# 2018 WESTERN PROGRESS REPORT













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Further, herds enrolled on DHI services may have information published for awards and recognition purposes with Annual Summaries and year-end publications.

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Please Note: This is a summary of the DHI Privacy Policy. For the complete statement, please visit canwestdhi.com.



# A Word From Our Chairman

Congratulations to all the herds recognized in this publication for their success. The Progress Report aims to celebrate the improvements made year over year on farm and the results clearly show that progress has been a driving factor for Canadian herd managers.

2018 was a year of challenges for dairy farmers across the country. Lower blend prices, increased cost of production, higher interest rates and more were among many new obstacles we had to overcome and continue to battle. On our own farm we are transitioning from producing as much as possible to meet quota allocations to focusing on how to produce as efficiently as possible. These changes drive us to be cost effective and make decisions on farm that yield the most profitability. In order to do that, we rely on having good information.

The theme of change extends to our organization as we look towards a new partnership with Valacta and CDN this year. Our partnership will position our industry for a more challenging future ahead and will enable us to provide support for a sustainable and progressive Canadian dairy industry.

We must adapt to change on our farms as our organization does the same. CanWest DHI remains for the producers, by the producers. Together, with continued commitment of our staff teams and Board, we look forward to years of progress and success.

Happy reading!

Ed Friesen Chairman, CanWest DHI



# A Word From Our General Manager

In this publication we present the annual listing of top ranked herds to celebrate their excellence in herd management. We profile several outstanding herds from each of our western provinces who as a result of their hard work and dedication have achieved success. Congratulations to all herds who have progressed over the past year whether it was through lower SCC, increased milk value or otherwise.

Our mission is built into our name, Dairy Herd Improvement, and at our core we are dedicated to serving producers. As the Canadian dairy industry continues to evolve, we have also adapted our service offerings and remain committed to developing effective new tools for customers so that they can remain competitive in the changing marketplace.

For example, this past year GestaLab milk pregnancy test was made available at 26 days post breeding and DairyComp herd management software was upgraded with a highly efficient automatic traceability reporting module.

Change is not limited to producers, as Canadian DHI will be experiencing its own transformation this year. This Progress Report will be the last to carry the CanWest DHI brand. Next year we look forward to presenting this publication under a new name and logo.

Finally, our sincere thanks to the sponsors participating in this annual publication. We appreciate your continued support.

Neil Petreny

General Manager, CanWest DHI



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REFERENCES: 1. Based on approved Canadian label. 2. Giguère 5, et al. Am J Vet Res 2011;72(3):326–30. 3. Huang, R.A., Letendre, L.T., Banav, N., Fischer, J. & Somerville, B. (2010) Pharmacokinetics of gamithromycin in cattle with comparison of plasma and lung tissue concentrations and plasma antibacterial activity. Journal of Veterinary Pharmacology and Therapeutics, 33, 227–237. 4. Tessman RK and Bade DJ. Intern J Appl Vet Med 2014;12(3):255–60. 5. Sifferman RL, et al. Intern J Appl Res Vet Med 2011;9(2):166–75.

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### Selecting for Pro\$ Means Selecting for Profitability

Lynsay Beavers, Industry Liaison, Canadian Dairy Network

When making genetic selection decisions, my ultimate goal is to create a \_\_\_\_\_ cow. If you filled in the blank with the word "profitable", Pro\$ is the genetic index for you.

Pro\$ was introduced in August 2015 as a selection tool to maximize genetic response for daughter lifetime profitability. Since that time, producers, A.I. companies, breed associations and other industry organizations have been quick to embrace this index. Over the course of the last three years significant changes in milk pricing and expenses have occurred. In addition, the accumulation of more data, as well as the opportunity to add new traits and expenses unavailable in 2015, led CDN to pursue updating the Pro\$ formula.

### **How Pro\$ Relates to Daughter Profit**

Pro\$ is expressed in dollars as a deviation from breed average. For example, a bull with a Pro\$ of \$2,000 can be expected to sire daughters that have an average accumulated profit to six years that is \$500 higher than daughters of the bull with \$1500 Pro\$. In other words, selecting sires with a higher Pro\$ value will translate directly into increased average lifetime profit of the resulting daughters (Example 1).

### What has Changed since Pro\$ was Launched?

The backbone of Pro\$ is cow profitability data from CanWest DHI and Valacta — data that comes directly from Canadian dairy farms. This information is provided to their customers across Canada in the form of a Cow Profitability Report as well as a Herd Summary Profitability Report.

Annually, economists update the economic parameters used to derive profit values for each cow in order to assure their relevancy. For example, component pricing has changed substantially in favor of fat production since Pro\$ was introduced in 2015. Overhead costs and feed costs have also seen significant change. All economic values used in cow profitability calculations from 2014 and 2019 are seen in Figure 1 and can be useful when assessing where the major updates to Pro\$ originate.

Two other important improvements to cow profit values include the modification of expenses to reflect cow differences in terms of reproduction and maintenance costs. On the reproduction side, the overall profit calculation used by CDN now accounts for the total number of inseminations performed for individual cows up to six years of life or disposal.

In terms of maintenance costs, previously, these varied across breeds but not between animals of different sizes within a given breed. Using Holstein Canada body weight measurements and certain linear and measured conformation traits, CDN developed an estimation for relative body size and modified maintenance costs accordingly.

Combined, these changes mean a sire whose daughters require more inseminations to get pregnant, and higher maintenance costs than average, will have higher expenses in the Pro\$ calculation.

Other changes to Pro\$ include the addition of nearly four more years of cow profit data, an updated Pro\$ formula specific to the Jersey breed, as well as the availability of Pro\$ evaluations for the first time in the Ayrshire breed.

If you answered 'profitable' in the question above, then Pro\$ is for you. Use it — it's been shown to work and with recent updates, continues to be relevant in today's environment.

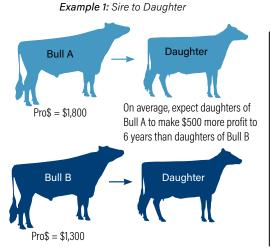
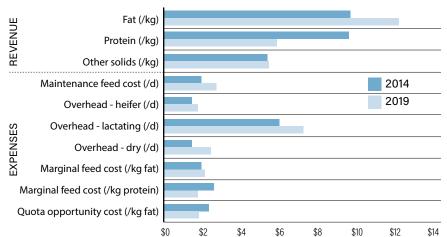


Figure 1: Changes in Economic Values Used in Holstein Cow Profitability Calculations





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# Benchmarking — It's Your Farm's Report Card

Richard Cantin, Marketing & Product Development, CanWest DHI

For our kids, or probably more as parents, we anticipate the arrival of report cards from school. We want to see how our children are doing and how they compare to the rest of the class. From there, we look for which subject matter they need to spend more time improving. Well, for your dairy farm operation, it is not much different.

### Why Benchmark?

In simple terms, benchmarking is identifying your performance in various aspects of your operation and highlighting opportunities for improvement. Through benchmarking you can see what is possible to achieve and then start driving towards that. Knowing your strengths is good, but more importantly you need to know upon which areas to improve. From there you can set priorities and goals. Unless you know where you stand and what is possible, you can't start the improvement process. That process will lead to better performance, efficiency and ultimately profitability.

In a world of rapidly increasing data and information, having common standards of measurements is critically important.

When it comes down to dairy herd management and herd performance, DHI is the gold standard for benchmarking. Comparing apples to apples is very important and DHI provides the metrics that are well known, understood and validated. In a world of rapidly increasing data and information, having common standards of measurements is critically important. The Monthly Reports provide ongoing monitoring and trends, while the Annual Reports provide that year-end report card to help set priorities and goals for your operation.



When it comes down to dairy herd management and herd performance, DHI is the gold standard for benchmarking.



Although benchmarking will identify opportunities for improvement, the data will not tell you how to improve. Your advisory team can be a great resource for this. They can help interpret the information and provide actionable recommendations for you to reach your goals. Get them involved! It is also a report card on their performance, so make them accountable for their advisory services. Successfully operating a dairy farm is truly a team effort.

### **Put Plans into Action**

Finally, you need an open mind and a willingness to make changes otherwise the benchmarking process will have little value. It's about continuous improvement and driving to be better and that only happens with change. Monitor the progress of the changes you make. This is possible using the DHI report card. After all, it's in our name, 'Dairy Herd Improvement', and it's what we do.

A great way to know if you're moving forward is to benchmark. Most of us would not accept sending our kids to a school that doesn't provide some form of report cards. We shouldn't accept it for our dairy farm business either.





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### Dairy Farms in the Age of Big Data

The ever-increasing use of technological tools on dairy farms is generating massive amounts of data.

René Lacroix, ing., Analyst, and colleagues R & D team, Valacta

Processing all that data, through software, algorithms and soon artificial intelligence, opens the door to developing powerful and practical applications and innovative tools for dairy farmers. To reap the benefits of this digital revolution, producers have a stake in ensuring the data collected on their farms is exploited to its full value and used appropriately.

### **Data, Data and More Data**

The dairy sector has long been using data to improve herd performance. Pedigree and milk recording data, for example, have been collected for over 100 years now for the purpose of genetic improvement. Over the past decades, data gathering has multiplied to include information on management, feeding, health and milk payments among others. Through sensors, cameras and automated milking systems, a cow now generates data with every chew, every movement and at each milking of each of her quarters. That information serves a number of purposes — from detecting heat to diseases and to ascertaining stress levels in individual cows. All the data generated by high-tech hardware and software are geared towards facilitating herd and farm management. How are producers and their advisors to navigate this sea of information?

