

info Holstein



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



WE'RE ON TRACK FOR A GREAT CONVENTION
IN JULY 2021.



NATIONAL HOLSTEIN CONVENTION
JULY 7-10 2021

Editor Steven Spriensma

CEO Vincent Landry

Board of Directors

President Gerald Schipper, ON
519-765-4614
GSchipper@holstein.ca

Vice President Nancy Beerwort, ON
613-330-0348
NBeerwort@holstein.ca

2nd Vice President Ben Cuthbert, BC
250-246-6517
BCuthbert@holstein.ca

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

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

Doug Peart, ON
905-768-5163
DPeart@holstein.ca

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

Elyse Gendron, QC
450-265-3147
EGendron@holstein.ca

Angus MacKinnon, QC
819-570-3891
AMackinnon@holstein.ca

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

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

Karen Versloot, Atlantic
506-363-8902
KVersloot@holstein.ca



Design by Blueprint Agencies Inc.
10 Scott Ave., Paris, ON 519.442.1242

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ABOVE: On page 5, we look at how the Young Leaders at Enniskillen are diversifying their farm and futures; our Field team talks to producers with high average herd ages starting on page 7; and on page 18, Trisha Rolston solves the mystery of missing registrations in this issue's Dear Customer Service!

ON THE COVER: Ciné or. Photo taken by Odrey Caron at Ferme Karona

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President's Message

Gerald Schipper, Holstein Canada President

THE CHALLENGING YEAR OF 2020 IS BEHIND US.

20/20 is supposed to be perfect vision, yet no one saw the extent that COVID-19 would impact our lives. 10 months later, we still have empty offices, customer service from home, new screening methods – our business has changed quite dramatically, as I'm sure yours has, too. At the Board level, we switched our face- to-face meetings to virtual ones. We are all getting more comfortable with meeting and sharing information through technology, and we are confident it will be one of the formats of the future.

On the plus side, this technology has also made it easier to reach more members, even with the restrictions on traveling! These are not the only money-saving ventures to which Holstein Canada is committing - we are consulting producers representing different segments of our industry to see how we can collaborate and streamline our services moving forward.

In the same vein of adding more value to our services, Holstein Canada has brought on a marketing analyst to solicit input from our members through a survey. We strongly encourage our members to answer questions and give feedback!

At Holstein Canada, we want to show leadership in ways that ensure our programs remain relevant and bring added value to farming businesses. Providing members with a completely customizable service offering is a vision Holstein Canada is taking steps to make a reality. As a first step, you will see some regional job postings; member consultation is the plan for 2021. The Classification program is an important tool that provides the solid ground to add new features that are developed and completed through collaboration with members.

On behalf of Holstein Canada, I would like to wish you a healthy and prosperous 2021! No matter what happens this year, our team will always be there for you. 🇨🇦

Gerald Schipper



Diversifying for the future

Diversification is the process of a expanding and varying a business's range of products or fields of operation. With new diversification on the horizon for many dairy producers, the Sargents are not newcomers to different ways of adding profit to their already busy operation.

On top of producing quality milk from their herd of Jersey cows, Enniskillen custom cuts small squares and custom-rounded bales of hay for horse farms and other dairy farms in their area. The Sargents also sell their farm's genetics to other breeders, with a focus on deeply pedigreed, well-producing animals.

They also take time to market their animals by attending four to five shows a year including shows in Belleville and Norwood and at the Ontario Summer Show and the Royal Winter Fair.

Now they are looking forward to 2021 and launching their on-farm dairy with sales of milk, cheese curds and butter.

Enniskillen's Diversification Is A Family Affair!

With the majority of Sargent siblings involved on the farm – and wanting to stay involved on the farm - the need to expand and create more employment opportunity was high. The Sargents decided that on-farm dairy was the way to go because of their ideal geographical location within the eastern GTA – this lets

them reach a large population in multiple cities with a significant market size.

Enniskillen's new dairy will generate revenue to support the growing dairy farm. They heavily researched on-farm dairy and looked at the potential return on investment before committing to making the change. Having Bruce's consumer marketing experience on hand is an asset!



With the decision to move forward made, the Sargents improved their barn this past summer to increase labour efficiency, changing the need to clean out the heifer barn by hand and making it scrapeable by tractor with a single feed alley.

With all of the changes taking place, the siblings have all had less down time this past summer, learning to balance normal farm chores and managing different suppliers at the construction site. They have also had to be available for municipal permit inspections, which sometimes can mean waiting most of the day.

Once the dairy becomes operational, family labour will be split between the farm and operating the dairy, which will create new routines for everyone.

Looking at 2021 and Beyond

COVID has provided some challenges the Sargents, like everyone else, weren't expecting. Since their building was considered essential – food production – the work never stopped, but permit approval and inspections often took a lot longer than anticipated. The pandemic also created delivery delays for equipment and supplies with increased demand and reduced production.

The need to try and balance dairy work and normal farm work is also challenging but something that continues to develop as they move forward. While the full benefits of diversifying to improve the overall operation are yet to be determined, preparing for the on-farm dairy has encouraged on farm improvements.

The Sargents' advice for other young leaders considering diversification? Do your research, make sure it pencils out, map out a best case and worse case scenario, be prepared to adapt and ask questions of people on the same path!



Classification Highlights

November 2020 at Enniskillen saw new 94 and 95-point cows, 8 VG 2-year-olds, 8 new Excellents and 3 multiple Excellents! Current herd classification stands at Multiple EX-14, EX-12, VG-45, GP-10!

- Enniskillen Vincent Suzy II EX-95-2E
- Enniskillen Getaway Mamie 436 EX-94
- Enniskillen Olympian Ellen EX-93
- Enniskillen Premier of BC Sue EX-92
- Enniskillen Silent Suzy VG-88
- Enniskillen Joel Mamie VG-88



Junior Member Updates!

The Junior Membership pilot project is now entering Year Two with some exciting changes and updates – now, it's even easier to sign-up!

You can find the modified application form at: https://www.holstein.ca/Public/en/Membership-Programs/Membership_Types_and_Benefits/Junior_Member.

We have added a whole lot of fun to #FrameTheHerd themes and are on target to launch the Junior Member Display Contest (for members aged 12 – 15) and the Junior Membership Project (for members aged 16 – 20). Watch for the details to come out in the spring.

