

in Sight

Dairying BC 4-12

Service 13 **Evolution**

Inbreeding and **Genomics**

Broods with Young VGs 15

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

Zest for Zita

nnie Lecours and Luc Boisvert couldn't be much more excited than they are right now. From Princeville, Qc, this couple recently obtained 97 points on their beautiful homebred, Flechedor Stormatic Zita.

Luc says, "She was a nice heifer, but after she calved and we saw her udder, we knew we had a great animal.

"With the magic of the internet, as soon as Zita's exceptional classification was posted, people from around the world signed up to buy embryos—it's crazy!"

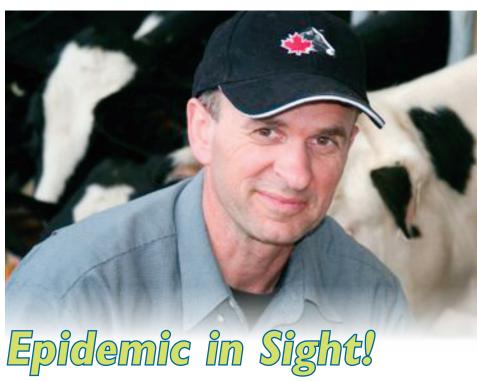
Adding to prior achievements, Zita was

first Aged Cow, Best Udder, and Best Bred and Owned at the 2010 Royal. Her lifetime leadsperson remains Annie, who shares a special rapport with her favoured bovine.

Nominated for All-Canadian Five-Year-Old in 2008, Zita has produced 43,662 kg milk, 1,721 kg fat (3.9%), and 1,390 kg protein (3.2%) in four lactations.

One of only five Canadian cows to achieve 97 points, she completes five generations of Excellent or Very Good cows. To date, Zita has one Excellent and three Very Good daughters.





by Holstein Canada President, Germain Lehoux, Saint-Elzéar, Qc

avian flu, what disease will hit us next?

Let me tell you ... it's H1P1— Holstein Passion.

All our shows this year have been affected. The animal preparation schools, the young breeder competitions, the 4-H clubs, the classics, and the breeding schools across Canada have revealed a serious progression of this outbreak!

The rest of the world has also been affected. My recent trip to the European Confrontation in Italy confirmed it. Over 5,000 people attended this first-class, international competition. Wow!

Holstein genetic progress is impressive in every country of the world. The quality of animals shown is the reflection of unwavering and constant improvement of all these breeders. For them, it is the functional cow, which is also the one we have great pleasure working with.

Exceptional udders, high-quality feet and legs, and powerful cows are certainly a pledge of a healthy long life and assured profitability.

By the way, congratulations to

Switzerland, which came out with top honours.

It is this passion for breeding that incites men and women to develop the Holstein breed to its current level. When shared, this love of the Holstein teaches us and makes us progress toward excellence. This passion also allows us to meet wonderful people all over the world.

This international Holstein contagion is certainly an added benefit that we possess—especially for the next generation. Life experiences are part of our technological and human skills; it is up to us to benefit from them.

Finally, I strongly encourage you to actively participate in your club and branch meetings. Let us know how you envision your Association and what you would like it to do to give you what you are looking for. We want to hear from you. Your Board of Directors continues to look at the best way to meet the needs of its members, clients, and tomorrow's dairy industry.

On that note, I wish you the happiest holiday season. Take time for your loved ones and tell them how important they are in your eyes and in your heart.

Warmest wishes!

Online Services Say ...

Holstein Canada continues to witness growth in the use of its online web accounts. Many producers have come to recognize the convenience and benefits of having an online account with the Association.

Some of the increase has been driven by new services such as herd trend reports and genomic testing.

As of October, more than 6,000 clients have a web account; more users join each month.

In August, a question was posed using the message board. Feedback was desired on what type of responses would be received and how effective this tool would be in soliciting client input.

During a period of 10 weeks, 2,231 clients visited their web accounts with 46% (1,016) taking the time to vote.

Thanks to all who took the time to vote!

The question was posed, "Would you be in support of adding prefix on animal names as a search field to view all cows scored VG or EX within a specific date range?"

89% said Yes 11% said No

As a result of this query, implementation is seriously being considered.

One key lesson learned is that more than 10 weeks must be allowed for a survey question to be posted on the message board.

If you are interested in setting up a web account visit:

>www.holstein.ca

>>select Sign Up Now link at top right side of page

>>>click Request Account ID

Contact a Holstein client service team member at 519-756-8300 if you have questions or need assistance.



Orders In, Tags Out the Door at Allflex

... Quickly

Senior Vice-President Glenn Fischer describes NLID tag processes



Allflex Operations Manager Mario Mauricio and Logistics Support Pauline Gagnon explain to Linda Markle, Rhonda Morley, and Glenn Cherry how the electronic file from NLID is directly imported into the Allflex Informatics System.



Mario Mauricio details the Holstein marking tray to be used in an upcoming order to Linda Markle.



Glenn Cherry, Linda Markle, and Mario Mauricio inspect the blank tags to be used in the production of an order.

olstein Canada staff had the pleasure of touring Allflex Canada earlier this year.
Located in Saint-Hyacinthe, Qc, this one of two Canadian Allflex operations (other in Edmonton, AB) provides
National Livestock IDentification tags (NLID and ATQ) to dairy producers across Canada.

Allflex has been serving Canadian dairy producers since 1996 and maintains a ISO:9001-2000 Quality certification, ensuring proper development and adherence to strict quality control standards.

For speedy, efficient service to dairs

For speedy, efficient service to dairy producers, two work lines function 24 hours daily, seven days a week.



Laser Operator Alexandre Schanck appreciates that an important element of the production process is loading trays with correct tags in keeping with the tag request documentation (format, size, numbers).



Schanck conducts the first visual inspection of the printed and coded Holstein tags as he transfers the finished tag sets to shipping nests.



Once ready for dispatch, the order is weighed to ensure completeness and to prepare the shipment documentation.





Mario Mauricio and Glenn Cherry discuss the dispatch logistics as boxes of tags are ready for postal pickup.

Dairying BC's Iconic Cariboo and Northern Interior Forts. John

During his last field mission for Holstein Canada, Registrar Glenn Cherry travelled the original Cariboo wagon route (97) to visit Holstein herds in British Columbia's northern interior. Enveloped by mountain ranges, this area was discovered in 1862 by Billy Baker, who found gold on Williams Creek. This started a rush of adventures from North America and around the world.

hile milk production in British Columbia is concentrated largely in the Fraser Valley (369 producers), there are six other milk-producing regions in the province. This makes dairy one of the most regionallydiverse sectors of BC agriculture.