### **Capitalizing on the Data**

Despite its enormous potential, data only has value if it is exploited fully and delivers a benefit, such as reducing and/or facilitating workload and herd management; improving herd performance, or reducing the incidence and impact of stress and disease on animals. There is also the largely untapped potential of increasing the data value by aggregating datasets to improve herd performance indicators. Aggregating and analyzing these

different datasets as a whole markedly increases their value and potential.

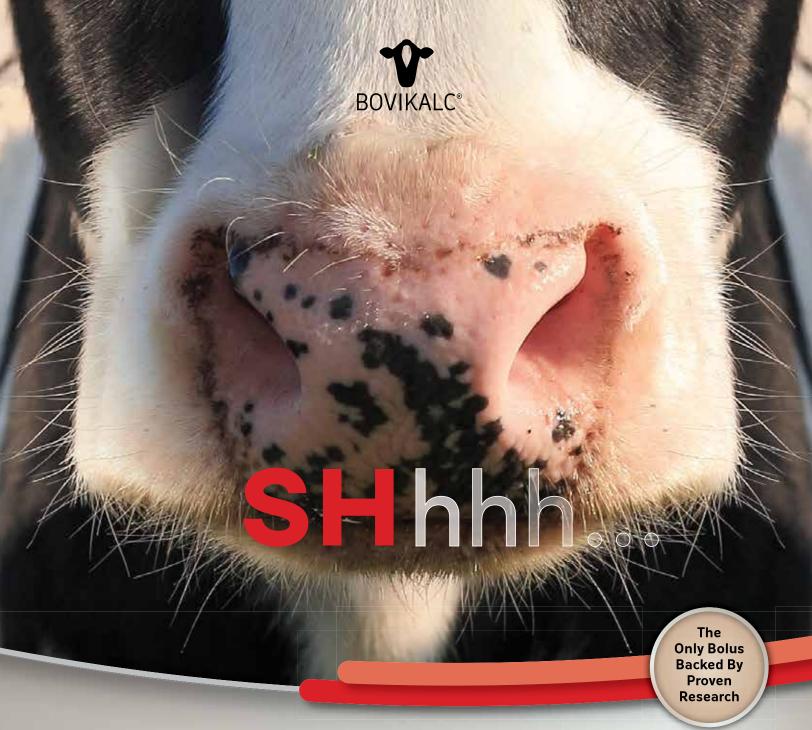
### **Data Challenges**

For data to be fully exploited, it must be accessible and have the ability to be grouped together. This is already the case for some data, but unfortunately not for most. When systems are incompatible and cut off from one another, as is so often the case, adding value to data becomes much more complex. What happens to all the data generated? Isolated in separate clouds, are they being exploited to their full value for the benefit of producers who have already paid for them? In this age of big data and high technology, producers have reason to ask themselves: Who exactly has access to my data? Do I have full control over my data and am I making the most of that information? Would my technology provider be able to facilitate the transfer of my data to organizations run by dairy producers? Who foots the bill to develop the infrastructures required to transfer data between producer organizations and technology providers? Data ownership and use are important issues, an integral part of what is called data governance. Data must be managed soundly, in an informed manner, for the benefit of dairy producers and all dairy sector stakeholders.

### **Reflection is in Order**

If multiple datasets from different sources represent unprecedented potential for dairy production, they also raise a number of critical issues, such as access, sharing, and governance. To better benefit their industry, dairy producers will need to ask the right questions and demand a greater return on their investment through value-added data.





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1.Rodriguez et al. 2017 Associations between subclinical hypocalcemia and post parturient diseases in dairy cows. J. Dairy Sci 100:7427-34 2.Caixeta et al. 2017 Association between subclinical hypocalcemia in the first 3 days of lactation and reproductive performance of dairy cows. Theriogenology; 94:1-7 3.Bovikalc label



# Handling Animals Safely and Without Stress

Steve Adam, Agr., Animal Comfort, Behaviour and Well-being, Valacta

Since the domestication of the cow, farmers have had to handle their animals on a regular basis. A producer can handle his cows 10 to 15 times during the lactation and this is without counting the handling for milking. Therefore moving animals is virtually a daily activity.

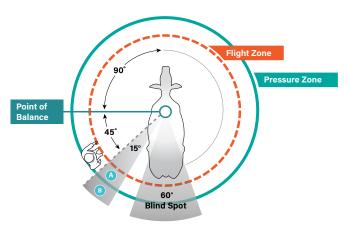
The Code of Practice states that: Workers who handle cattle have to be familiar with their behaviour and with gentle handling techniques, either due to training, experience or apprenticeship. It is also a requirement of proAction®.

The purpose of this requirement is, of course, to reduce stress on animals, but it also reduces the risk of injury to animals and people while improving work efficiency.

To properly match our handling of the animal with its behaviour, it is important to properly understand how it communicates and reacts with its environment.

### **Handling 101**

Every animal has an invisible zone around it, which is called a flight zone. When we enter this zone (A), the animal will want to protect this distance between him and his "predator" by moving away. Outside of the flight zone there is the pressure zone (B) in which a handler can position himself to initiate movement of an animal without scaring it away. When movement is initiated, pressure must be immediately released to reward the animal. That way the learning process will go smoothly. The tamer the animal is, the smaller the circumference of this zone.



The handler must position himself on the side of the animal, making sure to clearly see the eye of the animal. He has to make sure he gets the animal's attention. This can be detected by observing the movement of the ears. Without looking at us, a cow pointing her ear towards us is often a sign that we have captured the animal's attention.

It must be recognized that the cow has difficulty judging the distance of its handler due to her monocular side vision.

She has about a 60-degree angle blind spot behind her. Do not position yourself directly behind an animal to make it move forward because it will tend to turn its head to try to see us and this will also affect its trajectory.

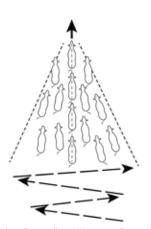
When we walk faster than the animal, it tends to slow down and stop the moment when we go past its shoulder (point of balance). Using this technique, we can control the speed and even make the animal stop solely with the position of our body. Walking in the opposite direction of animals will tend to make them speed up.

### **Getting an Animal Out of a Stall**

Using the point of balance technique to get the animal out of its stall is very effective. Simply enter a stall next to the cow, advance to go past the point of balance (the shoulder) while putting pressure towards the flight zone. That way the animal will rise and calmly walk out of the stall.

### **The Zigzag Technique**

The zigzag technique is used to bring a group of animals from point A to point B. This is useful both in the barn and outdoors. The idea is to start moving from left to right to gather the group of animals. Once the movement of the group is initiated and the animals are aligned in the direction we want to move them, just make a path of straight lines from left to right. Circulating from left to right allows us to capture the attention of all of the animals. Regardless of the number of animals in the group, this is an applicable technique.



Grandin, 2014 (https://www.grandin.com/behaviour/principles/eight.steps.grazing.without.fences.html)

### Conclusion

Animal handling is mainly a matter of positioning. Yelling is not necessary; it can all be done with both hands in your pockets. We must remember that a way to do things quickly is to take your time and not force animals to rush their movements. The more we use these techniques on young animals, the easier it will be once they become adults.

# Readore Holsteins Ltd.

### LOCATION

Notre Dame de Lourdes, MB

### **OWNER**

Rhéal Simon and family

### MANAGEMENT SCORE

871

### **HERD SIZE**

105

### **FACILITY**

Tie stall

### **DHI SERVICES**

Milk recording, DairyComp



### **Background**

Rhéal Simon's grandfather, Emmanuel Simon, started the dairy business as a cream shipper over 100 years ago in 1918 and we have been shipping milk since 1972. From the old hip roof barn, we built a new tie stall facility in 2002 that fit 50 cows and in 2005 increased capacity for another 55 cows. We crop about 2,700 acres for grain and 400 in forages.

### Describe some of the changes over the years.

Some of the major changes that have occurred over the years include switching to a TMR feeding system in 2015 building a new heifer barn and calving facility in 2016.

### What herd management tools are important to you?

Some of the tools we use include DairyComp software, a Triolet TMR mixer with straw blower and Big Ass fans in the heifer barn. We highly value the advice and input from feed advisors Denis Hague and Janine Souque. Some of the information we value most comes from the individual cow management report which we use to make effective culling and breeding decisions.

### What practice is integral to your success?

It is important to do all the small things right. We also pay attention to detail.

### What are some DHI products or services you use?

Along with DairyComp, we do regular herd testing including SCC. We have Mobile DHI and value the Cow Income Monitor Report.

### What would you like to change?

We would like to automate more of our daily tasks for efficiency and labour savings including adding feed conveyors, feed pushers and a straw delivery system.

### What successes are you proud of?

We are proud to be able to achieve high production while still maintaining a healthy herd.

### What is your farm goal?

We would like receive a Master Breeder Shield, and successfully transition our operation to the next generation who is already showing interest.

# Kessel Family Farm

LOCATION: Balgonie, SK

**OWNER:** Raymond Kessel and family

**MANAGEMENT SCORE:** 794

**HERD SIZE: 120** 

**FACILITY:** Tie stall

**DHI SERVICES:** 

Milk recording, DairyComp, Ketoscreen





### **Background**

The original 16-stall tie stall was built in 1954. Ray, along with his brothers Lloyd and Wes, purchased it in 1983. Today, Ray, Cecilia and their adult children Amanda, Brendan and Shaun, along with niece Lisa and a few employees, all work together to keep everything running smoothly.

### Describe some of the changes over the years.

Since the original barn was built, there have been several additions with current barn capacity at 117 milking stalls, newer calving pens and a feed room with an automated feeding system. The milkers were upgraded to communicate with DelPro software, which allows for precision herd management.