You will also notice we have removed Gamification. If you had signed up for Gamification during 2020, check your mailbox in the near future for a surprise "Thank you" gift.

New fun themes for #FrameTheHerd will give you a lot more opportunity to share your photos, earn some Holstein Canada swag and maybe have your photo featured for all to see.



Our themes now center around the seasons:

SPRING: Family, Valentines Day, St. Patrick's Day, baby calves, planting, fresh pasture and others just for fun!

SUMMER: Gardening, haying, World Milk Day, prepping for the show, around the farm.

FALL: Fairs, harvest, Thanksgiving, off to school and Halloween.

WINTER: Snow, Jack Frost, travel, in the barn, Christmas and the Holidays.

You can use your imagination to capture photos that fit the seasons, or be creative and create your own fun subjects. We have also added an email just for you! Send your photos, questions and inquiries to: JuniorMembers@holstein.ca.

Join today to enjoy the benefits of being a Holstein Canada Junior member!

Herds With High Average Ages

By Morgan Sangster, Field Service Business Partner, Western Canada; Jordan Eastman, Field Representative for Western Ontario; Marilie Pelletier, Advisor for Central territories; and Natasha McKillop, Field Service Business Partner, Atlantic Canada

Cow longevity refers to how long a cow stays in the herd. More and more herds are raising the average age to increase their lactations and reach their business goals. To learn more about how this affects real producers, we talked to farmers from Frueh Farms, Ferme Pionald S.E.N.C., Greiden Farms Ltd., and Ferme Bernadale, all of whom have herds with high average ages!

Environmental Influences

One positive influence common to all four of this issue's farms was housing. Kevin Frueh is the co-owner of Frueh Farms on Vancouver Island, British Columbia. He says that the design of the barn made by his father Steve has helped the herd reach a higher average age. "He built a deep bedded sand barn with oversized free-stalls. Cows get old in big stalls with deep bedding. Even if we didn't bed with sand, I don't think we would ever switch to shallow bedding or mats." Frueh Farms won a Herd of Distinction Award in 2019.

The high average herd age of Ferme Pionald S.E.N.C. in Mont Saint-Hilaire, Quebec, was also by design, according to owner Ghislain Pion. "It was planned, more or less. When we stopped breeding, we continued to love beautiful cows and beautiful cows come at a price."

"I believe that genetics have an influence, because for a cow to last a long time in the herd she must have a good conformation. I also believe that



the environment and management have an even greater impact on the sustainability of a cow. We invested in stall comfort a few years ago and we saw a big difference. Since that time, we almost no longer have to cull animals due to injury or locomotion. They live longer in the herd."

Rolf Haanstra of Greiden Farms in St. Marys, Ontario, reaches his herd's production goals by focusing on their ages. "The goal is to have a herd of healthy, trouble-free cows giving 2 kg of fat daily. Young cows are not going to achieve this goal so keeping cows later has, and will continue to be, our way forward."

Rolf sees many factors, including the cow environment, as indicative of their success. "We focus on individual cow management as much as possible. Cow comfort is also key to longevity. We also have built a herd that's strong in the functional type traits to be able to last in the free-stall. Finally we find good forages are an often overlooked part of long living cows."



West

FRUEH FARMS LTD.
Vancouver Island, British Columbia

PREFIX: FRUEH

PEOPLE INVOLVED: Steve and Janice Frueh, Kevin Frueh, Dave Frueh (owners)

OF COWS MILKED: 120

OF ACRES FARMED: 440 acres

FACILITY TYPE: Sand Free-stall with parlour

HERD PRODUCTION AVERAGE (L/COW):
36L/day

WHAT IS YOUR FEEDING SYSTEM? TMR

ARE THERE OTHER BREEDS IN YOUR HERD? Jersey

HOLSTEIN CANADA SERVICES USED:
Registration, Classification

CURRENT HERD CLASSIFICATION:
12ME 10E 67VG 46GP



Ontario

GREIDEN FARMS LTD.
St. Marys, Ontario

PREFIX: GREIDEN

PEOPLE INVOLVED: Rolf and both parents on home farm, along with brother on neighbouring farm

OF COWS MILKED: 480 on home farm, 250 at new farm

OF ACRES FARMED: 2000

FACILITY TYPE: Deep bed shavings in 4-Row free-stall. Double 11 herringbone parlour 3x daily

HERD PRODUCTION AVERAGE: 42L/day

FEEDING SYSTEM: TMR from bunk silos

ARE THERE OTHER BREEDS IN HERD? No

HOLSTEIN CANADA SERVICES USED: Registration, Classification in conjunction with DHI testing

Gilles Bernard, owner of Ferme Bernadale in Richmond, P.E.I., didn't plan on a higher average age, but it's worked well for him and his herd. "It just came about organically. Our barn is very comfortable for our cows and so they tend to stick around for a long time. We also don't tend to cull many animals. Also when we sell animals, they're typically younger and so it keeps the ratio of younger animals on farm low."

"We feel it's about a 50:50 split between genetics and management. We try to have a very comfortable barn for our cows, and we are very aggressive with our hoof care. The hoof trimmer is at our barn every month, and if we see that a cow is even starting to become sore, we intervene. Hoof maintenance is definitely a priority!"

- GILLES BERNARD

Traits To Consider

Breeding and genomics is another key part of raising and sustaining a higher average herd age. For Kevin Frueh and family, this means conformation, dairy strength, and chest width. "Udders have come so far in the breed in recent years, I'd like to see more a little more strength and chest width in the Holstein breed again," he says. "I don't mind tall cows, but they need to have enough

width and strength to be balanced. Like a cornstalk, tall frail ones end up on the ground."

"If I use a genomic sire, generally I choose one with a well-classified dam," says Kevin. "Sure, the biggest numbered genomic bulls have heifers for dams, and I'm sure there's some science behind those numbers, but for a guy like me, it gets a little bit silly seeing a bull with three generations of unclassified dams behind them. I use a scatter of older, well proven, and sometimes even antique sires with conformation and low SCC in mind. I find a lot of value in breeding for what I know, rather than what someone's computer program says.