This travelogue features the Cariboo, Bulkley Valley, Robson Valley, North Thompson Valley, Walhachin, and Kamloops.

Dairy producers of the rugged, northern interior afford visitors a travel and farming overview unlike any other.
Twenty-two milk and agri-food producing families are located in the picturesque, remote, lush green valleys and centres, namely Walhachin, Quesnel, Vanderhoof, Telkwa, Smithers, Dunster, Darfield, and Kamloops.

Unparalleled landscape consists of glaciers, rushing rivers, cascading waterfalls, breathtaking mountain ranges, serene lakes, canyons, and rolling hills. Other characteristic sights include totem poles, smokehouses, sawmills, sandbars, historic structures,

untamed wilderness, and wildlife.

Twelve resident Holstein dairy operations were visited to learn more of the unique challenges, rewards, and diverseness associated with generating a living from dairy farming and raising a family in the rugged expanse of BC's interior.

Common elements, regardless of farm location, include close proximity to a major highway (16, 97, 5, or 1); vital access to a river or waterway (irrigation source); a main rail line nearby (general freight and passenger); pasturing/grazing of cattle; irregular shapes and varying sizes of tillable fields; and diversified and family-involved farming operations.

Milk haulage is a big factor. One provincial rate applies to established dairy farms based on historical boundaries set in 2001.

A milk shed is a milking operation or milk-producing region.

This uniform freight rate is critical to survival, especially for those situated in remote areas. Milk is trucked primarily to Edmonton and the Fraser Valley (Abbotsford).

Except for a few regional milkcow sales, animals in northern BC, including culls, must be trucked to Abbotsford or Burnaby.

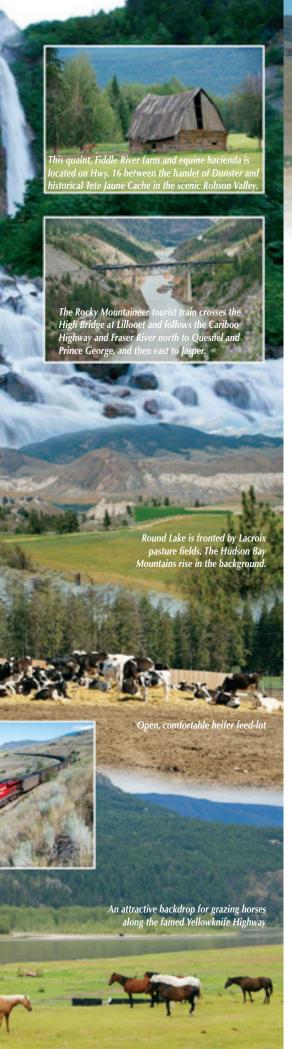
Given vast, available pastureland and favourable climatic conditions, owners do not always aim for extreme production tempered with overall efficiency, practicality, and profitability. Nonetheless, all strive for breed improvement in semen selection and an improved, next generation of Holstein. Likewise, all producers realize value in registration, classification, AI, and DHI services for herd management, pedigree development, longevity, and animal value.

While land values are lower in the interior, less-travelled, rural areas than concentrated agricultural valleys of cattle and vegetables, these proud, conscientious, and dedicated farmers matter-of-factly deal with daily challenges and routines particular to their respective location and corresponding environment.

Busy, active families often have to travel great distances to visit friends and enable children to participate in sporting and educational events. Families are close-knit; they work and play together and proudly call the picturesque northern interior of BC home!

Dairy farming in BC's northern interior, like elsewhere, makes a positive contribution to the economy and the environment. The industry supplies consumers all across the province with high quality, fairly priced, locally produced, agri-food products.





W. Richard Lancaster Walhachin Kluane (prefix)

The energetic Lancaster family (Richard and Lynn, Wade and Jessica, and Soren) recently relocated from Ridgedale to the rugged, scenic, and unique 300-ft. plateaus of Walhachin (population 100). Quick-witted Richard describes Walhachin as *dairying in the middle of nowhere* even though the Trans Canada, Thompson River, and CN and CP Railways traverse his doorstep. Wade and Soren are fourth-generation dairy farmers.

Kluane Holsteins are comfortably housed in a distinctive blue 258 ft. by 160 ft. modern, open, dairy facility constructed with a 3% grade west to east. Interestingly, cows routinely retire to sand-bedded, 10 ft. free-stalls lying consistently with their backs to the high side. A significant benefit to this practice is that cows avoid stepping on a close stablemate's teats or udder upon rising or laying down.

Cow comfort is further achieved through convection currents with cool breezes flowing up the hill (south to north) and back down to the valley during the evening. The dry air mitigates heat discomfort in the summer and cold in the winter.

This 240-cow structure, with its 15 ft. wide alleys, includes a convenient, 24-hour flush system (work-in-process) and sprinkler cooling system (30+ degrees).

Cows are milked in a double-eight, walk-through parallel parlour (no walls) with rapid exit directly onto the south and north alleyways.

Heifers on dry lot, sandwiched between the busy CN and CP rail lines, are quite comfortable—even without extensive shade. Soren trucks 18 km Open, sloped barn for Kluane Holsteins

daily to observe and feed TMR to heifers on the lower bank overlooking the meandering Thompson River.

Wade is a real keener and has lead responsibility for management of the dairy herd. He milks in the morning, as well as observing the cows at least once a day. He feels this is key to preventing udder problems and



(l-r) Jessica, Wade, Lynn, Richard, and Soren Lancaster standing high on the banks overlooking Walhachin and productive valley

promoting overall animal well-being.

Lynn takes care of feeding and the health of calves housed in hutches high above and backing onto the valley.

The Lancasters' goals include slowly expanding the herd to 240, placing more land under irrigation, and increasing longevity to at least four or five lactations. Their optimism can be tempered at times by challenges such as rock removal, irrigation costs, location of acreage, and travel

Neighbouring Milk Sheds

Walhachin to Quesnel=347 km. 4 hr.
Quesnel to Vanderhoof=214 km. 2 hr.
Vanderhoof to Telkwa=256 km. 3 hr.
Telkwa to Smithers =14 km. 15 min.
Smithers to Dunster=608 km. 7 hr. 20 min.
Dunster to Darfield=294 km. 3 hr. 18 min.
Darfield to Kamloops=99 km. 1 hr. 22 min.
Kamloops to Walhachin=82 km. 1hr. 10 min.
(The loop comprises 1,920 km and takes 24 hours of straight driving.)



distance. Furthermore, Richard is obliged to pay an additional charge for milk pickup reflecting the extra cost to travel to his farm (outside historical boundaries). Milk from big blue is picked up every third day.