### What herd management tools are important to you?

Tools that are important to us include DairyComp, DelPro software, DHI data, Holstein Canada classification, Rovibec automated feeding system and our advisor team. We highly value our vet and nutritionists' input as it is integral to having a healthy and productive herd.

### What practice is integral to your success?

We value consistency and progressive knowledge. When it comes to daily chores, if everyone is consistent, production and the cattle's wellbeing thrive. We are constantly seeking progressive knowledge and solutions from our advisors to apply to our herd management practices.

### What are some DHI products or services you use?

We use DairyComp along with regular herd testing and have used Ketoscreen. Combining herd test results, SCC, fat, protein and milk with all our herd information in DairyComp helps us to make management decisions regarding domestic sales, culling, drying and breeding. It's more convenient having all this information in one place.

### What would you like to change?

If we were able to have an automated milking system, we think that would further benefit our operation.

### What successes are you proud of?

We are happy to have been able to maintain a high producing herd while making sure animal health and wellbeing are a top priority. Currently, after making a switch in our closeup cow ration about two years ago, our transition cows and reproduction improvement has been something we're very pleased with.

### What is your farm goal?

We want to continue to be as efficient as possible while maintaining cow health, comfort and wellbeing.

### Final comments.

We enjoy being able to work together as a family in the dairy industry doing what we love to do on a daily basis.



# Milford Colony Farming

LOCATION: Raymond, AB

OWNER/MANAGER: Mike and Jerry Wipf

**MANAGEMENT SCORE: 885** 

**HERD SIZE: 85** 

FACILITY: Free stall, rotary parlour

**DHI SERVICES:** Milk recording, DairyComp, Calf Registration, GestaLab, Mastitis4

### Background

Our barn was built in 2007. It is a free stall barn with a 16-stall rotary milking parlour. Mike, Jerry and Dave are involved in the operation.

### Describe some of the changes over the years.

We haven't had any major facility changes since the original barn was built. However in regards to milk production, we have improved udder health through lowering our SCC and have improved our reproduction.

### What is your farm goal?

Over time we'd like to keep expanding the herd if possible.



### What herd management tools are important to you?

The tools important to us include DairyComp software for cow and herd management, and Feed Supervisor for our feed management. Milk production information is key to track and monitor.

### What practice is integral to your success?

It is important to stay home and do your own work because nobody knows your farm and herd as well as you do.

### What would you like to change?

If we could change one thing, we would like to have a better heifer facility.

### What successes are you proud of?

We have improved our reproduction program on farm and hope to maintain that positive performance. Our transition cows have benefited and now give more milk at the start of their lactation.

### **Final Comments.**

We have a good nutritionist, veterinarian and hoof trimmer. Combined, this advisor team has about 90 years of experience. We try to involve them as much as possible because their knowledge and advice is important to our herd management success.

### Kish Farms Ltd.

LOCATION: Abbotsford, BC

TEAM: Darren Kish & Derrick Epp

**MANAGEMENT SCORE: 904** 

HERD SIZE: 70

FACILITY: Free stall, parlour

### **DHI SERVICES:**

Milk recording, Mastitis4, DairyComp

### Background

The farm started in 1990 by Darren Kish and Derrick Epp joined the operation in 2003. They worked together until 2015 when Derrick took over the management of the business and the day-to-day tasks of the farm.

### Describe some of the changes over the years.

Some of the changes include adding a new calving space on to the existing barn, far off dry cows moved to a dry pack to alleviate overcrowding in milk cow groups, and alley scrapers and a feed pusher were added to increase automation and labour efficiency in the barn. We also focus more on calf health and colostrum quality for newborn calves.

### What herd management tools are important to you?

We use DairyComp for all our breeding and treatments along with DHI milk test results for SCC, fat and protein. Dairy Plan is our parlour software for activity monitoring. We genomic test all heifer calves to identify the best genetics and breed to sexed semen. We also work closely with our vet and nutritionist who have been essential in helping us monitor and manage fresh cows through a now trouble-free transition period.

### What practice is integral to your success?

We focus heavily on stall maintenance, raking and adding new bedding to maintain a low SCC and good udder health. We use a refractometer to determine which colostrum we will feed.







### What are some DHI products or services you use?

We use SCC results for finding high cows to treat. Fat and protein results are used to properly mate cows to yield daughters with higher components.

### What would you like to change?

We would like to add a new calf facility with better ventilation and space for calves and weaned heifers.

### What successes are you proud of?

We are proud of the high volume and components we are able to get out of the cows on  $2 \times$  milking, allowing us to over ship. This has helped us sell off our lower end heifers to advance the herd genetics.

### What is your farm goal?

We'd like to continue growing the herd, purchase more quota and continue to increase the overall production of the cows.

### **Final Comments.**

We aim to continue to grow the business while being profitable, efficient and increase longevity in our cows. We love having cows around that hit the 100,000 kg mark!

		MANITOBA HERD MA	NAGEMENT	SCORE				
Rank	Farm Name	Owner	City	Region	Score	Herd Size	)	Breed
1	Readore Farms	Rheal Simon	Notre Dame	Central	871	131	,	НО
2	Isaac Dairy Ltd	Brent & Victoria Isaac	Kleefeld	Eastern	848	96	*	Н0
3	Labass Holsteins Ltd	Jan & Tracy Bassa	La Broquerie	Eastern	825	574	*	НО
4	Fehr Farm	Jakob, Ana & Andreas Fehr	La Broquerie	Eastern	822	181	R	НО
5	Holmestead Dairy	Russ & Crystal Holme	Anola	Eastern	811	97	R	НО
6	Rehoboth Farms	_	Grunthal	Eastern	808	200	*	НО
7	Sturgeon Creek Colony	Samuel Waldner	Headingley	Interlake	806	68	*	НО
8	Lang Farms Ltd	Arnold & Kim Lange	Dufresne	Eastern	803	71	R	НО
9	C & D Farms	Cornie Penner	Altona	Central	802	82		НО
10	U of M, Glenlea Research	Dr Tracy Gilson	Winnipeg	Eastern	793	55	R	НО
11	Friecrest Holsteins	Ed & Kathy Friesen	Kleefeld	Eastern	791	95		НО
12	Sight Hill Farm Ltd	_	Austin	Central	781	65	R	BS
13	Plemark Holsteins	Matt & Tanya Plett	Blumenort	Eastern	767	79	*	НО
14	Noreydo Holsteins	Norbert, Kevin & Ryan Rey	St Claude	Central	764	107		НО
15	Sweetridge Farms	Harold & Miriam Sweetnam	Winkler	Eastern	761	324	*	НО
16	Columbine Holsteins	Jacob & Annita Benthem	Elm Creek	Central	753	121	R	НО
17	Boonstra Farms Ltd	Brian & Rob Boonstra	Marquette	Interlake	753	817		НО
18	Reutter Dairy	Thomas & Saskia Reutter	Grunthal	Eastern	753	406		НО
19	Four Oak Farms	Armin Dueck	Kleefeld	Eastern	746	53		BS
20	Muller Farms	Richard Muller	Notre Dame	Central	741	100	R	НО

	S	ASKATCHEWAN H	ERD MANAG	EMENT SCOR	E			
Rank	Farm Name	Owner	City	Region	Score	Herd Siz	e	Breed
1	Sierra Colony Farms Ltd	<b>'</b> -	Shaunavon	Swift Current	936	107	R	НО
2	Dept Animal & Poultry Science	_	Saskatoon	Saskatoon East	891	123	*	Н0
3	Bench Farming Co Ltd	-	Shaunavon	Swift Current	881	97	R	НО
4	Clearspring Farming Co	-	Kenaston	Saskatoon	849	207		H0
5	Alley Holsteins	Albert Leyenhorst	Dalmeny	Saskatoon East	846	199	*	H0
6	Vinoridge Farm	Kevin & Robert Coghill	McLean	Regina	842	212		H0
7	Elkrest Farms	Brad, Jason & Trevor Kornelius	0sler	Saskatoon East	841	784	*	НО
8	Fox Valley Farming Co Ltd	Don Mandel	Fox Valley	Swift Current	830	91		НО
9	Quill Lake Colony	Robert Tschetter	Quill Lake	Saskatoon	804	117		НО
10	Kessel Family Farm	Raymond Kessel	Balgonie	Regina	794	151		H0
11	Hyljon Holsteins	John & Susan Hylkema	Hague	Saskatoon	789	765	*	НО
12	Star City Colony	Ruben Tschetter	Star City	Prince Albert/Melfort	785	202	R	НО
13	Beechy Colony	George Hofer	Beechy	Saskatoon West	769	175		НО
14	Robella Holsteins	Reg & Juliann Lindenbach	Balgonie	Regina	767	94		H0
15	Foth Ventures Ltd	Melvin Foth	Hague	Saskatoon East	764	659	*	НО
16	Main Centre Dairy	Andy Hofer	Rush Lake	Swift Current	762	189		H0
17	Marfay Farms Ltd	Merlis & Mark Wiebe	Osler	Saskatoon East	755	310	*	НО
18	Kenbert Acres	Ken, Ryan Friesen	Drake	Saskatoon East	746	132		НО
19	Cypress Colony	Darrell Entz	Maple Creek	Swift Current	740	104	R	НО
20	Calvin & Diane Vaandrager	_	Langham	Saskatoon East	735	112	*	НО