In this sense, it helps to have as much knowledge as possible. "Know your cows' every detail, plan facilities that prevent issues, have the cow sense to stay ahead of problems rather than culling, and don't give up on our best cows," says Kevin. "Even if this pushes our calving interval up a month or two, I'd rather have a few extra dry cows than raise 30 extra replacements every year. Plus, you already know your mature cows are good cows, that's why you've kept them around all these years.

Gilles Bernard does something similar when breeding his herd in P.E.I. "When we're selecting sires, we try to find sires that will complement each cow and bring strengths where she may need improvement," he says.

"We focus a lot on udders in our breeding program, but we also focus on legs and rumps. We look for high, wide, rear udders, and well

attached fore udders. We also focus on foot and bone quality, and pin height."

Ghislain and Ferme Pionald S.E.N.C. buy rather than breed. As such, they are very selective. "For us, it is inconceivable to buy animals that do not have a good mammary system and excellent feet and legs," says Ghislain. "We believe that with these two criteria we maximize our chances of keeping cows for a long time. We want to have strong cows with good production."

"The main objective of our farm is to have the best possible profitability," he says. "By no longer breeding our replacement animals, we know the cost of buying cows. It is therefore important for us to keep our animals as long as possible in our herd to maximize our investment."

Rolf Haanstra has taken an interesting approach. "We're breeding exclusively for A2A2 now," he says. "Our next focus is production. We like to emphasise a combination of milk and components. We also look for those functional type traits. If the legs and udders don't last, the cow can't stay in the herd."

Is There An Ideal Age?

All the farms have found success with higher average ages, but is there an ideal for which to strive? According to Ghislain of Ferme Pionald S.E.N.C., it's hard to say. "I don't think there's an ideal age," he says. "Many of my older cows over six years old are among my best. But if I had to put an age on it, I would say around 5 years old. It is around that age that the animal produces the most milk and that its purchase costs have been reimbursed."

"[The ideal age] comes down to individual cows and management," says

Kevin Frueh. "We have a few well-built cows in their mid teens from cow families with longevity, still healthy, sound and producing quality milk. I don't think there is a magic age to cull a cow, it all goes by the cow herself and the management and environment around her."

Rolf is more firm than his contemporaries in B.C. and Quebec. "I would say five lactations is the average tipping point. We find that on average, more cows develop issues after that point; however we do have several cows in their 8th lactation and two in their 10th."

Gilles Bernard isn't sure what the "ideal" age would be, but he says that everyone's ideal would be different. "The problem cows normally weed themselves out. If you're stay a long time on the farm, you're typically not having any problems."

How Does High Average Age Help Farms Achieve Their Goals?

Having a higher average herd age can be the key to reaching individual production goals. "We aim for high kilogram of butterfat per cow per day and to raise fewer replacements," says Kevin Frueh.

"In recent years, we have fed and managed for fat production rather than kilograms of milk. The current herd average is 1.6kg of butterfat per day, and average tank test of 4.6% throughout the year."

"Most of the Frueh herd consists of big, open framed cows with a lot of dairy strength. This type of cow converts

Quebec

FERME PIONALD S.E.N.C.
Mont Saint-Hilaire, Quebec

PREFIX: PIONALD

PEOPLE INVOLVED: Ghislain, Denis Pion and Suzie Bernier, their son and one employee

OF COWS MILKED: 75

OF ACRES FARMED: 568

FACILITY TYPE: Tie-stall

HERD PRODUCTION AVERAGE: 10 300

WHAT IS YOUR FEEDING SYSTEM?
Individual

ARE THERE OTHER BREEDS IN YOUR HERD? No

HOLSTEIN CANADA SERVICES USED: All



East

FERME BERNADALE
Richmond, P.E.I.

PREFIX: BERNADALE

PEOPLE INVOLVED: Gilles and Tania, daughter Mireille, father Julian, mother Corinne, nephew Alex

OF COWS MILKED: 78

OF ACRES FARMED: 1200

FACILITY TYPE: Free-stall with deep-bedded sand stalls, double-12 parallel parlour

HERD PRODUCTION AVERAGE (L/COW): 10,300 kg

WHAT IS YOUR FEEDING SYSTEM? TMR

ARE THERE OTHER BREEDS IN YOUR HERD? No

HOLSTEIN CANADA SERVICES USED: Registration, Classification



forages into kilogram of fat. You'll never achieve this with a herd of 2-year-olds or even mature cows lacking in dairy strength."

To Kevin, there are many advantages to this. "It allows us to have fewer cows in the barn, and raise fewer replacements," he says. "The rich components have always paid. Longevity means fewer replacements to raise."

Ghislain Pion also sees his herd's success in striving for a higher average age. "The main advantage for us is milk production. We buy first calf cows, the average production is good, but we know very well that the best milk production is around the fourth lactation and is stable thereafter. So the longer our animals stay, the more milk they produce. We have an easier time seeing a good productivity per replacement animal purchased."

For Ferme Pionald S.E.N.C., their high average age is inseparable from their success. "For us, productivity by replacement is very important. In fact, since we buy all our animals, we have to make sure that they stay in the herd as long as possible to make sure that their purchase cost has been paid, but also that they produce a profit."

Rolf Haanstra agrees that age has helped Greiden Farms succeed. "With the initial raising costs being as high as they are,

we need cows to stay in the herd longer to spread those costs out and provide a higher profit margin per stall."

"We always hope to keep growing, although with quota limitations, we continue to look to other areas of the farm to grow or look to diversify. In the end, we're dairy farmers though. We want to fill more quota with fewer cows and being able to keep the average age higher will be key to that. Less cows mean less headaches."

It's a business decision for Gilles and Ferme Bernadale, too. "We all know that older cows produce a lot of milk, and we feel it's those older animals (3rd, 4th and 5th lactation) that are very profitable for our farm," he says. "They've well paid back their raising costs. An older herd also allows us to keep fewer replacement animals, and provides us with the opportunity to sell young and fresh heifers. This allows us to create more revenue for the farm as we still have a good market for them."