With irrigation, they get three to five cuttings from the deep-rooted alfalfa and also grow corn for silage. They farm 160 acres on site and 440 on the other side of the Thompson River.

Walhachin means a land of round stone and, in reality, is tough land to farm with much of the arable land located in banks (differing levels or banks of elevation). The Lancasters, with vision and fortitude, aim to restore the valley to the lushness envisioned by Walhachin's early settlers, in 1907.

They are serious about dairying and have quickly put Walhachin back on the map. Mail from England has even found its way to this dry-belt area (annual rainfall less than 20 cm) when simply addressed to the blue barn on Hwy 1 between Kamloops and Cache Creek.

Fox Dairy Farm (93) Quesnel Eagleview

Fox Dairy, with its red buildings and attractive surroundings, is championed by the brotherin-law team of Ueli Grob and Roland Traber. This Swiss-born twosome, with complementing skill sets, and their wives immigrated to northern BC from Switzerland 20 years ago. The Quesnel site for dairying

was selected for its unique

landscape and affordable land.

The dairy herd comprises 130 milking Holsteins and 20 dry individuals. In addition, *Eagleview* houses 150 heifers and replacements. Due to a devastating fire in 1995, new buildings were constructed to house 250 large animals. The new facilities incorporate a double-10, herringbone, rapid-exit, Boumatic milking parlour, with automatic take-offs.

Ueli is responsible for the livestock side of the partnership and Roland the mechanical and field work. All members of both families are involved and help out in accordance with their busy schedules.

Roland's wife Romy handles the office duties and Ueli's wife Ingrid tends to the calves. Two milkers are employed—one for the morning and another for the afternoon.

Both partners are strong advocates of student exchange programs. A summer exchange student for six to nine months is the norm and generally involves Switzerland. Moreover, they assist French agricultural students visiting English-speaking countries on a monthly basis to advance language and planning skills.

In addition to the full range of industry services, sexed semen is used

on heifers. Semen selection takes place in co-operation with their Al representative and incorporates young sires. Top production, quality udders, and sound feet/legs are priorities.

Fox Dairy Farm continues to expand and diversify, now incorporating a 100 cow/calf herd, 30 sows (farrow to finish), and a forestry acreage project across the old, 97 Highway. The land base is comprised of 1,000 acres with 650 in irrigation, 50 non-irrigated, and the balance in bush and trees.

Water—feeding the computerized, automated, pivotal irrigation system—is sourced from the nearby Fraser River. The farm is now self sufficient in forage production allowing for surplus sales. Current facilities even allow for local butcher sales (pork and beef), including cold storage. Main crops are alfalfa, corn, and barley.

These survivors are proud of their close family connection, farm involvement, and varied interests. On the business side, Ueli and Roland take great pride in recovering from economic hardship and in developing an existing, diverse, farming infrastructure that consists of modern dairy facilities, a series of internal roadways, and adequate land base for production capabilities (food and crops).

David Martens and Sons Ltd. Vanderhoof Vanmar

The Martens' family-owned corporation has clearly and successfully pushed the diversification envelope. They have taken advantage of land acquisition opportunities and utilization of family expertise and interests.

The Vanderhoof-centered enterprise currently owns title to 7,000 acres and is operated by brothers Allan (dairy), Richard (beef and feed lot), Steve (field and mechanic), Dale (irrigation), and sister Verna Janzen (office).

The *Vanmar* herd consists of 200 milking, 40 dry, and 250 calves and heifers. Cows are milked in a double-eight, herringbone, Boumatic parlour. The milking times of 8:00 a.m. and



(perched on and in tractor I-r) Tanya Grob, Brittany Grob, Sophia Traber, Christina Grob, Vivian Traber, Angela Grob. (standing I-r) Roland Traber, Romy Traber, Tim Traber, Ingrid Grob, Ueli Grob







7:00 p.m. work well, nicely meshing with shift coverage, travel distance, and personal preference.

Cows are placed in three groups in accordance with production and to reduce time spent in the holding area. Milk is picked up every day.

Father David designed the main, freestall barn and incorporated wooden posts and dividers made from long-lasting Douglas fir. The wooden dividers and stalls (without gaps) prevent cows from being kicked and retain bedding longer. Owning the local saw mill at the time, wood was readily available and practical. Cows rest comfortably and are amazingly clean resting on mattresses and shavings.

Given 5,000 tillable acres, the Martens are self-sufficient in forages, purchasing mineral and by-pass protein.

Grazing and dry lots comprise the balance of the otherwise flat, treed, rolling acreage. With 1,000 to 1,200 acres under irrigation, 3,000 to 4,000 animals are processed through the impressive chain of feed lots each year. Also housed separately are 500 Black Angus cows. The colour black demands a premium in this breed and sector, as well. One person can have 4,000 head fed in about six hours. Using the cattle brand M is a natural.

While Allan didn't mind registering the calves, he has now opted for the regular filing and convenience offered by DHI.

A nutritionist assists with formulation of the differing TMR mixtures. Some sexed semen is used-mostly on heifers. In addition to udders and feet/legs,

sire selection considers fertility and temperament. Embryo transfer has been explored, but, service, like most equipment repair parts, must come from the Fraser Valley or the Okanagan.

The Martens team is extensively involved with school trips, agriculturecareer awareness, and the 4-H movement (dairy and steers). On average, four to six calves (this year 10) are provided as 4-H projects to local youth. Each 4-H member learns to do



by doing—taking his or her project home and caring for it from March to August. Calves are housed in makeshift sheds and/or allowed to graze.

The Martens siblings take great pride and satisfaction in successfully working together as a family. They support one another and bring differing skill sets and knowledge to the table. Like the long-lasting Douglas fir tree stall dividers, the Martens family corporation stands the test of time. Expansion and diversification continues as land in close proximity is acquired; huge, modern logging equipment begins to clear sections of spruce and aspen.

Danina Dairy Farm Vanderhoof Danina

David and Anita Pickett combine talents to manage and operate Danina with its 480 (300 tillable) acres and 60-65 Holsteins in the milking line-up.

Danina is one of only two dairy herds left in the Vanderhoof milk shed (down from 21). The dairy facilities are relatively new as previous buildings were lost due to a fire in 2004. These life partners are back in the milk production business and methodically back on track.

The existing infrastructure has a milking capacity for 90. Expansion is not contemplated knowing that the next generation is not interested in farming at the present time. David looks after feeding, breeding, and field work. Anita handles the evening milking, feeding of calves, and calf tagging/registration. They employ one full-time worker responsible for morning milking, calf feeding, and barn cleanup. Milk pickup is based on a three-day schedule.