		ALBERTA HERD	MANAGEME	NT SCORE			
Rank	Farm Name	Owner	City	Region	Score	Herd Size	Breed
1	Richards Farms Ltd	William Richards	Red Deer County	Red Deer	925	158	Н0
2	Deerfield Colony	Andy Waldner	Magrath	Lethbridge/Brooks	891	137	НО
3	Milford Colony Farming Co Ltd	Mike Wipf	Raymond	Lethbridge/Brooks	885	100	H0
4	H & J Leusink Dairy	Harmen Leusink	Picture Butte	Lethbridge/Brooks	884	129	H0
5	Houweling Farms Ltd	Pete Houweling	Coaldale	Lethbridge/Brooks	881	442	Н0
6	Roseglen Farming Co Ltd	Rueben Entz	Hilda	Lethbridge/Brooks	880	101	НО
7	High Field Farm Ltd	Jan & Marlen Steeneveld	Lacombe	Red Deer	878	283	НО
8	Sylvanside Dairy Ltd	Sipke & Margreet Dijkstra	Ponoka	Red Deer	870	175	НО
9	Dan Hofer	Little Bow Colony	Vulcan	Lethbridge/Brooks	870	93	Н0
10	Nifera Holsteins	_	Nobleford	Lethbridge/Brooks	867	104 F	Р НО
11	Mars Dairy	Gert & Sonja Schrijver	Stettler	Red Deer	865	296	Н0
12	Earnewald Holsteins-Dejong Bros Ltd	_	Lacombe	Red Deer	865	158	НО
13	GDL Farms Ltd	Gerrit Deleeuw	Picture Butte	Lethbridge/Brooks	862	124	H0
14	Sunalta Farms	Siebe Brouwer	Ponoka	Red Deer	861	457	Н0
15	Royal Hill Farm	-	Lacombe	Red Deer	860	330	Н0
16	New Rockport Colony	Simon Waldner	New Dayton	Lethbridge/Brooks	852	120	H0
17	Janna Dairy Ltd	John & Shanna Hulsman	Ponoka	Red Deer	852	220	Н0
18	Fairville Farming Co Ltd	_	Bassano	Calgary	851	144 F	Р НО
19	Poly-C Farms	Cor & Cathy Haagsma	Ponoka	Red Deer	846	435	Н0
20	Cawithca Dairy	Richard & Katie Veldkamp	Fenn	Red Deer	844	63	Н0

		BRITISH COLUMBIA I	HERD MANA	GEMENT SCO	RE			
Rank	Farm Name	Owner	City	Region	Score	Herd Siz	e	Breed
1	Milky Way Dairy	Frank & Debbie Les	Chilliwack	Chilliwack	935	89		НО
2	West River Farm Ltd	Grant & Eugene Sache	Rosedale	Chilliwack	915	157	R	НО
3	Kish Farms Ltd	Darren Kish	Abbotsford	Sumas	905	78		НО
4	<b>UBC Dairy Education</b>	Nelson Dinn	Agassiz	Agassiz	901	300		НО
5	PJV Farms Ltd	Peter Vink	Chilliwack	Chilliwack	892	161	*	Н0
6	Fraser Edge	Sid Stoker	Deroche	Dewdney-Deroche	891	159	R	Н0
7	Lloydshaven Holsteins Ltd	Lloyd Onnes & Family	Courtenay	Courtenay-Comox	885	105	*	НО
8	Valedoorn Farms Inc	Tom & John Hoogendorn	Agassiz	Agassiz	873	342	*	НО
9	Abclan Dairy	Martin & Mary Zwartbol	Chilliwack	Chilliwack	863	126		Н0
10	Wallyann Holsteins	Edwin Crandlemire	Grindrod	Kamloops-Okanagan	857	148		НО
11	Elmido Farms	John & Debbie Aarts	Sardis	Chilliwack	857	604	*	Н0
12	Country Charm Farms Ltd	Huizing Brothers	Matsqui	Matsqui	855	283	*	Н0
13	Balme Ayr Farms Ltd	Oliver Balme	Cobble Hill	Cowichan	847	139	R	AY
14	Kambro Farms Ltd	Doug, Tom & Will Kampman	Abbotsford	Matsqui	846	451	*	Н0
15	Lavender Farms Ltd	Gerrit Vaandrager	Abbotsford	Sumas	846	173	R	НО
16	Cliffview Farm Ltd	Henry Bremer	Enderby	Kamloops-Okanagan	846	182		Н0
17	Melinke Farms Ltd	Theo Stoker	Deroche	Dewdney-Deroche	843	131		НО
18	Trinity Dairies Ltd	R & H Vandalfsen	Enderby	Kamloops-Okanagan	843	212		НО
19	Triwest Farms	Vic & Terry Triemstra	Chilliwack	Chilliwack	842	135	*	НО
20	B & L Farms Ltd	Matt Dykshoorn	Abbotsford	Sumas	840	56	R	НО

### LOW SCC HERDS

DHI congratulates the following producers for outstanding udder health management resulting in low SCC.

Farm Name	Owner	City	Cows (	Avg)	Avg SCC (× 1000)
<b>British Columbia</b>					
Tolamika Farms & T & L Cattle	Tom Degroot	Rosedale	118		40
Willswikk Holsteins	William Wikkerink	Mill Bay	62	R	41
Trinity Holsteins	Paul Schmidt	Mission	44		47
Dahlia Holsteins	Kristin Dahl	Abbotsford	32		49
Happy Cow Dairy	Kyle Durrance	Qualicum Beach	81		58
Viewfield Farms Ltd	Dave Taylor	Courtenay	154		62
Wikksview Farm Ltd	Fred Wikkerink	Cobble Hill	73		62
Shenandoah Dairy	-	Armstrong	52		62
Riverwater Farm Ltd	J Wikkerink	Duncan	145		64
Neveridle Farms	Arthur Keulen	Delta	156		66
Baklund Acres	Elizabeth Olesen	Chilliwack	54		76
Kingsdale Dairy Ltd	Bert Doppenberg	Abbotsford	39		76
Brunoro Farms	Ed Brunoro	Aldergrove	39		77
Robert Emans	_	Mission	98		79
Friesen Dairy	Len Friesen	Chilliwack	29		80
Elmido Farms	John & Debbie Aarts	Sardis	604	*	82
Brinkland Dairy Ltd	Gary Brink	Enderby	209		83
Glorybound Holsteins	Thys Haambuckers	Enderby	73		85
B & L Farms Ltd	Matt Dykshoorn	Abbotsford	56	R	86
Bert Tuytel	_	Chilliwack	118		89
Alberta					
GDL Farms Ltd	Gerrit Deleeuw	Picture Butte	124		65
Deerhaven	Glenda Mutrie	Thorsby	40		82
Twilight Colony	Albert Entz	Falher	165		87
Earnewald Holsteins-Dejong Bros Ltd	_	Lacombe	158		87
Fairville Farming Co Ltd	-	Bassano	144	R	87
H & J Leusink Dairy	Harmen Leusink	Picture Butte	129		90
Glesman Farms Ltd	Myrin & Nancy Glesman	Leduc County	77		90
Pine Haven Colony	_	Wetaskiwin	132		91
River Road Farming Co Ltd	Gideon Entz	Milk River	123		92
Grandview Jerseys Ltd	Adam Bouwman	Ponoka	79		92
Freedom Dairy	Marinus Helmus	Barrhead	83		94
Houweling Farms Ltd	Pete Houweling	Coaldale	442	*	98
Plainview Colony	Tim Waldner	Warner	128	*	100
Kramer Dairy Ltd	_	Ponoka	95		100
Sylvanside Dairy Ltd	Sipke & Margreet Dijkstra	Ponoka	175		102
Deerfield Colony	Andy Waldner	Magrath	137		102
Sietzema Dairy Ltd	Sietze Sietzema	Olds	111		103
Rock Lake Colony Farming Co Ltd	Peter Entz	Coaldale	99		105
Hylac Holsteins	Ken & Donna Fenske	Ponoka	58		108
Castor Farming Co Ltd	Jason Waldner	Castor	117		109

	LOW SCC H	ERDS (Continued)			
Farm Name	Owner	City	Cows (Avg)		Avg SCC (× 1000)
Saskatchewan			1	1	
Daum Farms	Doug Daum	Dalmeny	44		95
Quill Lake Colony	Robert Tschetter	Quill Lake	117		113
Robella Holsteins	Reg & Juliann Lindenbach	Balgonie	94		114
Kessel Family Farm	Raymond Kessel	Balgonie	151		115
Downie Lake Colony	Josh Hofer	Maple Creek	119		122
Bramville Farm	Fran & Joanne Edwards	Nokomis	64		131
Sierra Colony Farms Ltd	-	Shaunavon	107	R	133
Calvin & Diane Vaandrager	_	Langham	112	*	134
Ronleen Holsteins	Ron & Cathy Schaeffer	Vibank	76	R	138
Beechy Colony	George Hofer	Beechy	175		139
Manitoba					
Fifi Holsteins	Gabriel Fifi	Bruxelles	33		82
Sturgeon Creek Colony	Samuel Waldner	Headingley	68	*	91
Four Oak Farms	Armin Dueck	Kleefeld	53		101
Spring Breeze Dairy Ltd	Allen Kampman	Oakbank	337	*	109
Mageo Pouteau Farms Ltd	Chris & Carla Pouteau	Mariapolis	83		114
Candyview Farms	Gerald Janssens	Kleefeld	84	*	118
U of M, Glenlea Research	Dr. Tracy Gilson	Winnipeg	55	R	118
Kenson Holsteins	G & N Larson	Teulon	71		119
Steinmann Dairy Farm	W & M Steinmann	Clandeboye	97		122
Reutter Dairy	Thomas & Saskia Reutter	Grunthal	406		125