"We love well-balanced, low-maintenance cows. We strive for cows with great udders that can milk. We also focus on feet and legs, as she needs to be able to easily do her job. We also put a lot of emphasis on cow comfort, as we feel if you look after them, they'll look after you!" 🐄



THE ECONOMIC BENEFITS OF REGISTRATION:

Understanding Inbreeding and Haplotypes

Inbreeding and haplotypes are hot discussion points within today's industry, topics that producers should consider when making breeding decisions. A perfect breeding strategy would strike a balance between boosting genetics and decreasing inbreeding. Inbreeding reduces genetic variation within the national dairy gene pool, but it can also have a significant impact on decreasing your herd's performance. Today, as elite animals are used to produce the next generation of young A.I. bulls, the inbreeding of the population continues to steadily increase. More producers are finding it difficult to find an interesting sire that is not related to the females in their herd.

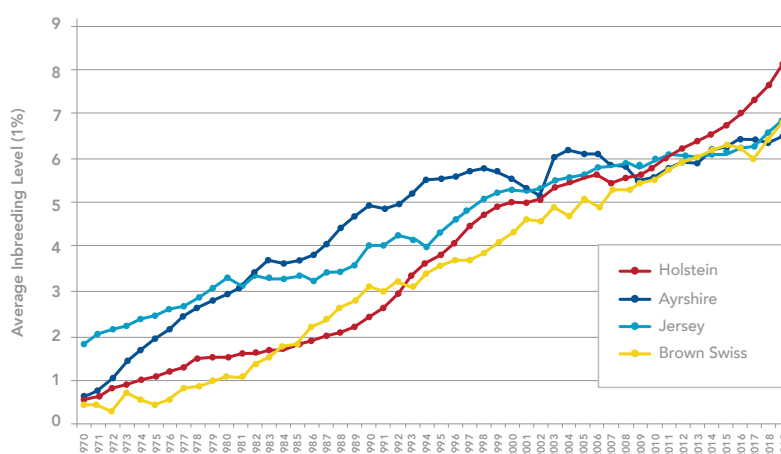
With the information listed in the family tree obtained from Registration, it becomes easier to limit breeding between related animals or between animals carrying recessive genes!

Inbreeding Trends On The Rise

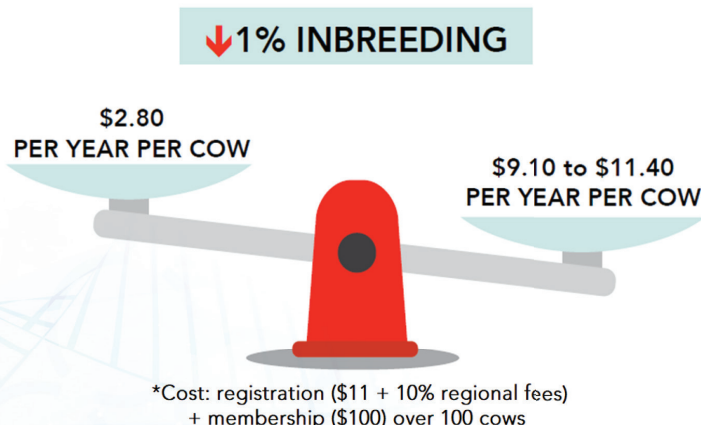
In 2019, the average level of inbreeding of Holstein heifers reached 8.13%. The rate of increase in inbreeding of females born since 2010 was + 0.25% annually. As a result, the Holstein breed currently has the highest level of inbreeding among the top four dairy breeds in the country: Jersey (6.90%, +0.10%), Brown Swiss (6.85%, +0.15%) and Ayrshire (6.50%, +0.11%). The increase is common to all four breeds, but Holsteins stand out from the group (see Figure 1).

According to data from Lactanet, increasing inbreeding by 1% represents a potential loss of between \$60 and \$78 over the productive life of an animal (four lactations) due to reduced milk production, fertility, and longevity. Therefore, we are talking about losses of at least \$1000 per year in a 100-cow herd. However, a recent Canadian study investigated inbreeding on the DNA level,* and the results have shown even further losses: as the inbreeding level increases by 1%, we will see more than \$40 lost per animal just in the 1st lactation due to reduced production and fertility. Knowing this information makes it essential to use the tools available to reduce the rate of inbreeding in the Holstein breed. Registration is the primary tool for maintaining pedigree information and providing the most accurate estimate of the pedigree inbreeding rate.

Figure 1: Inbreeding Trends in Canadian Dairy Breeds



Registration to Avoid Inbreeding



While the cost of Registration comes to \$2.80 per year for an average cow lifespan (based on national average costs), you quickly realize that a small investment like registration has a major impact on the profitability of a herd. A registered animal opens the door to unlimited pedigree information, giving access to decades of accumulated data from each of the individuals in its family line.

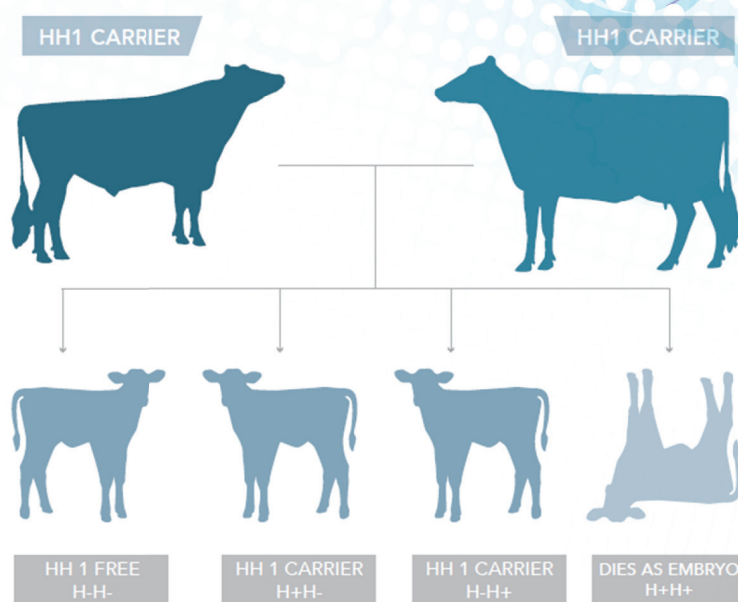
Registration and Haplotypes

Inbreeding is not the only growing problem in the dairy industry that Registration information can manage. Haplotypes are increasingly important to manage as part of a sound breeding strategy. These are the parts of DNA that cause various unwanted genetic abnormalities that geneticists have been able to isolate and identify, such as HH1, HH2, HH3, HH4, HH5 and HH6 (among others). Recessive genetic traits become serious problems when two carriers breed and both parents pass the haplotype to their offspring (see Figure 3). In an average herd, an animal can generate costs ranging from \$260 to \$340 per carrier gene, corresponding to the costs associated with abortions and early death of calves. According to a Lactanet study, some herds have frequencies above 20% of their herd carrying recessive traits and/or haplotypes.