David works closely with his nutritionist believing that with proper nutrients and the right mix of ration and roughage, the need for veterinary attention is greatly reduced.

The Picketts are very passionate about housing and growing Danina heifers as herd replacements. David designed and is justifiably proud of their state-of-the-art, heifer-raising facility. This attractive, open-air shelter (locking head rails) offers a comfortable environment while minimizing labour.

Since the fire, the Picketts' vision and ideas have changed. They take care of what's going on inside of the barn by using more outside custom operators.

David Pickett's heifers have access to open-air shelter.



It remains important to get silage and hay put up quickly—better quality and less labour. David stresses his preference for bigger cows and that he likes to grow his heifers out well prior to breeding. They use a mix of young sires and support overall breed

improvement programs.

The Picketts describe their Danina operation as a small, family farm committed to keeping costs in line, while moving forward. They would like to keep a younger herd and foresee heifer sales coinciding with market demand and milk supply.

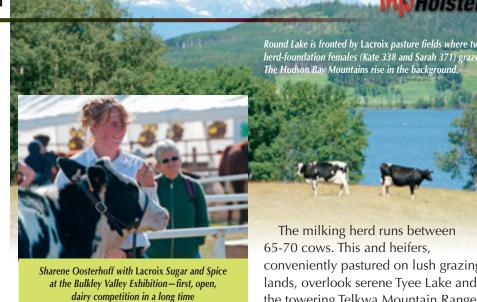
David is fond of John Deere green with a couple of working 30-yearolds and a few 40 and 50-year-olds displayed alongside the drive. R and R in David's case means Retire and Restore!

Lacroix Acres Telkwa Lacroix

Lacroix Acres represents a partnership venture involving a father and daughter-Rayner and Sharene Oosterhoff. Sharene is a new member joining the Association in August 2009. Rayner is re-entering the dairy production business on his original premises and as a mentor for his daughter.

The family has a stunning view of Round Lake (previously called Lacroix Lake) and Hudson Bay Mountain. Lacroix Holsteins are surrounded by picturesque landscape—whether front and centre on pasture or in pens and under the aspen shelters in the yard.

The current herd has 20 milking, but capacity for 70. The primary challenges of the day include herd health (acquisitions) and more-readilyavailable, milk quota. Rayner desires a better plan for new dairy entrantssomething that works and, in particular, is accessible much more quickly.



In the interim, the Oosterhoffs plan to maintain full registration, take advantage of all industry service programs, become more efficient, and move top speed to full operating capacity. Sharene and Rayner clearly have the passion, on-site facilities, and genetic foundation to achieve their goals and develop a herd mirroring their beautiful surroundings.

Tyee Farms Ltd. Telkwa Tyee

Tyee Farms of Bulkley Valley is another family-operated, dairy farm with Alan and Dorothy Koopmans acquiring ownership in 1990. Son Travis has his own mechanic business, but works parttime on the 1,400-acre farm (250 tillable, 100 pasture, 400 fenced, bush pasture). Alan's brother, Don, is the herdsman and primary milker. Alan looks after the feeding, breeding, and field work.

Manure is spread in the fall taking a 21/2-year cycle to cover all elevated, distant fields. Given the steep slope and rainy conditions at this time of the year, a customized, five-ton, 6x6 military truck—mounted with Loewen manure spreader—makes uphill traction easy and a timesaver.

The milking herd runs between 65-70 cows. This and heifers, conveniently pastured on lush grazing lands, overlook serene Tyee Lake and the towering Telkwa Mountain Range.

Round Lake is fronted by Lacroix pasture fields where two

The Hudson Bay Mountains rise in the background.

lolstein

Currently, maxed out in barn space, comfort, and worker convenience, Tyee has ambitious and progressive plans. These include new dairy facilities, free stalls, and the incorporation of a double-six, herringbone parlour. Construction for this major upgrade has started. When completed, it will accommodate 100 cows.

Don advises that Westgen's G-Mate program assists with sire selection; the farm has always bred AI.

Phil Anderson, Langley provides their herd-health program on a 5-6 week interval. All service providers and



A customized, five-ton, 6x6 military truck, mounted with Loewen manure spreader, is used to conquer steep slopes in rainy conditions.



Heifers from Tyee Farms Ltd. overlook Tyee Lake and Telkwa





suppliers must schedule appointments months in advance for mutual respect and because of extensive travel distances.

Cattle sales are limited on a local basis with most being trucked to the Fraser Valley. Heifer sales have been curtailed in recent years, and particularly of late, in anticipation of the proposed expansion. The biggest challenge confronting the Koopmans is the long winters with extreme -30° to -40° C temperatures, compounded by occasional heavy snows.

Canyon Creek Farm Ltd. Smithers Jadee

James and Elizabeth Davidson and sons John and Paul have been members of the Association for 29 years with the prefix *Jadee*.

Canyon Creek is a convenient water source, if needed, with irrigation rights flowing through acreage south of Snake Road. The Hudson Bay Mountain Range paints an impressive backdrop to enhance the northern landscape.

The family corporation owns 1,000 acres and rents an additional 400. The *Jadee* milking herd averages 50, which produces 1,000 litres per day. Cows are milked in a double-6, herringbone parlour located in a traditional, well-maintained, red barn.

The 60+ calves and heifers rest comfortably on adjoining dry lots and graze on the adjacent rolling pasture. Heifers are wintered in these same sheltered dry lots. Cows are conveniently pastured from June to September, both night and day.

Paul, responsible for the dairy enterprise, maintains an effective and practical, herd record-keeping system. He is happy with the national dairy tags and recently adopted the XL panel for ease of visibility. Paul has also switched to the convenience of the internet for calf registration. They, too, utilize the herd-health program offered by Phil Anderson. Veterinarians from Smithers can be engaged for emergency cases.

The Davidsons rely mainly on their



In the foreground is a corral where heifers have access to open shelters. In the background stands a typical, traditional, hip-roof, milk shed.



Paul Davidson stands by tractor on top of freshly-packed bunker.

Westgen representative for advice on semen usage. They select sires which improve individual cow traits, particularly feet/legs and udders. Cows are desired with strength and capacity to process large amounts of feed and to withstand long, cold winters. Each year, Paul attempts to breed better cattle as they establish sound cow families. They find it exciting to witness the development of the next generation.

These Bulkley Valley farmers are essentially self-sufficient in growing roughage. However, they do purchase barley to roll and add to the TMR mixture. They feel it is important to have good feed in bunkers at *all* times. Silage and hay is a mixture of alfalfa and brome.

Canyon Creek also operates a 100 cow/calf, commercial beef herd. Holstein steers are kept for one year and intermixed with beef loads.