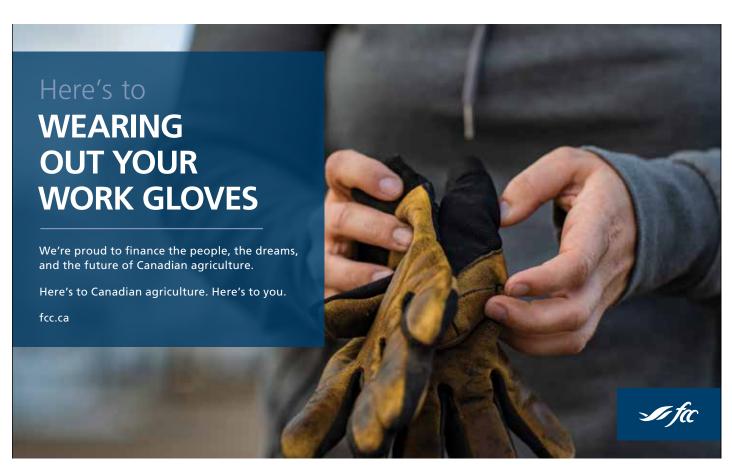
<sup>\*3×</sup> Milking Per Day or Greater/R: Robotic

		F	PROVINCIA	AL STATIS	TICS			
	Calving Inte	rval (Months)	Dry Perio	od (Days)	Age at 1st Calv	ving (Months)	SCC (Avg)	
	2017	2018	2017 <b>2018</b>		2017	2018	2017	2018
British Columbia	14.0	14.0	67	68	25.8	25.7	190	185
Alberta	13.7	13.7	73	74	25.5	25.3	224	218
Saskatchewan	14.0	14.0	79	81	25.5	25.2	222	223
Manitoba	14.2	14.4	81	86	26.6	26.6	251	248
Ontario	13.9	13.9	68	70	25.9	25.6	248	238
Quebec	13.7	13.6	63	64	25.9	25.6	223	217
New Brunswick	13.7	13.7	66	67	26.8	26.6	225	213
Nova Scotia	13.9	13.9	69	72	27.0	26.5	239	225
Prince Edward Island	14.1	14.1	77	77	27.3	27.0	209	205
Newfoundland	13.7	13.5	68	65	25.9	25.2	247	191

	PRODUCTION TRENDS (305 Kg/s)													
	Bri	tish Columb	ia	Alberta			Saskatchewan			Manitoba				
	Milk	Fat	Protein	Milk	Fat	Protein	Milk	Fat	Protein	Milk	Fat	Protein		
2018	10,197	414	332	10,499	415	337	10,977	429	356	10,279	397	330		
2017	10,161	405	329	10,417	406	333	10,686	415	345	10,057	383	322		
2016	10,362	404	336	10,352	399	332	10,420	400	335	9,850	375	315		
2015	10,071	386	323	10,015	386	319	9,964	383	320	9,633	365	308		

COMPLETE LACTATIONS (Kg's)											
			2	2018		2017					
		Milk	Fat	Protein	Avg DIM	Milk	Fat	Protein	Avg DIM		
British Columbia	All	10,214	415	335	304	10,358	413	338	308		
	Publishable	10,704	437	351	309	10,885	438	356	319		
	Management	9,551	385	313	297	9,556	376	311	290		
Alberta	All	10,429	415	337	298	10,628	417	343	308		
	Publishable	10,912	434	352	303	11,009	431	355	310		
	Management	9,784	390	316	290	10,050	395	325	306		
Saskatchewan	All	10,713	423	351	299	10,167	397	329	295		
	Publishable	11,152	442	366	304	11,021	432	359	313		
	Management	10,030	394	328	291	11,399	446	371	316		
Manitoba	All	10,529	414	341	311	10,483	406	338	316		
	Publishable	11,110	430	359	317	10,834	414	349	319		
	Management	9,830	394	320	305	10,012	395	324	312		

	ENRO	ALL WESTERN PROVINCES						
	British Columbia	Alberta	Saskatchewan	Manitoba	2015	2016	2017	2018
DHI Herds	291	375	88	164	1,041	993	950	918
Percent Publishable	75	60	72	70	67	67	67	68
Percent Management	25	40	28	30	33	33	33	32
DHI Cows	53,266	60,548	16,822	30,807	158,626	157,158	156,219	161,443
Percent Publishable	61	62	67	54	65	63	63	61
Percent Management	39	38	33	46	35	37	37	39
Average Herd Size	183	161	191	188	152	158	164	176