Let's take the example of HCD. HCD is a Holstein breed-specific haplotype associated with cholesterol deficiency. For calves carrying two copies of this DNA strand, it causes death in the first six months of life. Overall, it is estimated that 20% of all Holstein herds have a frequency of 9% or less of this haplotype, while there are also 20% of herds where 19% or more of their animals are potentially HCD carriers. It therefore becomes important to know the carrier level within a herd, and producers should pay particular attention to the breeding choices that they will make for their herd.

The Tools to Manage Inbreeding and Haplotypes are Within Your Grasp!

Briefly said, Registration is a key tool to manage inbreeding while simultaneously providing accurate information to avoid haplotypes and recessive genetic traits. Compass (<https://www.compasscan.ca>) is another quick and easy tool to monitor their negative effects, as it lists and manages the recessive traits and haplotypes in your herd!



Note: this concept applies to all Holstein haplotypes and recessive

Registering your calves is an integral starting point and the key to access a box full of tools. A registration cost of \$ 11 per animal lasts a lifetime and provides many benefits. By reducing inbreeding, recessive genes and haplotype losses, the monetary benefits found through registration can be significant, with precise benefits from a service that already provides gains for the herd through genetic improvement and declaration of traceability.

Registration adds valuable information to the breed's herd book that contributes directly to your herd's bottom line. More information will always leads to better results! 🐄

*Makanjuola et al. 2020. BMC Genomics, 21:605. doi: 10.1186/s12864-020-07031-w

Explaining December's New Genetic Evaluations



The release of new genetic evaluations last December introduced genetic evaluations for the linear type traits Udder Floor, Fronts Legs View and Locomotion to the current list of conformation descriptive traits. Lactanet also expanded the number of health trait evaluations available for Holsteins, Jerseys and Ayrshires, including resistance to three fertility disorders: Retained Placenta, Metritis and Cystic Ovaries.

New Linear Type Traits

Three new linear type traits will have official genetic evaluations for all breeds: Udder Floor, Front Legs View and Locomotion. In general, once a trait is added to the Classification program by Holstein Canada, it takes a few years of collection to have a sufficient number of records to perform accurate genetic evaluations:

- Front Legs View has been scored as a research trait since June 2018
- Udder Floor was added to the Canadian Classification program in June 2017 as a trait contributing to Mammary System, replacing the defective characteristics "Tilt" and "Reverse Tilt."
- Locomotion has been scored as a research trait for over a decade

Expression of Genetic Evaluations for New Type Traits

Type trait genetic evaluations are expressed relative to the genetic base with an average of zero and a standard deviation of 5 points, meaning they have a typical range of -15 to +15. Proofs for both Udder Floor and Front Legs View will be published using letter codes since they have intermediate optimums. The letters T = Tilt and R = Reverse Tilt will be used for Udder Floor evaluations; and the letter codes of K = Knock Kneed and B = Bow Legged will be

used for Front Legs View evaluations.

While type traits are generally more heritable compared to other trait groups such as Health and Fertility, there is wide variation in the level of heritability among type traits; in Holsteins, for example, the heritability of Udder Floor, Front Legs View and Locomotion is 21%, 11% and 5%, respectively.

Interpretation of Sire Proofs for New Type Traits

It's not easy to interpret genetic evaluations for conformation traits in terms of how they relate to expected daughter performance in the Canadian Classification program. This information can be important to properly consider the new descriptive type traits in sire selection decisions, especially with mid-scoring traits with intermediate ideals. For the three new type traits, Table 1 outlines the average linear score in first lactation that is expected for daughters of sires with an average proof (i.e.: EBV) of zero in the Holstein, Jersey and Ayrshire breeds. This average represents what can be anticipated in an average herd and with an average dam; therefore, will likely not be what would be actually observed in the majority of herds as there are many variables impacting

daughter performance.

The presented average indicates how daughters of these bulls with a proof of zero are scoring across the Canadian breed population. Table 1 also provides the equivalent change expected in daughter linear score expected with each 5-point change in sire proof. Since the relationship is linear between daughter performance and sire proof for these traits, this value is valid for any 5-point difference in proof (e.g. comparing a +9 to a +4 bull or a +2 to a -3 bull) or can be extrapolated to fit any other degree of difference in proof. This difference value is relevant for all herds since it reflects the expected genetic level of daughters regardless of the management level of the herd for the specific trait.

Evaluations for Resistance to Fertility Disorders

The December 2020 release also saw Retained Placenta, Metritis and Cystic Ovaries join Lactanet's current portfolio of health-related traits for the Holstein, Jersey and Ayrshire breeds. Genomic evaluations for resistance to these fertility disorders are calculated using "Single-Step" methodology, which calculates genomic evaluations by simultaneously

TABLE 1: Bull proof interpretation table including the expected average first lactation linear score for daughters of breed average sires (proof=0) and the expected increase in the average daughter performance with each 5-point increase in sire proof.

	Holstein		Jersey		Ayrshire	
	Average for proof=0	Per 5-point proof increase	Average for proof=0	Per 5-point proof increase	Average for proof=0	Per 5-point proof increase
Udder Floor ¹	5.70	0.15	5.43	0.15	5.32	0.15
Front Legs View ¹	5.18	0.15	5.27	0.20	5.26	0.15
Locomotion	5.45	0.20	5.98	0.15	5.32	0.35

¹Trait is considered to have an intermediate optimum and for interpretation purposes a positive proof change represents a tendency towards more "Reverse Tilt" for Udder Floor and towards and "Bow Legged" for Front Legs View.

using all pedigree, performance and genotype information. This same methodology is already used by Lactanet for Hoof Health evaluations in the Holstein breed. Consistent with all other functional traits, fertility disorder evaluations will be expressed as Relative Breeding Values (RBV) with a breed average of 100 and a standard deviation of 5, where higher values indicate a better resistance to the fertility disorder (i.e.: lower frequency of disease).