Feeling fortunate to be solidly established, this two-generation enterprise ensures that everyone gets the work done and, in turn, takes time off for pleasurable, off-farm activities.

Brantanna Dairy Inc. Smithers Brantanna

Brantanna Dairy with its aged, distinguished, red buildings is located at the intersection of Snake and Telkwa High Roads. Telkwa High was formerly known as Glentanna and considered a main wagon route prior to the development of Smithers.

Al and Rosalie Brandsma own and operate this dairy enterprise with assistance from son Travis and one full-time employee. Al worked full-time on the farm with his father (started dairy farming 1964) from 1980 until the smooth transition to Al and Rosalie, commencing 1989.

The Brandsmas have 900 rolling acres with 300 arable, 300 pasture, and 300 hillside, trees, and swamp. While it may not be prime agricultural land, it works nicely for them. They put up their own hay—primarily round bales, wrapped and stored under cover.

Grain silage is bagged; this provides a means for crop rotation. A few, small squares are still part of the program providing Travis with manual *stooking* experience. A stooker (small skid-like machine pulled by baler) enables a rider to build a pyramid from six bales. These



(I-r) Travis, Rosalie, and Al with quads in front of stanchion barn



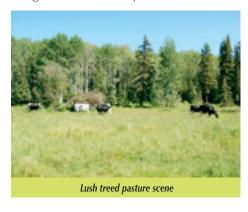
bales also add an insulation factor for the barn during the winter months.

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The herd comprises 65 milking and 65-70 calves, heifers, and replacements. The cows are outside year round although inside at night during the winter months. Heifers remain outside at all times. The younger ones have open shelters, while the yearlings gather under trees to keep warm. They can opt to pasture high in the mountains. There is very little wind as buildings and pastures are surrounded by Reiseter Ridge and Babine Mountain Range.

The herd has been on DHI since the late '60s. Sire selection criteria is based on price, milk proofs, and good mammaries to support milk components. Here, feet/legs are not a problem as animals are outside, except when in the parlour for milking and feeding. A hoof trimmer is engaged once a year.

A secure future requires a succession plan. Their current dairy infrastructure is operating to its maximum. However, it is not feasible or practical to build and/ or upgrade without future assurances of agricultural stability and transitional



accountability. The Brandsmas would like to see the northern livestock industry grow, but it is costly to get into the business, plus the rugged north presents additional challenges.

For now, Al and Rosalie will continue to farm and efficiently eke out a comfortable living for their family in this quiet, reserved setting with historical significance.



From the road, calves and hutches are in the forefront, while the Boyd Creek Dairy Farm and mountains ascend in background.

Boyd Creek Dairy Farm Dunster **BOY005**

Boyd Creek Dairy Farm, located in the Robson Valley, is owned and operated by Arlan and Janet Baer, and son Brent. The Baers' five children—three boys and two girls—have all been or are involved in the farming operation. Arlan appreciates the opportunity to work with family members.

The Dunster-based Holstein herd, consists of 125 head with 45-50 milking; daily production averages 32 kg.

They utilize the full range of management services offered by Holstein Canada and industry partners. Brent works with their Westgen representative and G-mate for effective sire selection and to maximize herd improvement.

The Baers farm 300 arable acres and lease another 700 for additional crops and pasture. Arlan and Brent also maintain a 200 cow/calf beef herd and raise Holstein steers to about 300 kg.

The province-wide freight rate is crucial to their livelihood. Arlan can recall, as a youngster, retrieving milk cans from the water-cooling pit and placing then on the train bound for Prince George.

Arlan predicts they would be in an expansion mode if quota prices were more in line and agricultural stability was assured. The Baers are cautious as well, knowing their livelihood is dependent, in part, on a somewhatdistant market.

On the whole, farming at Dunster provides a meaningful and satisfying life and remains a great place to raise a family.

Isaac Martin and Family **Dunster MAR594**

Isaac and Marie Martin have been blessed with eight children—five boys and three girls. Isaac enjoys being a dairy farmer and feels it provides a great family environment.

This congenial and energetic family crops 600 acres and pastures another 600 in the Robson Valley. The Holstein herd counts 120 with 60 cows milked in a double-6, herringbone, DeLaval parlour. Gerald and Nathan—designated dairy boys—clearly demonstrate a passion for the breed and dairying, in general, even at their young ages.

Using all industry services, the Martins' Holsteins are currently registered; upgrading has advanced herd progress. They have elected to acquire metal tags (match tags through NLID) with the same management numbers as an added assurance of identity, given the ruggedness of pastures and corresponding tag retention.

In addition, they run a 300 cow/calf, commercial, beef herd, which grazes in

Isaac, Gerald, and Nathan Martin balance on their tractor with harvester in front of the dairy complex.





a community pasture near McBride. The Martins raise their Holstein steers to about 300 kg, with a couple regularly added to a beef load.

The Martins take pride in having started from scratch (one log barn and log house) and developing the farm to its current status. The building process has involved three generations and taken many years. Isaac took over management of the farm in the fall of 1986. Lester, Isaac's father, started dairy farming in 1961 and shipped cream by train from nearby Dunster Crossing until 1965.

In addition to hay silage, the Martins grow 90 acres of corn. Silage is stored in three upright silos. Lester built the 50 ft. and 60 ft. silos with Isaac adding an 80-slab silo.

Interestingly, field sizes can be quite small, even one to five acres. To be tillable, fields must fit the contour of the landscape meaning shapes are rarely square or rectangle. This makes it difficult to find a straight line to start cutting hay.

Isaac and Marie's aspiration is to witness family members continue farming with a dairy component. They realize that the ability to expand will be a challenge—both expensive and difficult. Nonetheless, team Martin proudly conveys a positive view on dairying both now and for the next generation.

Karl and Debbie Rainer Darfield Linquist

Linquist Holsteins and Rainer Custom Cutting sit aloft the Yellowhead Highway (5) in the agricultural, but rugged area known as the North Thompson Valley (central interior).

Karl and Debbie Rainer with sons Ben, Dustin, and Kurtis farm 650 acres—150 tillable and 400 leased. They

LINOUIST DAIRY

maintain a profitable

Holstein herd with 38 milking and operate a provincially-licensed slaughter plant and

Sign on Yellowknife Highway marks access to business

butcher shop. Regularly inspected, it adheres to all food processing standards. Six people are employed during peak periods. This on-farm facility includes cold storage, cooling/ holding room, and has composting provisions.

While Karl is responsible for management of the *Linquist* dairy herd,

the province's graduated-entry program, with quota not saleable for 15 years.

This diverse food production/ processing centre proudly sports all new buildings since 1980 thanks to master carpenter Karl.