Stritish Columbia   291   10,197   414   332   235   250   237   229,2   238,2   236,2   240	REGIONAL STATISTICS (generated throughout the year)											
Sartish Columbia   29				305 (Kg)			BCA		Composite BCA			
Segestiz   2	Region	Herds	Milk	Fat	Protein	Milk	Fat	Protein	2015	2016	2017	2018
Entral BC 8 8,690 350 285 191 202 195 193.0 191.1 195.3 195.5 195. 191.0 191.1 195.3 195.5 195.5 191.0 191.1 195.3 195.5 195.1 191.0 195.3 195.5 195.1 191.0 195.3 195.5 195.1 191.0 195.3 195.5 195.1 191.0 195.3 195.5 195.1 191.0 195.3 195.5 195.1 191.0 195.3 195.5 195.1 191.0 195.3 195.5 195.1 191.0 195.3 195.5 195.1 191.0 195.3 195.5 195.5 195.0	British Columbia	291	10,197	414	332	235	250	237	229.2	238.2	236.2	240.4
Schilliwack 57 10,520 427 343 243 258 245 236,2 246,1 242,5 248,1 242,5 248,1 241,5	Agassiz	21	9,980	408	324	230	249	233	221.6	235.4	232.3	237.1
Sourienay-Comox 7 9,883 408 322 229 249 232 214.8 230.0 229.3 236.1 236.	Central BC	8	8,690	350	285	191	202	195	193.0	191.1	195.3	195.9
2000  2000	Chilliwack	57	10,520	427	343	243	258	245	236.2	246.1	242.5	248.8
Delta-Richmond 13 10,285 413 337 233 249 238 234.4 240.6 239.7 239. 239. 239. 239. 239. 239. 239. 239.	Courtenay-Comox	7	9,883	408	322	229	249	232	214.8	230.0	229.3	236.8
Dewidney-Deroche	Cowichan	24	10,227	417	329	230	250	232	229.3	239.9	239.1	237.6
Kamloops-Okanagan         51         10,286         419         337         237         252         241         229.5         238.8         238.8         243.           Kootenay         4         9,139         365         295         214         218         212         203.8         205.5         204.7         214.           Matsqui         17         10,475         423         338         238         256         239         230.1         244.7         243.7         244.1           Pritt Meadows-Maple Ridge         8         10,176         403         333         245         241         244         232.0         245.1         237.3         243.7           Surrey-Langley         24         9,802         387         317         221         231         222         224.9         230.7         224.5         238.           Alberta         375         10,499         415         337         237         250         239         225.9         234.6         237.8         242.1           Alberta         375         10,499         415         337         236         248         239         223.8         232.2         235.6         240.1           <	Delta-Richmond	13	10,285	413	337	233	249	238	234.4	240.6	239.7	239.7
Kootenay         4         9,139         365         295         214         218         212         203.8         205.5         204.7         214.           Matsqui         17         10,475         423         338         238         256         239         2301         244.7         243.7         244.8           Pitt Meadows-Maple Ridge         8         10176         403         333         245         241         244         232.0         245.1         237.3         243.6           Burney-Langley         24         9,802         387         317         221         231         222         224.9         230.7         224.5         228.5           Alberta         375         10,499         415         337         237         250         239         225.9         234.6         237.8         242.1           Alberta         375         10,499         415         337         236         248         239         223.8         232.2         236.6         240.1           Eddomotion         73         9,943         395         321         224         237         226         214.1         226.8         226.8         228.2           Eddmor	Dewdney-Deroche	26	10,448	433	342	249	263	250	234.2	244.4	242.5	253.9
Adatsqui 17 10,475 423 338 238 256 239 2301 244.7 243.7 244.8 Pitt Meadows-Maple Ridge 8 10,176 403 333 245 241 244 232.0 245.1 237.3 243.4 Pitt Meadows-Maple Ridge 8 10,176 403 333 245 241 244 232.0 245.1 237.3 243.4 Pitt Meadows-Maple Ridge 8 10,176 403 333 245 241 244 232.0 245.1 237.3 243.4 Pitt Meadows-Maple Ridge 8 10,176 403 333 245 241 244 232.0 245.1 237.3 243.4 Pitt Meadows-Maple Ridge 8 10,176 403 333 245 249 235 233.6 237.2 236.5 238.4 Pitt Meadows-Maple Ridge 8 10,086 409 327 232 249 235 233.6 237.2 236.5 238.4 Pitt Meadows-Maple Ridge 8 10,086 409 327 232 249 235 233.6 237.2 226.9 230.7 224.5 224.4 Pitt Meadows-Maple Ridge 8 10,086 409 327 237 250 239 225.9 234.6 237.8 242.4 Pitt Meadows-Maple Ridge 8 10,364 411 335 236 248 239 223.8 232.2 235.6 240.1 Pitt Meadows-Maple Ridge 8 10,364 411 335 236 248 239 223.8 232.2 235.6 240.1 Pitt Meadows-Maple Ridge 8 10,364 411 335 236 248 239 223.8 232.2 235.6 240.1 Pitt Meadows-Maple Ridge 8 10,364 411 335 236 248 239 223.8 232.2 235.6 240.1 Pitt Meadows-Maple Ridge 8 10,364 411 335 236 248 239 223.8 232.2 235.6 246.1 Pitt Meadows-Maple Ridge 8 10,364 411 335 244 232 248 248 248 248 249.1 Pitt Meadows-Maple Ridge 8 10,364 411 335 244 232 248 248 248 248 248 248 248 248 248 24	Kamloops-Okanagan	51	10,286	419	337	237	252	241	229.5	238.8	238.8	243.3
Pitt Meadows-Maple Ridge 8 10,176 403 333 245 241 244 232.0 2451 2373 243.0 5 245 241 244 232.0 2451 2373 243.0 5 245 241 241 242 232.0 2451 2373 243.0 5 245 241 242 232 242 242 235 236.5 238.0 5 244 242 232 242 242 242 242 242 242 242	Kootenay	4	9,139	365	295	214	218	212	203.8	205.5	204.7	214.3
Sumas 31 10,086 409 327 232 249 235 233.6 2372 236.5 238. Surrey-Langley 24 9,802 387 317 221 231 222 224.9 230.7 224.5 224.  Alberta 375 10,499 415 337 237 250 239 225.9 234.6 237.8 242.1 231 231 231 231 231 231 231 231 231 23	Matsqui	17	10,475	423	338	238	256	239	230.1	244.7	243.7	244.5
Surrey-Langley 24 9,802 387 317 221 231 222 224.9 230.7 224.5 224.  Alberta 375 10,499 415 337 237 250 239 225.9 234.6 237.8 242.1  Calgary 46 10,364 411 335 236 248 239 223.8 232.2 235.6 240.3  Caldimonton 73 9,943 395 321 224 237 226 214.1 226.8 226.8 228.3  Cethbridge/Brooks 122 10,728 420 343 242 255 243 228.2 235.3 241.7 246.3  Ceace River 2 10,548 432 338 241 266 243 240.5 241.3 249.7 249.3  Cethbridge Ceremition 8 9,904 395 318 231 244 232 226.0 234.3 235.1 235.1  Ceanora 2 10,719 407 354 238 242 258 250 224.4 235.8 242.3  Ceanora 2 10,719 407 354 238 242 246 215.8 225.3 225.0 242.8  Ceanora 1 3 11,394 435 365 249 257 252 225.1 238.4 245.2  Ceanora 1 3 11,394 435 365 249 257 252 225.1 238.4 245.2  Ceanora 2 10,777 432 348 244 253 246 251.2  Ceanora 1 3 11,394 435 365 249 257 252 255.1 238.4 245.2  Ceanora 1 3 11,394 435 365 249 257 252 225.1 238.4 245.2  Ceanora 1 3 11,394 435 365 249 257 252 225.1 238.4 245.2  Ceanora 2 10,779 432 358 249 257 252 225.1 238.4 245.2  Ceanora 2 10,779 432 358 249 257 252 225.1 238.4 245.2  Ceanora 2 10,779 432 358 249 257 252 225.1 238.4 245.2  Ceanora 2 10,779 432 358 249 257 252 225.1 238.4 245.2  Central 1 9 10,963 430 357 247 261 252 224.7 233.8 242.7 253.  Central 1 9 10,963 430 357 247 261 252 224.7 233.8 242.7 253.2  Central 5 1 10,519 400 339 236 240 238 221.8 225.5 23.2  Central 5 1 10,519 400 339 236 240 238 221.8 225.5 23.2  Central 5 1 10,519 400 339 236 240 238 221.8 225.5 23.5  Central 5 1 10,519 400 339 236 240 238 221.8 227.5 231.5 234.4  Central 5 1 10,519 400 339 236 240 238 221.8 227.5 231.5 234.4  Central 5 1 10,519 400 339 236 240 238 221.8 227.5 231.5 234.4  Central 5 1 10,519 400 339 236 240 238 221.8 227.5 231.5 234.4  Central 5 1 10,519 400 339 236 240 231 240 231 247.7 220.3 227.7 234.4  Central 5 1 10,519 400 339 236 231 240 231 244.7 220.3 227.7 234.4  Central 5 1 10,519 400 339 236 240 238 221.8 220.9 231.5 230.5  Central 5 1 10,519 400 339 236 240 231 240 231 247.7 220.3 227.7 234.4  Central 5 1 10,519 400 339 236 240 238 226 213.9 213.6 210.0	Pitt Meadows-Maple Ridge	8	10,176	403	333	245	241	244	232.0	245.1	237.3	243.4
Alberta 375 10,499 415 337 237 250 239 225.9 234.6 237.8 242.1  Calgary 46 10,364 411 335 236 248 239 223.8 232.2 235.6 240.5  Caldmonton 73 9,943 395 321 224 237 226 214.1 226.8 226.8 228.5  Cethbridge/Brooks 122 10,728 420 343 242 255 243 228.2 235.3 241.7 246.1  Cedece River 2 10,548 432 338 241 266 243 240.5 241.3 249.7 249.1  Cedece River 124 10,688 424 343 241 255 242 231.6 239.5 241.5 246.1  Cermilion 8 9,904 395 318 231 244 232 226.0 234.3 235.1 235.1  Canora 2 10,719 407 354 238 242 246 215.8 253 225.3 224.2  Cedece River 4 9,639 358 308 218 218 219 221.7 224.3 224.8 217.1  Cedece River 4 9,639 358 308 218 218 219 221.7 224.3 224.8 217.1  Cedece River 4 9,639 358 365 249 257 252 255.1 238.4 245.2 252.3  Cedece River 5 11,268 441 364 253 248 221.4 235.2 244.2 248.3  Cedece River 124 10,698 424 348 244 253 248 221.4 235.2 244.2  Cedece River 124 10,698 424 348 244 253 248 221.4 235.2 244.2  Cedece River 125 11,268 441 364 253 265 256 227.6 242.3 248.9 258.3  Cedece River 19 10,963 430 357 247 261 252 224.7 233.8 242.7 253.3  Cedece River 19 10,963 430 357 247 261 252 224.7 233.8 242.7 253.3  Cedece River 19 10,963 430 357 247 261 252 247.7 233.8 242.7 253.3  Central 51 10,519 400 339 236 240 238 221.8 227.5 231.5 238.4  Central 51 10,519 400 339 236 240 238 221.8 227.5 231.5 238.4  Central 51 10,519 400 339 236 240 238 221.8 227.5 231.5 238.4  Central 51 10,519 400 339 236 240 238 221.8 227.5 231.5 238.4  Central 51 10,519 400 339 236 240 238 221.8 227.5 231.5 238.4  Central 51 10,519 400 339 236 240 231 244.7 220.3 227.7 234.4  Central 51 10,519 400 339 236 240 231 244.7 220.3 227.7 234.4  Central 51 10,519 400 339 236 240 231 240 231 244.7 220.3 227.7 234.4  Central 51 10,519 400 339 236 240 231 244.7 220.3 227.7 234.4  Central 51 10,519 400 339 236 240 231 240 231 244.7 220.3 227.7 234.4  Central 51 10,519 400 339 236 240 231 240 231 244.7 220.3 227.7 234.4  Central 51 10,519 400 339 236 240 231 240 231 244.7 220.3 227.7 234.4  Central 51 10,519 400 339 236 240 231 240 231 244.7 220.3 227.7 234.4	Sumas	31	10,086	409	327	232	249	235	233.6	237.2	236.5	238.7
Edmonton 73 9,943 395 321 224 237 226 2141 2268 2268 228. Lethbridge/Brooks 122 10,728 420 343 242 255 243 228.2 235.3 241.7 246.5 262.6 River 2 10,548 432 338 241 266 243 240.5 241.3 249.7 249.5 246.6 Permillion 8 9,904 395 318 231 244 232 226.0 234.3 235.1	Surrey-Langley	24	9,802	387	317	221	231	222	224.9	230.7	224.5	224.7
Admonton 73 9,943 395 321 224 237 226 214.1 226.8 226.8 228.2 235.3 241.7 246.1 226.8 226.8 228.2 235.3 241.7 246.1 226.8 226.8 228.2 235.3 241.7 246.1 226.8 226.2 235.3 241.7 246.1 226.8 226.2 235.3 241.7 246.1 226.8 226.2 235.3 241.7 246.1 226.8 226.2 235.3 241.7 246.1 226.8 226.2 235.3 241.7 246.1 226.8 226.2 235.3 241.7 246.1 226.2 241.3 249.7 249.1 226.2 241.3 249.7 249.1 226.2 241.3 249.7 249.1 226.2 241.3 249.7 249.1 226.2 241.3 249.7 249.1 226.2 241.3 249.7 249.1 226.2 241.3 249.7 249.1 226.2 241.3 249.7 249.1 226.2 241.3 249.7 249.1 226.2 241.3 235.1 235.1 235.1 241.1 235.2 244.2 235.2 226.0 234.3 235.1 235.1 235.1 241.2 241.	Alberta	375	10,499	415	337	237	250	239	225.9	234.6	237.8	242.0
Lethbridge/Brooks         122         10,728         420         343         242         255         243         228.2         235.3         241.7         246.8           Peace River         2         10,548         432         338         241         266         243         240.5         241.3         249.7         249.4           Red Deer         124         10,688         424         343         241         255         242         231.6         239.5         241.5         246.1           Jermilion         8         9,904         395         318         231         244         232         226.0         234.3         235.1         235.1         236.1         236.0         234.3         235.1         235.1         235.2         226.0         234.3         235.1         235.1         236.2         226.0         234.3         235.1         235.1         236.2         226.0         234.3         235.1         235.2         226.0         234.3         235.1         235.2         244.2         236.8         242.3         255.2         225.1         224.2         246.2         215.8         225.3         225.0         242.1         235.2         242.1         227.2         227.2	Calgary	46	10,364	411	335	236	248	239	223.8	232.2	235.6	240.9
Peace River 2 10,548 432 338 241 266 243 240.5 241.3 249.7 249.8 Red Deer 124 10,688 424 343 241 255 242 231.6 239.5 241.5 246.1 (Armilion 8 9,904 395 318 231 244 232 226.0 234.3 235.1 2	Edmonton	73	9,943	395	321	224	237	226	214.1	226.8	226.8	228.7
Red Deer 124 10,688 424 343 241 255 242 231.6 239.5 241.5 246.1   Alermillon 8 9,904 395 318 231 244 232 226.0 234.3 235.1 235.1   Canora 8 10,977 429 356 246 258 250 224.4 235.8 242.3 251.3   Canora 2 10,719 407 354 238 242 246 215.8 225.3 225.0 242.4   Canora 1 2 10,719 407 354 238 242 246 215.8 225.3 225.0 242.4   Canora 1 3 11,394 435 365 249 257 252 225.1 238.4 245.2 252.3   Caskatoon 9 10,598 424 348 244 253 248 221.4 235.2 244.2 248.3   Caskatoon East 25 11,268 441 364 253 265 256 227.6 242.3 248.9 258.3   Caskatoon West 12 10,717 432 351 241 262 248 226.7 232.0 237.1 250.4   Caskatoon West 19 10,963 430 357 247 261 252 224.7 233.8 242.7 253.4   Caskatoon 4 10,972 425 358 238 248 244 213.1 231.3 230.5 243.4   Caskatoon 5 10,519 400 339 236 240 238 221.8 227.5 231.5 234.4   Caskatoon 7 4 10,773 397 326 231 240 231 214.7 220.3 227.7 234.6   Caskatoon 7 4 10,773 397 326 231 240 231 214.7 220.3 227.7 234.6   Caskatoon 7 4 10,773 397 326 231 240 231 214.7 220.3 227.7 234.6   Caskatoon 7 4 10,773 397 326 231 240 231 214.7 220.3 227.7 234.6   Caskatoon 7 4 10,773 397 326 231 240 231 214.7 220.3 227.7 234.6   Caskatoon 7 4 10,773 397 326 231 240 231 214.7 220.3 227.7 234.6   Caskatoon 7 4 10,773 397 326 231 240 231 214.7 220.3 227.7 234.6   Caskatoon 7 4 10,773 397 326 231 240 231 214.7 220.3 227.7 234.6   Caskatoon 7 4 10,773 397 326 231 240 231 214.7 220.3 227.7 234.6   Caskatoon 7 4 10,773 397 326 231 240 231 214.7 220.3 227.7 234.6   Caskatoon 7 4 10,773 397 326 231 240 231 214.7 220.3 227.7 234.6   Caskatoon 7 4 10,773 397 326 231 240 231 214.7 220.3 227.7 234.6   Caskatoon 7 4 10,773 397 326 231 240 231 214.7 220.3 227.7 234.6   Caskatoon 7 4 10,773 397 326 231 240 231 214.7 220.3 227.7 234.6   Caskatoon 7 4 10,773 397 326 231 240 231 214.7 220.3 227.7 234.6   Caskatoon 7 4 10,773 397 326 231 240 231 214.7 220.3 227.7 234.6   Caskatoon 7 4 10,773 397 326 231 240 231 214.7 220.3 227.7 234.6   Caskatoon 8 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Lethbridge/Brooks	122	10,728	420	343	242	255	243	228.2	235.3	241.7	246.
Armilion         8         9,904         395         318         231         244         232         226.0         234.3         235.1         235.1           Saskatchewan         88         10,977         429         356         246         258         250         224.4         235.8         242.3         251.3           Canora         2         10,719         407         354         238         242         246         215.8         225.3         225.0         242.1           Prince Albert/Melfort         4         9,639         358         308         218         218         219         221.7         224.3         224.8         217.8           Regina         13         11,394         435         365         249         257         252         225.1         238.4         245.2         252.1           Saskatoon         9         10,598         424         348         244         253         248         221.4         235.2         244.2         248.3           Saskatoon East         25         11,268         441         364         253         265         256         227.6         242.3         248.9         258.3           Saskato	Peace River	2	10,548	432	338	241	266	243	240.5	241.3	249.7	249.8
Saskatchewan         88         10,977         429         356         246         258         250         224.4         235.8         242.3         251.3           Canora         2         10,719         407         354         238         242         246         215.8         225.3         225.0         242.1           Prince Albert/Melfort         4         9,639         358         308         218         218         219         221.7         224.3         224.8         217.1           Regina         13         11,394         435         365         249         257         252         2251         238.4         245.2         252.1           Gaskatoon         9         10,598         424         348         244         253         248         221.4         235.2         244.2         248.3           Gaskatoon East         25         11,268         441         364         253         265         256         227.6         242.3         248.9         258.3           Gaskatoon West         12         10,717         432         351         241         262         248         226.7         232.0         2371         250.1           G	Red Deer	124	10,688	424	343	241	255	242	231.6	239.5	241.5	246.0
Canora 2 10,719 407 354 238 242 246 215.8 225.3 225.0 242.1 Prince Albert/Melfort 4 9,639 358 308 218 218 219 221.7 224.3 224.8 217.3 Regina 13 11,394 435 365 249 257 252 225.1 238.4 245.2 252.4 Saskatoon 9 10,598 424 348 244 253 248 221.4 235.2 244.2 248.3 Saskatoon East 25 11,268 441 364 253 265 256 227.6 242.3 248.9 258.3 Saskatoon West 12 10,717 432 351 241 262 248 226.7 232.0 2371 250.1 Swift Current 19 10,963 430 357 247 261 252 224.7 233.8 242.7 253.4 Weyburn 4 10,972 425 358 238 248 244 213.1 231.3 230.5 243.4 Central 51 10,519 400 339 236 240 238 221.8 2275 231.5 238.6 Eastern 74 10,173 397 326 231 240 231 214.7 220.3 2277 234.6 Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5	Vermilion	8	9,904	395	318	231	244	232	226.0	234.3	235.1	235.8
Prince Albert/Melfort 4 9,639 358 308 218 218 219 221.7 224.3 224.8 217.8 Regina 13 11,394 435 365 249 257 252 225.1 238.4 245.2 252.1 Saskatoon 9 10,598 424 348 244 253 248 221.4 235.2 244.2 248.3 Saskatoon East 25 11,268 441 364 253 265 256 227.6 242.3 248.9 258.3 Saskatoon West 12 10,717 432 351 241 262 248 226.7 232.0 237.1 250.1 Swift Current 19 10,963 430 357 247 261 252 224.7 233.8 242.7 253.4 Neyburn 4 10,972 425 358 238 248 244 213.1 231.3 230.5 243.4 Manitoba 164 10,279 397 330 232 238 232 216.6 221.8 226.9 234.5 Saskatoon Task 24 10,173 397 326 231 240 231 214.7 220.3 227.7 234.6 Restern 74 10,173 397 326 231 240 231 214.7 220.3 227.7 234.6 Restern 74 10,173 397 326 231 240 231 214.7 220.3 227.7 234.6 Restern 74 10,173 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5 Restern 25 10,334 240 231 24.7 24.7 24.7 24.7 24.7 24.7 24.7 24.7	Saskatchewan	88	10,977	429	356	246	258	250	224.4	235.8	242.3	251.3
Regina 13 11,394 435 365 249 257 252 225.1 238.4 245.2 252.5   Saskatoon 9 10,598 424 348 244 253 248 221.4 235.2 244.2 248.5   Saskatoon East 25 11,268 441 364 253 265 256 227.6 242.3 248.9 258.5   Saskatoon West 12 10,717 432 351 241 262 248 226.7 232.0 237.1 250.1   Swift Current 19 10,963 430 357 247 261 252 224.7 233.8 242.7 253.5   Weyburn 4 10,972 425 358 238 248 244 213.1 231.3 230.5 243.5   Manitoba 164 10,279 397 330 232 238 232 216.6 221.8 226.9 234.5   Central 51 10,519 400 339 236 240 238 221.8 227.5 231.5 238.6   Eastern 74 10,173 397 326 231 240 231 214.7 220.3 227.7 234.6   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5   Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 225.5	Canora	2	10,719	407	354	238	242	246	215.8	225.3	225.0	242.0
Saskatoon 9 10,598 424 348 244 253 248 221.4 235.2 244.2 248.3 248.5 258.4 221.4 235.2 244.2 248.5 258.4 221.4 235.2 244.2 248.5 258.4 221.4 235.2 244.2 248.5 258.4 221.4 235.2 244.2 248.5 258.4 221.4 235.2 248.9 258.4 248.5 258.4 248.5 258.4 248.5 258.4 248.5 258.4 248.5 258	Prince Albert/Melfort	4	9,639	358	308	218	218	219	221.7	224.3	224.8	217.8
Saskatoon East 25 11,268 441 364 253 265 256 227.6 242.3 248.9 258.5 Saskatoon West 12 10,717 432 351 241 262 248 226.7 232.0 237.1 250.0 Swift Current 19 10,963 430 357 247 261 252 224.7 233.8 242.7 253.5 Neyburn 4 10,972 425 358 238 248 244 213.1 231.3 230.5 243.5 Manitoba 164 10,279 397 330 232 238 232 216.6 221.8 226.9 234.5 Central 51 10,519 400 339 236 240 238 221.8 227.5 231.5 238.0 Sastern 74 10,173 397 326 231 240 231 214.7 220.3 227.7 234.0 Interlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 228.5	Regina	13	11,394	435	365	249	257	252	225.1	238.4	245.2	252.
Saskatoon West       12       10,717       432       351       241       262       248       226.7       232.0       237.1       250.0         Swift Current       19       10,963       430       357       247       261       252       224.7       233.8       242.7       253.8         Weyburn       4       10,972       425       358       238       248       244       213.1       231.3       230.5       243.8         Manitoba       164       10,279       397       330       232       238       232       216.6       221.8       226.9       234.8         Central       51       10,519       400       339       236       240       238       221.8       227.5       231.5       238.0         Eastern       74       10,173       397       326       231       240       231       214.7       220.3       227.7       234.0         Interlake       29       10,334       396       327       227       233       226       213.9       213.6       216.0       228.3	Saskatoon	9	10,598	424	348	244	253	248	221.4	235.2	244.2	248.3
Swift Current       19       10,963       430       357       247       261       252       224.7       233.8       242.7       253.8         Neyburn       4       10,972       425       358       238       248       244       213.1       231.3       230.5       243.3         Manitoba       164       10,279       397       330       232       238       232       216.6       221.8       226.9       234.0         Central       51       10,519       400       339       236       240       238       221.8       227.5       231.5       238.0         Eastern       74       10,173       397       326       231       240       231       214.7       220.3       227.7       234.0         Interlake       29       10,334       396       327       227       233       226       213.9       213.6       216.0       228.3	Saskatoon East	25	11,268	441	364	253	265	256	227.6	242.3	248.9	258.2
Weyburn         4         10,972         425         358         238         248         244         213.1         231.3         230.5         243.4           Manitoba         164         10,279         397         330         232         238         232         216.6         221.8         226.9         234.0           Central         51         10,519         400         339         236         240         238         221.8         227.5         231.5         238.0           Eastern         74         10,173         397         326         231         240         231         214.7         220.3         227.7         234.0           Interlake         29         10,334         396         327         227         233         226         213.9         213.6         216.0         228.1	Saskatoon West	12	10,717	432	351	241	262	248	226.7	232.0	237.1	250.0
Manitoba         164         10,279         397         330         232         238         232         216.6         221.8         226.9         234.0           Central         51         10,519         400         339         236         240         238         221.8         227.5         231.5         238.0           Eastern         74         10,173         397         326         231         240         231         214.7         220.3         227.7         234.0           Interlake         29         10,334         396         327         227         233         226         213.9         213.6         216.0         228.3	Swift Current	19	10,963	430	357	247	261	252	224.7	233.8	242.7	253.
Central         51         10,519         400         339         236         240         238         221.8         227.5         231.5         238.0           Eastern         74         10,173         397         326         231         240         231         214.7         220.3         227.7         234.0           Interlake         29         10,334         396         327         227         233         226         213.9         213.6         216.0         228.0	Weyburn	4	10,972	425	358	238	248	244	213.1	231.3	230.5	243.2
Eastern 74 10,173 397 326 231 240 231 214.7 220.3 227.7 <b>234.</b> 0 nterlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 <b>228.</b> 3	Manitoba	164	10,279	397	330	232	238	232	216.6	221.8	226.9	234.
nterlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 <b>228.</b> 5	Central	51	10,519	400	339	236	240	238	221.8	227.5	231.5	238.0
nterlake 29 10,334 396 327 227 233 226 213.9 213.6 216.0 <b>228.</b> 3	Eastern			397			240					234.0
	Interlake			396								228.7
	South West			384								230.2