One evaluation will be published for each of the three fertility disorders, which is a combination of first and later lactation values. A sire is considered to have an official evaluation for all of three fertility disorders when they have health events available for daughters in at least 5 different herds and a minimum Reliability of 70% for Holstein (50% for Ayrshire and Jersey) for at least one of the three traits.

The heritability of Cystic Ovaries and Metritis is 4% while it is 5% for Retained Placenta. Although these levels are relatively low, like other health traits, there is genetic variation observed among sires that can be exploited and used for genetic improvement. The incidence of these fertility disorders is regarded to be largely management-related by many producers, but if a problem is present in the herd, genetics can provide a more permanent, additive solution over and above herd management considerations.

Interpretation of Sire Proofs for Resistance to Fertility Disorders

Even with the relatively low heritability of these fertility disorders, there is an evident relationship between the observed percentage of healthy daughters and the RBV of their sire. Table 2 provides the expected average percent healthy daughters for a sire with a breed average RBV of 100 and the increase in percent healthy daughters expected with each 5-point increase in RBV. The values given are based on combined records in first and later lactation daughters. As discussed with the interpretation of linear type traits, the

TABLE 2: Bull proof interpretation table including the expected percent healthy daughters for breed average sires (RBV=100) and the expected increase in percentage of healthy daughters with each 5-point increase in sire RBV for fertility disorders.

	Holstein		Jersey		Ayrshire	
	Average for RBV=100	Per 5-point RBV increase	Average for RBV=100	Per 5-point RBV increase	Average for RBV=100	Per 5-point RBV increase
Retained Placenta	94.7%	1.83%	97.6%	1.01%	91.4%	3.39%
Metritis	93.8%	1.80%	94.1%	1.67%	94.8%	1.83%
Cystic Ovaries	90.4%	1.96%	87.7%	3.77%	92.4%	2.70%

actual average percent healthy daughters will be different for each herd depending on management factors.

Correlations Between Resistance to Fertility Disorder Proofs

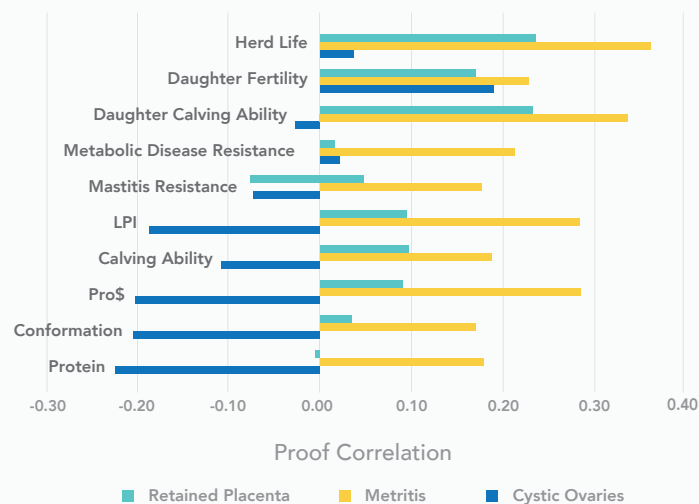
While Retained Placenta, Metritis and Cystic Ovaries can all be defined as fertility disorders, there are major differences between them. In the Holstein breed, there is a moderately strong relationship between sire proofs for Retained Placenta and Metritis (73%), but the proof correlation of these two traits with Cystic Ovaries is much lower at 24% with Metritis and 11% with Retained Placenta. This suggests that Cystic Ovaries is a genetically different trait compared to the other two fertility disorders and may require specific attention for genetic selection and improvement.

Correlations with Other Traits

The three fertility disorders will not be combined into a specific index nor included in the LPI formula. It is therefore important to be conscious of how selection for other traits may indirectly affect genetic progress for these fertility disorders. Figure 1 displays proof correlations for Holstein sires between the fertility disorders and other

key traits commonly considered in selection decisions. All three fertility disorders are favourably correlated with Herd Life and Daughter Fertility. Metritis also has a favourable relationship with Metabolic Disease Resistance, confirming a link between these diseases important during the transition period. Most notable though is the negative correlations observed between Cystic Ovaries and many other traits of interest, including LPI and Pro\$.

Figure 1: Holstein proof correlations for Metritis, Retained Placenta and Cystic Ovaries with selected other traits.



Lactanet is continually working to expand the tools available for genetic selection of dairy cattle in Canada. Genetic evaluations for these traits are made possible by the participation of dairy producers in the national classification program and their recording of herd health events.



Understanding Bull Proofs

A bull is +600 for milk – but what does this mean?

AS A DAIRY FARMER, looking at an AI company bull catalog to pick sires of your future herd is probably part of your weekly routine. Even if the AI rep picks them for you, at a certain point, you've likely been curious and checked out the numbers on the sires recommended to you. At the end of the day, everyone is looking for the bulls with traits that can improve their herd the most: high fat, feet and legs, or health and fertility (or everything together!). However, the highest number does not necessarily mean that the bull is the best for a certain trait, especially in regards to conformation.

Where do the numbers come from, and what do they mean?

The population averages are updated annually in the April proofs release, and as the genetic gain from one year to the next is accounted for, we see major changes within the April round of proofs.

Production trait averages are based on test day data from 1st, 2nd, and 3rd lactations of the females, so the yield shown on a bull proof is the genetic merit of that bull compared to the average. Meanwhile, conformation and functional traits averages are based on 1st lactation information from the daughters of proven bulls (exception for longevity traits).

How do the averages and proof values translate to actual performance?

For production traits, the number you see in the proof is two times the daughters' average yield compared to the population average - the sire and dam each contributes half of the performance. So if the population average is 11,000 kg, a bull with +2000 Milk is expected to have daughters that produce 1,000 kg more milk during each of the three first lactations (305d). See the table and example below.

In this example, the daughters of Bull A are expected to produce on average 500 kg more milk (2000 - 1000, divided by 2) and 60 kg more fat (120 - 0, divided by 2) in each of the first three lactations (305d) compared to the daughters of Bull B.