The Rainers realize much enjoyment from their successful business



Three quads with (I-r) Dustin, Ben, Debbie, and Karl Rainer park in front of green, dairy unit constructed by Karl; pets are Rex and Lady.

Ben is in charge of the Rainer Custom Cutting meat shop. Debbie milks twice a day, looks after the bookkeeping and financial issues, registers calves, and drives tractor for a change of scenery. Dustin raises free-range birds to go through the meat shop and for local sales.

Dustin also assists in the slaughter plant, meat shop, and elsewhere on the farm, as needed. Youngest son Kurtis, an electrician by trade working off-farm, still finds time to assist on the family farm. Karl welds and repairs equipment, and designs and builds expansion projects, while keeping abreast of community events. He also handles the breeding duties, being an advocate of young sire programs, specifically screening for feet and legs.

The climate and weather patterns allow the cattle to be outside all year, except overnight from November to April.

Karl became actively involved in the operation of the farm in 1974, expanding herd numbers and switching from shipping cream to industrial milk (MSQ). This was achieved through the acquisition of MSQ (token value) from cream shippers leaving the business. More significantly, he benefited from ventures—happy customers and cash flow. They like being their own bosses, even though cows seemingly control the schedule. Milking cows pay the bills, as long as Debbie can keep Karl's building projects in line!

As for the future, the Rainer families must begin planning for succession and retirement. The challenge is probably greater at *Linquist* in that everything happens on one piece of property. However, Karl and Debbie are committed to everyone making a decent income to enjoy a good living. With independence, each family member requires the ability to purchase what he wants and have a nice place to live and raise a family.

Blackwell Dairy Holsteins Kamloops Blackwell

Blackwell Dairy Farm, comprised of 225 acres (40 pasture), is truly picturesque. It is located at Barnhartvale and rurally positioned overlooking the South Thompson River, Trans Canada Highway, and Canadian Pacifics rail line. This overlooks Kamloops to the immediate northwest.



At the helm is industry serviceminded entrepreneur E.J. Ted Blackwell. He carries on a family tradition dating back to 1913 and Milton Blackwell.

Daughter Laura Hunter manages Blackwell Holsteins with the capable assistance of Allan Andrew—herdsman for 20 years. Seventy Holsteins are milked in a double-four, herringbone parlour with automatic take-offs. Cows receive a standard quantity of grain in the parlour. This is topped up by a dairy ration through three electronic, self feeders adjacent to the free-stalls.

Involved Laura is with the animals every day. She milks and feeds two days a week to really know and care for the herd. Cows are comfortable and clean resting between woodenstall dividers and on a bed of shavings. Daily events are accurately recorded aiding in management with dairy tags positioned for best retention and overall appearance.

In addition to 110 Holsteins, Ted maintains a small beef herd of 30 Black Angus. Laura's husband Ryan is in charge of irrigation and extensively involved with field work and crops. Laura and Ryan have fostered the next energetic generation, which includes Matthew, Reid, and Emily.

Further to the basic farm operation,

Blackwell legend.

Milton Blackwell began dairy farming in 1913 and by the Three generations of Blackwells pose in front of the grandfather's dairy spring of 1914 began selling barn built in 1928 and the original milk bottling shed. Left are Ryan and cream and butter at the farmer's Laura Hunter with their three children, Reid, Matthew, and Emily. Right are Ted and Gerri Blackwell. market in Kamloops. He even distributed milk through a homedelivery service. In 1983, the Blackwells (Arthur and son Ted) built their own processing plant right on the farm.

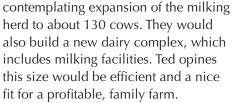
In addition to the milk produced by their own cows, Blackwell Dairy also receives milk through the BC Milk Marketing Board from other dairy farmers in the North Thompson and Shuswap Okanagan for processing.

Approximately 800 cows are required to supply the plant and its 20 employees with sufficient fluid milk to maintain the dairy's processing standard of 75,000 litres/week.

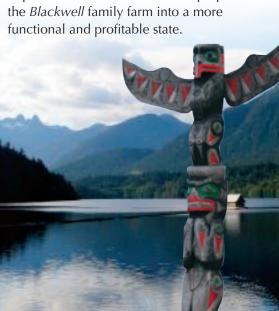
The Blackwells have solidified and understand the ins and outs of niche marketing. These include firstrate service, package creation (40 plus), freshness, customer needs, competitiveness, and product branding.

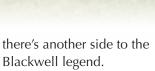
The Blackwell product is traditional, of high quality, and eagerly sought throughout much of northern BC and the north Okanagan.

With current facilities limited due to age, design, and size, the family is



These entrepreneurs take pride in getting reclaimed fields back into full production for continuous farm improvement. It is their desire to propel





Dry cows mosey about on the highest bank on top of Barnhartvale overlooking the South Thompson River.



Service Evolution

by Brian Van Doormaal, Holstein Canada Chief Executive Officer and CDN General Manager

The mission of Holstein Canada is "to provide leadership through genetic improvement programs that enhance profitability for all dairy producers."

To achieve this Association goal, your Board of Directors, management team, and staff are challenged to develop and offer new genetic improvement programs, while reviewing existing ones. All decisions must be aligned with our core values: customer focused, responsive leadership, passion for the dairy industry, utmost integrity and respect, continuous improvement, embracement of technology, open communication, and quality service.

Undoubtedly, you are all aware of the rapid arrival and impact of genomics on the dairy cattle improvement industry in Canada and globally. Holstein Canada is well positioned for offering services to help producers take advantage of this exciting new technology for enhancing the profitability of their herds.

With the launch of the GenoTest Program, in partnership with the Semex Alliance and its four partners, Canadian producers now have access to genotyping services using either the 3K panel (\$47) or the 50K panel (\$160). The adoption rate of this new service is expected to be extremely fast and, generally, the earliest adopters of new technologies reap the greatest benefits.

All Holstein Canada members should consider genotyping key cows and heifers in their herds and use the resulting genomic evaluations for selection and mating decisions. To achieve the greatest accuracy with 3K genotyping, it is ideal to have at least

one dam in the maternal line genotyped with the 50K panel.

As Holstein Canada adds to its portfolio of genomic testing services offered to Canadian producers, we must also identify ways that genomics can add value to the current classification and Herdbook services. In addition, the Association will evaluate potential alliances and partnerships aimed at generating more profit at the farm level by reducing costs and/or adding value to existing services.

As you read this message, the festive season will be upon us. I want to extend sincere best wishes on behalf of everyone at Holstein Canada for a joyous Christmas, as well as good health, happiness, and success throughout 2011!



re-open Tuesday, January 4.

