on those with data to do so. Genetic evaluations help Holstein producers select which sires to use to improve the genetics of their herd for those traits they are interested in. This brings efficiency to the herd by improving milk production and many functional traits like health and longevity and even feed efficiency. Having the best genetics possible in a herd can create many efficiencies and increased profitability by making sure they are good producing animals and will last in a herd,

minimizing involuntary culling. Using genetic data on young heifers permits the selection of the best replacement animals at an early age so the cost of raising too many heifers can be reduced. Knowing which cows will be the best dams for the next generation of replacements can help breeding decisions and the use of sexed, conventional, or beef semen.

Any additional comments you want to make!

Data collected throughout the dairy industry can be used in many different ways and genetic evaluations make use of much of it. The data that a producer chooses to record and the method or measure they use will depend on how it helps them and their decision making and what efficiency it may create on their farm. There have been many changes in the amount of data collected on farm and how it is being collected. New data sources like sensors and robots are changing the data landscape of the dairy industry. For genetic evaluations, many new traits can now be selected for that would not have been possible before. However, this also brings many new challenges and a lot of work to be able to utilize this data in genetic evaluations. As these technologies advance and become more precise and we learn how to make them comparable across all herds and systems and share the data, our genetic evaluation systems will also evolve to make the best use of this data and generate new breeding goals and genetic improvement.







2023 Education Award Winners



LAUREN BOONSTOPPEL Dalhousie University Dumfries, NB LAUREATE



CARMEN VANDERWAL University of Guelph Mount Brydges, ON BELLSON



SARAH DEAN University of Guelph Arnprior ON CARLETON



AUDREY LABBÉ Institut de technologie agroalimentaire du Québec (ITAQ), St-Lambert-de-Lauzon, QC DUHIBOU



CADENCE BECK University of Guelph Clarendon, QC RBFI



NICOLE VERHOEF Lakeland College Red Deer County, AB HAPPY COW

Top Sires According to Average Final Score of 1st Lactation Daughters

Based on 1st Lactation Classifications December 2023 , January and Febuary 2024

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

Top 10 Sires with 30-100 Daughters Classified
in Three-Month Period

Sire	Daughters Classified	Avg Daus Score	Avg Dam Score	Sire	Daughters Classified	Avg Daus Score	Avg Dam Score
SIDEKICK	295	82.24	82.64	LIMITED-P	49	83.35	83.10
ALLIGATOR	283	82.07	82.58	AVENGER	42	83.29	83.07
STARS	130	81.89	82.10	LEGEND	71	82.92	83.23
ILLUSTRATOR-P	173	81.84	82.16	HANIKO	38	82,21	82.53
ALONGSIDE	104	81.80	81.83	CRUSH	80	82.01	81.80
DOC	393	81.79	82.21	HANLEY	95	81.74	81.36
MILANO	135	81.52	81.57	ALLEYOOP	95	81.61	82.13
A2P2-PP	152	81.46	81.49	APPLE-CRISP	37	81.49	81.73
FUEL	433	81.24	81.45	DEALMAKER	64	81.41	81.55
RANDALL	340	81.21	81.70	SIDEROAD	65	81.32	81.23

NOTE: Daughters are included in these statistics only if both the daughter and her dam calved for the first time before 30 months and were both first classified within the first six months of lactation. Sires listed must have >=50% of daughters that improve in score over the dam.

Top 15 Sires	with the first 1 in a Six-Mont	10 Daughters Cl th Period	Prs classified Iop 10 Sires for Health and Fertility with 100+ Daughters Classified in Three-Month Period					
Sire Name	Daughters Classified	Avg Daus Score	Bull Proof for Conformation*	Sire Name	Daughters Classified	Sire Health & Fertility	Avg Daus Score	
RANGER-RED	15	83.13	8	ALMAMATER	199	677	79.6	
ADVANTAGE	29	83.03	5					
FITTERS CHOICE	11	82.82	11	SPEEDUP-P	618	650	80.2	
HOMECOMING	12	82.00	5	TOTEM	326	623	80.3	
MCDONALD-P-RED	10	81.90	5					
COBRA-P	14	81.71	7	HEART	186	604	80.3	
NULL	10	81.30	3	ALTAFLASHBACK	210	604	80.0	
TASER	11	81.18	1					
DIMENSION	24	81.17	6	RIDGELINE	107	604	79.9	
DISTRICT	11	81.09	4	PORTER	183	578	80.5	
NULL	10	81.00	2					
HALO-PP	14	81.00	0	LOGISTICS	113	578	80.2	
NULL	11	80.82	-1	COCKPIT	323	578	80.0	
BLAINE	22	80.73	2					
GORDY	15	80.60	9	DRYDEN	199	578	79.7	

NOTE: Some bulls have a small amount of daughters in a small number of herds. *Proof may be genomic, MACE or phenotype-based.