Trait	Bull A	Bull B
Milk	2000 kg	1000 kg
Fat	120 kg	0 kg

It should be clear that the proof numbers are a comparison to the average values for the population, and they are based on the genetic merit of the females.

For conformation and functional traits, the proofs are expressed on a 40 point range scale (-20 to 20 conformation, 80 to 120 functional). That means that a 0 represents the population average for each conformation trait, and the majority of the bulls have values between -5 and +5 (close to the average), while very few bulls have values under -15 or over +15 for any trait. It is important to keep that in mind when selecting specific traits, especially the ones in which the ideal is close to 5-6 on the scorecard. These traits are identified with a letter beside the proof value (for example 5S, 10C, 3A, 13W).

Let's use a herd's classification results as an example. The column 1st Lact. Avg. shows the herd average of the current 1st lactation cows, while Breed Avg. shows the current average score for the breed.

TRAIT AVERAGES				<div> <div></div> <div></div> </div>										
1st Lact. Avg	Breed Avg	Traits		1	2	3	4	5	6	7	8	9		
5.2	5.6	Udder Floor	tilt										reverse tilt	
6.4	5.5	Udder Depth	deep										shallow	
6.7	5.8	Udder Texture	fleshy										soft	
6.5	6.3	Median Suspensory	weak										strong	
4.8	5.3	Fore Attachment	weak										strong	
5.4	5.3	Front Teat Placement	wide										close	
5.6	6.5	Rear Attachment Height	low										high	
6.7	5.8	Rear Attachment Width	narrow										wide	
6.5	6.4	Rear Teat Placement	wide										close	
2.9	4.9	Teat Length	short										long	

Making decisions out of conformation data

Based on the conformation assessment information, this herd needs to improve fore udders, rear attachment height, and teat length. For the first two traits, the ideal is the extreme (9), meaning the higher the value in the bull proof, the better it is. However, for teat length, the ideal is an intermediate value – but should they look for bulls with teat length close to 0? The table shows the population average value for the three traits (which translates into a 0 EBV in the bull proof), the ideal value in the conformation scorecard, and the change you can expect on the daughters for every +5 points on the trait on the bull proof.

It is possible to observe that if you select bulls with teat length 0 (or close to 0), the expected daughters are not going to have ideal teat size – but still smaller than ideal. To get daughters with ideal length, it would require a bull with +7 for this trait. Therefore, in the case of the herd mentioned, it is important to look for bulls at least +5 for teat length; otherwise, very limited progress would be achieved. In addition, the average value for Fore Attachment within both the breed population and herd is considerably lower than Rear Attachment Height. That means the herd should look for bulls with even higher Fore Attachment to achieve good improvement. This approach is similar for other traits as well, with the ultimate goal of achieving faster and greater improvement on traits that are limiting the herd's potential.

Mammary System Traits			
Trait	Average value (equal to 0) in the bull proof	Ideal value on the scorecard	Change expected for every +5 points on the bull proof
Fore Attachment	4.99	9	0.45
Rear Attachment Height	6.33	9	0.30
Teat Length	4.66	5	0.30
Teat Length (cm/inches)	3.98 / 1.56	4.7 / 1.85	0.20 / 0.08

Take-home messages

When selecting the sires for your next generation of cows, it is important to identify the strengths and weaknesses of your herd and address the needs by picking bulls that have a significant impact on the desired traits. Understanding what the numbers for each trait mean in the bull proof is how you can make the best decisions. Each herd has its own needs, so a clear, individualized breeding strategy for the future is indispensable for any producer! 🐮🔥



Holstein Canada Online Resources 2021

Do you need help with some of our services? Did you know our website has almost everything you need to answer the questions you may have?

On top of the very knowledgeable Customer Service team, the Holstein Canada website has a large collection of bilingual online resources for all our services. Browse through this list of valuable resources to see how Holstein Canada can help you!

You'll find links to all this content in the PDF version of the January/February 2021 on the Holstein Canada website.

Classification

Conformation Assessment Posters break down the traits and their weighting towards final Classification scores. On our website, you'll find posters for:

- Holstein
- Jersey
- Ayrshire

Genotyping Factsheets

Genotyping can be a complicated topic to understand, but many producers use it as an essential part of enhancing their breeding values. To help you ensure your samples are usable, keep these factsheets handy!

- Explaining the workflow and the complete timeline of your sample.
- How to pull hair for sampling
- The TSU guide from Allflex: this shows you how to use the Tissue Applicator to get an accurate sample for genotyping services.

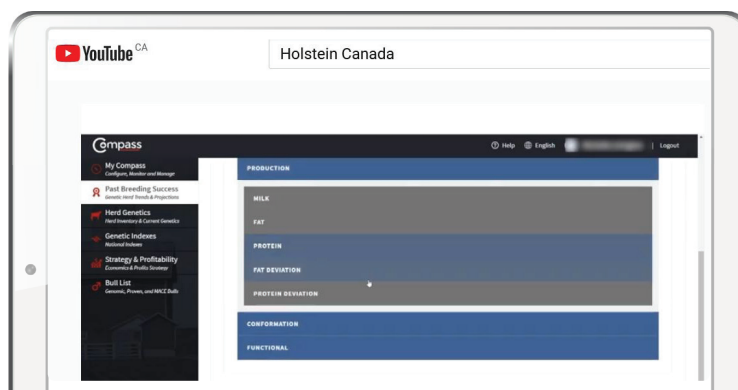
NLID

Learn more about the features of the National Livestock Identification (NLID) program:

- FAQ - Single White Button Tag
- Holstein Canada Tag Positioning Key For Maximum Results factsheet
- Dairy Farmers of Canada: Livestock Traceability Quick Tips factsheet
- Dairy Farmers of Canada: Identification of Animals Imported from the USA factsheet

Video Series

On top of the many Master Breeder videos, Holstein Canada has informational videos to help you use our online programs. Two video series that walk producers through their Herd Performance Trend Reports and the Compass Program. 🐄



Show Class Changes – Coming 2021

THE HOLSTEIN CANADA SHOW & JUDGING COMMITTEE'S new class structure plan will come into effect for the 2021 show season. The new classes maintain the current heifer classes, offers a better platform for young cows and respects the older cows.