Convention SPONGIFF BUZZ

Halifax, Nova Scotia Thursday, May 12 Welcome Reception Friday, May 13 Farm tours Master Breeder Banquet Saturday, May 14 128th Annual General Meeting of Sale Atlantic Lobster Feast Sunday, May 15 Holstein Show Halifax city tour Monday, May 16 Tour through Antigonish returning to Halifax airport Newfoundland Monday, May 16 to Tour through Antigonish to Thursday, May 19 Newfoundland for farm visits and a myriad of island-related activities

Well, it's time again for Holstein Canada's Annual Convention and General Meeting of Members.

Halifax, NS is the designated location to experience east coast traditions. Not to be missed is the post-tour, ferry excursion to Newfoundland—a province unlike anywhere else in Canada!

The entire event will be held in *May*—for this year only.

Convention material is no longer being mailed to the entire membership. Register online at:

>www.holstein.ca

>>Holstein Canada Events

>>>National Convention Spotlight

You can also print off and mail/ fax the applicable form or call customer service for a hard copy of the information. Early-bird deadline for registration is Saturday, March 12. Anyone attending the Newfoundland segment of the program must book before Monday, April 11.



New World Dairy Inc., St. David's, NF is one of Canada's largest dairy operations and a stop on the tour.



Inbreeding and Genomics

enomics has given the dairy industry an incredible tool to select and mate animals much more accurately.

By relating DNA profiles to traditional breeding values of proven sires, a mechanism has been created to assess the amount of beneficial genes an animal has inherited from its parents. These will, in turn, be passed on to their progeny.

Inbreeding is a measure of the proportion of genes an animal may have inherited from both parents and have, therefore, become *fixed*. When referring to gene markers, such as **Single Nucleotide Polymorphisms** (**SNPs**), when the two alleles at each SNP are identical or *homozygous*, we can consider that SNP as *fixed*.

If such an animal is mated to another that is also id *fixed* for the same two alleles, all progeny have a 100% chance of inheriting that allele. Over time, the genotype at that SNP becomes *fixed* in the population or breed. As a breed becomes increasingly inbred, this fixing occurs at numerous SNPs.

Traditionally, inbreeding is measured by tracing the degree (or percentage) of genes that are identically inherited from both parents over several generations—simply from known pedigree relationships.

The average inbreeding level in the Holstein breed continues to increase annually and was recently reported to be 5.87% (source: CDN) for animals born in 2009. This continual increase has planted concern in the minds of breeders and industry as a depression in production, health, and fertility may result from fixing deleterious (or unwanted) genes in a breed.

However, the opposite is also true. Inbreeding can propagate the beneficial genes that we want to select for in a population that increase genetic potential in the breed.

Computerized mating programs offered by various AI companies in Canada consider maximum inbreeding tolerance levels when making sire mating recommendations for cows and

Inbreeding can propagate the beneficial genes that we want to select for in the population that increase genetic potential in the breed.

heifers in the herd. These inbreeding thresholds really should be weighed in combination with the potential genetic gain that could be realized from such a mating when making sire recommendations.

Inbreeding tends to be underestimated the more incomplete a pedigree has been recorded. Therefore, animals with several (5 or more) generations of known ancestors have an estimated inbreeding level that tends to be higher and is more accurate compared to those that have little or no known ancestors.

With the availability of more than 45,000 DNA profiles of Holsteins in North America, a study was conducted to determine the relationship between the percentage of genes that have become fixed (or homozygous) in an individual's 50K genotype and its pedigree-based inbreeding value calculated by CDN.

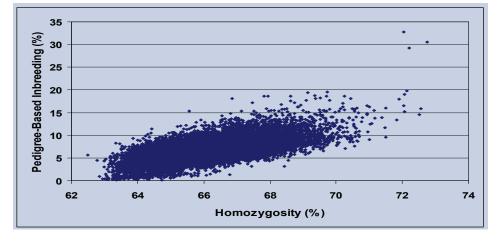
Although pedigree-based inbreeding ranged from 0% to more than 32% in genotyped animals, a vast majority had between 63% and 69% of their SNPs that were homozygous (see figure). Because a large percentage of SNPs on the 50K panel are homozygous in most animals, detecting differences can be challenging.

Further analysis hopes to isolate the SNPs that are segregating in the most informative way. Therefore, they would provide additional insight into the amount of genetic variation that can be lost or gained from becoming fixed.

An interesting result showed that when homozygosity was used to predict inbreeding, no genotyped animal had an estimated level of inbreeding that was less than 2%; most ranged from 4% to 10%. When pedigree-based inbreeding was less than 3%, SNP-based inbreeding is always predicted to be higher, ranging from about 3.9% to 8.0%.

Genotyped animals with a published inbreeding coefficient of zero (little or no pedigree) in the CDN database can have a SNP-based inbreeding coefficient ranging from 3.9% to almost 10%.

SNP homozygosity in genotyped animals can increase our understanding of published inbreeding coefficients calculated using known pedigree data. More work is needed to determine how to best capitalize on this new source of information to improve our selection and mating decisions while monitoring inbreeding levels.





Broods with Young VGs

Some well-known brood cows have the incredible distinction of producing the most daughters classified *Very Good* in first lactation. With only three percent of first calvers becoming VG 2-year-olds, it's quite a feat to have so many daughters meeting this high level.

These matriarchs have become famous enough to be referred to by single names and stand out for other achievements as well.

Six of the nine have been a finalist or



Stépido Super Mega

named Canadian Cow of the Year. Stadacona Outside *Abel* is the dam of the

million dollar Eastside Lewisdale Gold Missy (VG-89-2yr 2 Sup. Lacts.).

La Présentation *Daurel* is Canada's highest Star Brood cow with 50 stars.

The dam/daughter pair of Blondin *Skychief Supra* and Blondin *R Marker Supra* both appear on the list.

Quality Astre *Felice's* stablemate, Quality B C *Frantisco* was twice Grand Champion at the Royal and voted All-Canadian five times.