DEMOGRAPHICS										
		Hero	d Size		Hou	sing	Freq	uency	Dabada	
	0-49	50-99	100-199	200+	Tie Stall	Free Stall	2×	3×	Robotic	
British Columbia										
Number of Herds	27	78	111	75	8	283	200	39	52	
Percent of Herds	9.3	26.8	38.1	25.8	2.7	97.3	68.7	13.4	17.9	
Percent of Cows	1.8	10.9	28.9	58.4	1.0	99.0	58.0	25.7	16.3	
Average Herd Size	35.6	74.2	138.7	414.9	68.3	186.3	154.5	350.7	167.1	
Average 305 Milk	9,107	9,703	10,595	10,513	8,825	10,236	9,747	11,318	11,086	
Average 305 Fat	375	395	431	421	351	415	397	458	446	
Average 305 Protein	298	318	344	341	291	333	319	365	358	
BCA Milk	219	225	243	237	213	235	226	258	251	
BCA Fat	230	236	260	255	210	251	239	277	269	
BCA Protein	221	227	245	241	213	238	229	260	253	
Average SCC	164	181	174	211	256	182	178	197	202	
Alberta										
Number of Herds	11	87	202	75	23	352	276	39	60	
Percent of Herds	2.9	23.2	53.9	20.0	6.1	93.9	73.6	10.4	16	
Percent of Cows	0.7	11.0	46.9	41.4	3.1	96.9	66.9	19.5	13.6	
Average Herd Size	38.4	76.6	140.6	334.1	81.3	166.7	146.8	302.7	137.1	
Average 305 Milk	8,978	10,198	10,614	10,760	9,783	10,545	10,252	11,754	10,819	
Average 305 Fat	353	401	421	424	380	417	407	465	418	
Average 305 Protein	297	330	340	344	316	339	330	372	351	
BCA Milk	212	230	239	244	219	238	231	265	245	
BCA Fat	215	240	254	258	226	252	245	282	252	
BCA Protein	216	233	240	244	221	240	233	263	248	
Average SCC	191	222	211	236	216	218	214	218	239	