Two extra milking classes have been added, responding to calving trends in the industry. The younger milking classes are separated into more appropriate groups for date of calving. No changes were made to the dates of heifer classes, but the names of the classes now represent the season in which the calf was born. You can find a breakdown of the Show Class changes on our website, www.holstein.ca / **Membership-Programs / Show & Judging Program / Show Classes.**



Dear Customer Service Team

Answering the question this week is **Trisha Rolston**. Trisha has worked with our Mail and Print team for the last three years. For the first week of every month, she is busy coordinating the print, folder, stuffer and postage machines to complete each of the monthly mailings in a timely manner. In 2020, our average monthly print has been 75,000 pages mailed out in 7500 envelopes and \$13,000 for postage!



Why are some of my Registrations missing in the mail? How can I reduce the paper received in the mail from Holstein Canada?

All of us, either on a personal level or in a dairy business operation, had to adapt our work to the pandemic. It seems like everything has moved online, from grocery shopping to meetings. This has brought timely questions to our Customer Service team related to Holstein Canada's online web services and electronic document preferences.

Once an animal is registered the animal inquiry on our website has the most up to date and current information plus in your web account you will have access to the Certificates of Registry. If your animal or service is not posted online, the work is still in progress and needs some additional validation. Customer service can assist you with these --- see below on how to contact our customer service team.

At the end of the month, all processed work is batched together for printing and mailed to clients. Work not completed by month end will be held until the following month's batch printing.

Don't want to wait – set up your electronic preferences:



An environmentally friendly, cost effective alternative to receiving traditional paper documents in the mail.



You will receive less mail and less paper from Holstein Canada, and you can view, save or print your documents at your convenience.



All e-Documents are kept on your web account for a period of one year or can be saved on your computer and always available online – easy to locate and no lost paperwork!



You can choose to have an email notification sent when new documents become available.

Switching to electronic documents is an opportunity for Holstein Canada to reduce operating costs; allowing us to become more efficient and you have your animal records at your fingertips!

Setting up your electronic preference is as easy as 1, 2, 3!

- 1 Log into your Holstein Canada Online Service
- 2 Click on Preference Tab
- 3 Select the Categories you want sent electronically.

The screenshots show the Holstein Canada online service interface. The top section is titled 'Preferences' and includes a message: 'All documents are available as e-Documents regardless of Preference. Select Electronic preference to no longer receive paper documents in the mail.' Below this is a dropdown menu for 'Send Email Notifications To' with the email 'testteam@holstein.ca' selected. The 'Document Delivery Options by Category' table shows various categories with radio buttons for 'All Electronic' and 'All Print & Mail'. The 'e-Documents' section shows a filter by category dropdown set to 'All (excluding awards)', a date range from '2019-12-04' to '2020-12-03', and a table of documents with columns for Transaction Date, Category, Product Name, Reference, and Invoice.

Where do you go to find all your documents – simply click on e-Documents

How to contact Holstein Canada Customer Service:

Text: 226-401-8305

Phone: 855-756-8300

Fax: 519-756-3502

Email: customerservice@holstein.ca

Video chat: is available through Microsoft Teams. Let us know a good time during business hours and we can book an appointment.

Staff are always ready to handle your requests and will do their best to maintain a 24-hour turnaround on incoming requests. 🍁

The All-Canadian Contest

THE HOLSTEIN CANADA Board of Directors welcomes the All-Canadian Contest under the Association's umbrella. The success of this acclaimed contest is due to the efforts over many decades in which Peter English, the *Holstein Journal* team, and dedicated men and women shared their passion for the best Holstein cows. We thank the English family and the *Holstein Journal* team for entrusting us with this prestigious competition, and we look forward to resuming the All-Canadian Contest in 2021 and beyond.



Holstein Canada has also agreed to support the 2020 Canadian Champions Competition, adding the results on official pedigrees of any animals exhibited at the Ontario Fall Show, the Atlantic Dairy Championship Show, and the Westerner Dairy Showcase. These shows met the criteria of being inclusive and respecting health regulations. 🇨🇦

Each issue, we'll be publishing a selection of the Top Sire charts you can now find on our website. Go to www.holstein.ca to see the full range of reports!

Based on 1st Lactation Classifications October/November 2020

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

Sire	Daughters Classified	Avg. Dau Score
JACOBY	115	84.05
SIDEKICK	103	83.71
RAMBO	110	83.32
SOLOMON	173	83.30
CHIEF	200	83.19
LIGHTHOUSE	158	83.04
IMPRESSION	705	83.03
LAUTRUST	583	83.02
CONTROL	339	82.91
HIGH OCTANE	239	82.90

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

Common Name	Classified Daughters (100+)	Avg. Final Score
SIDEKICK	103	83.74
FUEL	109	83.65
JACOBY	115	83.61
MONTROSS	115	83.58
SOLOMON	173	83.53
DOC	104	83.53
DEMPSEY	174	83.49
DUKE	108	83.20
MR JOHNSON	108	83.07
DOORMAN	325	82.97

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**

JANUARY

ON Prescott, Carleton, Russell
 ON **MR** Lanark, Renfrew, Leeds, Grenville, Grey, Huron
 QC **MR** Pontiac
 QC Bellechasse, Montmagny, L'Islet
 MB

EARLY

ON Niagara, Wentworth, Brant
 ON **MR** Bruce
 QC **MR** L'Assomption, Montcalm, Joliette, Berthier, Maskinonge, St-Maurice, Champlain, Laviolette
 QC Kamouraska
 B.C.

MID

ON Haldimand, Norfolk

LATE

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.

Holstein Canada is continuing our strict Biosecurity Protocols into 2021



Holstein Canada continues to take all matters related to COVID-19 seriously. Since the Association's services have been deemed essential by all provinces, we want to maintain the safety of employees, producers, and the dairy industry as a whole. This way, we can remain in line with our vision:

A Healthy Canadian Dairy Industry for All.

You can read our Biosecurity Protocols and On-Farm Operational Plan on our website: www.holstein.ca > [News-Events](#) > [News Bulletin](#)

info Holstein 

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Editor: Steven Spriensma
sspriensma@holstein.ca

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Holstein Canada
P.O. Box 610, Brantford, ON N3T 5R4

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