Cows With Most VG First Calvers

Cow	Data	# VG Daus.	Breeder	Owner		
Stépido Super Mega	VG-88-4yr 18*	25	Ferme Stépido enr., Qo	:		
Stadacona Outside Abel	VG-88-4yr 14*	22	Robin & Marcel St-Denis, Qc	Lewis Bros., PE Guy Thompson & Son, PE		
Quality Astre Felice	EX 26*	21	Quality Holsteins, ON	N		
La Présentation Daurel	EX 50*	20	Ferme Richard Blanch	nard Blanchette & Fils, Qc		
Blondin Skychief Supra	EX-93-3E 19*	19	Ferme Blondin, Qc	Ferme Blondin Pierre Boulet, Qc		
Glen Drummond Splendor	VG-86-2yr 34*	19	Roger Dyment, ON	Syndicat Gen-I-Beq, Qc		
Brabantdale Triumphant Spooky	EX-2E 31*	18	H. W. Nooyen, ON			
Quality B C Frantisco	EX-96-3E 14*	17	Quality Holsteins, ON			
Blondin R Marker Supra	VG-89-3yr 4*	16	Ferme Blondin, Ferme Belle-Rivière SENC, Qc	Ferme Blondin Pierre Boulet, Qc		

Top Sires According to Average Final Score of 1st Lactation Daughters Based on 1st Lactation Classifications from September/October 2010

Top 10 Sires with 100+ Daughters Classified in Two-Month Period			Top 10 Sires with 30-100 Daughters Classified in Two-Month Period				
Sire	Daughters Classified	Avg. Daus. Score	Avg. Dam Score	Sire	Daughters Classified	Avg. Daus. Score	Avg. Dam Score
Jasper	221	81.4	81.4	Damion	86	82.1	81.5
Goldwyn	873	81.4	81.3	Blade	35	81.4	79.3
Bolton	197	81.1	80.9	Ross	30	81.4	79.4
Spirte	323	80.9	80.3	Atlas	31	81.2	80.6
AltaBaxter	355	80.9	81.6	Roy	86	81.2	81.3
Talent	345	80.7	80.5	Stormatic	57	81.0	81.2
Fortune	199	80.6	81.1	Mr Sam	64	80.9	79.4
Mr Burns	331	80.6	80.7	Sovereign	34	80.9	80.7
Blitz	110	80.3	79.8	Lheros 83 80.8		80.8	80.7
Final Cut	199	80.2	80.3	E Commerce	33	80.7	78.9

Note: $^{\blacktriangle}$ Daughters are included in the 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 $\geq 50\%$ of daughters that improve in score over the dam.

Classification Schedule

ciassification schedule		
ON – III Grey, Bruce, Huron, Halton, York, Peel, Ontario Qc – III Portneuf, Lapointe, Dubuc, Charlevoix, Chicoutimi	Early	
Qc – III Lac St-Jean, Roberval Qc – Rivière du Loup, Témiscouata, Rimouski, Matapédia, Bonaventure, Matane	Mid	
ON – Lambton, Middlesex, Essex & Kent, Elgin ON – Mi Simcoe, Dufferin	Late	
ON – III Peterborough, Northumberland, Lennox & Addington, Frontenac, Hastings, Prince Edward Qc – Arthabaska Qc – III Vaudreuil, Soulanges, Huntingdon, Châteauguay, Beauharnois, Laprairie, Napierville, Saint-Jean, Iberville, Shefford, Richmond, Missisquoi PE, NB, NS, NL – III	Early	
ON – Oxford ON – III Victoria, Durham, Waterloo Qc – Mégantic, Wolfe, Lotbinière, Nicolet Qc – III Compton, Brome	Mid	
ON – III Wellington, Thunder Bay, Northern Ontario Qc – Yamaska Qc – III Sherbrooke, Stanstead SK – III	Late	
ON – Perth ON – Mil Dundas, Stormont QC – Mil Frontenac, Beauce, Lévis, Québec, Montmorency QC – Drummond, Bagot, Saint-Hyacinthe, Richelieu BC – Lower & Central Fraser Valley, Richmond Delta	Early	
ON – Lanark ON – Mi Prescott, Glengarry, Niagara, Wentworth, Brant, Haldimand & Norfolk Qc – Verchères, Rouville, Abitibi, Témiscamingue, Pontiac, Labelle, Papineau, Gatineau, Argenteuil, Deux-Montagnes, Terrebonne, L'Assomption, Montcalm, Joliette Qc – Mi Dorchester BC – Upper Fraser Valley, Okanagan, Vancouver Island	Mid	
ON – Leeds, Grenville, Renfrew ON – Mi Russell, Carleton Qc – Berthier, Maskinongé, Saint-Maurice Qc – Mi Bellechasse, Montmagny, L'Islet	Late	

iii mid-round



West Hawk Lake Lessens Disease Risks

he federal government has stepped up to the **traceability** plate designating \$2 million for Canada's West Hawk Lake Zoning Initiative.

Managed by the Canadian Animal Health Coalition (CAHC), zoning serves as

West Hawk Lake serves as an important safeguard for the health and welfare of our food supply and our livestock industry. Every day, dozens of trucks roll through this area to deliver products that Canadians put in their grocery carts.

a mitigating activity to reduce losses and the resulting economic impact by 50%.

While BSE in 2003 and Avian Influenza in 2004 resulted in huge financial losses, they would pale in

Canada has the only known natural phenomenon in the world (West Hawk Lake) to facilitate zoning into two geographical expanses.

Other logical, restricted-access, zoning opportunities could be easily adapted to include Prince Edward Island, Newfoundland, and Vancouver Island.

comparison to the ramifications of the highly contagious, spreading **F**oot and Mouth **D**isease (FMD)—estimated at \$46 billion.

The West Hawk Lake Zone control site is situated on the Trans-Canada Highway near the Manitoba/Ontario border. This is the only passage point for commercial vehicles—road and rail—between the two provinces. With an existing scale, it could be easily secured, in a state of emergency, preventing all movement and stopping infected animals from entering the clean zone. It offers a unique, single-road checkpoint to monitor Canadian east/west livestock movements.

Canada must look at foreign animal disease prevention and control measures as a series of firewalls—none 100% effective. However, recognizing West Hawk Lake will aid in ensuring that partial trade is reestablished quickly.

This initiative represents another step toward Canada reaching its goal of national food traceability by December 2011. It also demonstrates to international trading partners that Canada is ready and able to seize control of any potential animal diseases quickly and effectively.

This project is funded by Agriculture and Agri-Food Canada (AAFC) through its Canadian Industry Traceability Infrastructure Program (CITIP). AAFC is pleased to participate and is committed to working with industry partners to increase public awareness of the importance of the agri-food industry to Canada.



Animal Crossings at West Hawk Lake in 2009

Dairy	Beef	Hogs	Sheep	Goats	Equine	Bison	Feathers	Other
1,351	66,215	88,911	29,781	1,682	608	185	2	117



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Return undeliverable Canadian addresses to:
Holstein Canada
P.O. Box 610, Brantford, ON N3T 5R4

Tel: 519-756-8300 Fax: 519-756-3502 jwhaley@holstein.ca www.holstein.ca Published six times annually Subscription: \$18 outside Canada Editor: Jane Whaley Publications Mail Agreement 40008691