Classification Schedule Mid-round MR

MAY

 ON
 MR
 Huron, Grey, Bruce, Halton, York, Peel
 Peel

 QC
 MR
 Portneuf
 Portneuf

 QC
 Montmagny, L'Islet, Kamouraska
 Portneuf

 BC
 MR
 Portneuf, North Shore Central,
 Portneuf

LATE

Classifier Conference May 27 – Jun 1

JUNE

ON ON QC QC	MR Peterborough Middlesex, Lambton MR Lapointe, Chicoutimi, Lac St-Jean, Roberval Riviere-du-Loup, Temiscouata, Matane, Matapedia, Bonaventure	EARLY
ON ON QC	MR Northumberland, Frontenac, Hastings, Lennox & Addington, Prince Edward, Victoria, Durham Elgin MR Vaudreuil, Huntingdon, Chateauguay, Beauharnois	MID

ON MR Waterloo ON QC MR Iberville, St-Jean, Brome, Missisquoi, Shefford

JULY

ON ON QC QC	MR Thunder Bay, Northern Ontario Oxford MR Compton, Richmond Arthabaska, Wolfe	EARLY
ON QC	MR Wellington Lotbiniere, Megantic	MID
QC QC	MR Glengarry, Stormont, Prescott Nicolet, Yamaska, Drummond	LATE

This schedule is subject to change within a 1-2 week period.

Top 10 Sires for 305d Fat Production with 50+ Daughters Classified in Three-Month Period

Common Name	Classified Daughters	Avg Daus Score	Average 305- Day Fat	Sire Proof for Fat
FORTNITE	58	80.1	457.1	66.0
PARFECT	65	81.3	455.9	117.0
HELIX	68	80.4	452.4	93.0
ALCOVE	104	80.2	447.8	128.0
ALTAREAL MONEY	94	79.8	436.5	113.0
ALTAFLASHBACK	188	80.1	435.6	103.0
POSITIVE	87	80.7	435.6	107.0
HANLEY	71	79.0	430.1	73.0
FUEL	433	81.2	428.9	102.0
HUGO	51	78.6	427.5	92.0

Note: Daughters are included in the statistics if they had their last milk test/lactation termination date beyond December. 1st, 2023.

Top Sires According to Trait Section Average Score of 1st Lactation Daughters

Based on 1st Lactation Classifications December 2023, January and Febuary 2024

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

Sire Name	Daughters Classified	Average Final Score of Daughters	Sire Conformation
DELTA-LAMBDA	625	83	14.0
SIDEKICK	430	82	14.0
ALLIGATOR	418	82	14.0
ALONGSIDE	156	82	14.0
CRUSHABULL	134	82	13.0
A2P2-PP	200	81	13.0
STARS	171	82	12.0
HANLEY	127	82	12.0
SOLARPOWER	109	81	12.0
BAROLO SG	150	82	11.0

Top 10 Sires for 305 d Milk Production with 100+ Daughters Classified in Three-Month Period

Sire Name	Daughters Classified	Average Final Score of Daughters	Avg 305 d Milk	Sire Proof for Milk
ALCOVE	104	80.2	10581	2148
LAMBEAU	111	80.0	10099	444
FUEL	433	81.2	10040	1655
DARWIN	159	79.8	10016	1952
DELTA-LAMBDA	482	82.8	10004	1098
PHANTOM	120	80.5	9979	1371
ATEAM	282	80.3	9959	1216
ALLIGATOR	310	82.0	9902	959
ADAGIO-P	219	80.5	9870	985
RANDALL	361	81.2	9821	1516

ONLY Bull in the Breed, Proven or Genomic, that is +13 Conformation or Higher with more than +100 kg Fat.

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724HO02033 Benbie ALLURE PP A2A2/AB +3610 GPA-LPI





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Tel: 519-756-8300 Fax: 519-756-3502 Toll Free: 1-855-756-8300 www.holstein.ca

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