			DEM	OGRAPH	IICS				
		Hero	d Size		Hou	sing	Freq	uency	Dahat!a
	0-49	50-99	100-199	200+	Tie Stall	Free Stall	2×	3×	Robotic
Saskatchewan									
Number of Herds	4	19	39	26	9	79	55	17	16
Percent of Herds	4.5	21.6	44.3	29.5	10.2	89.8	62.5	19.3	18.2
Percent of Cows	0.9	9.1	32.9	57.1	5.2	94.8	47.1	39.8	13.1
Average Herd Size	38.5	80.4	142.1	369.2	96.7	201.9	144.2	393.6	137.6
Average 305 Milk	10,478	11,014	11,062	10,899	11,438	10,924	10,668	11,697	11,272
Average 305 Fat	407	434	431	427	460	426	420	461	427
Average 305 Protein	333	360	359	353	370	355	345	379	369
BCA Milk	222	249	248	245	258	245	239	263	253
BCA Fat	233	260	260	258	271	256	252	278	258
BCA Protein	222	253	252	249	260	249	242	267	260
Average SCC	173	182	218	263	164	228	209	252	232
Manitoba									
Number of Herds	8	69	55	32	43	120	98	25	41
Percent of Herds	4.9	42.1	33.5	19.5	26.2	73.2	59.8	15.2	25
Percent of Cows	0.9	16.7	23.5	58.8	12.1	87.6	46.5	31.8	21.7
Average Herd Size	35.4	74.6	131.9	566.3	86.8	224.9	146.1	392.4	163
Average 305 Milk	9,372	10,109	10,670	10,201	10,317	10,262	9,775	11,410	10,793
Average 305 Fat	361	387	411	401	402	395	382	441	405
Average 305 Protein	305	324	342	329	330	330	317	357	347
BCA Milk	207	229	237	234	229	232	221	259	242
BCA Fat	210	232	245	246	237	238	228	269	242
BCA Protein	210	229	238	236	229	234	223	254	243
Average SCC	263	229	265	265	247	252	257	231	241

	D	ISPOS	AL RE	ASON	S				DISTRIBUTIO	ON (all)
	D 1				0 1 1				Cows	Herds
Reason	British C	Columbia	AID	erta	Saskati	chewan	Man	itoba	0-19	4
									20-29	7
Reproductive	3,093	26%	3,924	27%	678	20%	1,605	26%	30-39	14
Mastitis/High SCC	2,190	19%	2,268	16%	523	16%	1,189	19%	40-49	25
Mastitis/ flight SCC	2,190	19%	۷,۷00	10%	ეგა	10%	1,109	19%	50-59	42
Low Milk Production	1,724	15%	2,455	17%	501	15%	1,080	17%	60-69	48
LOW WIIK I TOUGETION	1,124	1370	2,433	17 70	301	1370	1,000	17 70	70-79	65
Feet & Leg Problems	1,442	12%	1,612	11%	300	9%	628	10%	80-89	43
Tool & Log Frobicino	1,772	1270	1,012	1170	500	370	020	1070	90-99	55
Udder Breakdown	878	8%	1,633	11%	322	10%	656	10%	100-109	62
	0.0	0.0	.,000		022	1070		.070	110-119	51
Sickness	949	8%	1,139	8%	525	16%	497 8%		120-129	66
			4.22						130-139	53
Injury/Accident	753	6%	570	4%	314	9%	319	5%	140-149	47
									150-159	30
Old Age	389	3%	513	4%	99	3%	160	3%	160-169	25
									170-179	28
Slow Milker	139	1%	221	2%	34	1%	54	1%	180-189	28
									190-199	17
Bad Temperament	123	1%	159	1%	26	1%	94	1%	200+	208



2018 MANAGEMENT CENTRE BENCHMARKS (All western DHI herds based on herd averages)

	BRI	BRITISH COLUMBIA	OLUMB	ΑI		ALBERTA	RTA		SA	SKATCI	SASKATCHEWAN	_		MANITOBA	OBA	
MANAGEMENT CENTRE	25th	50th	75th	90th	25th	50th	75th	90th	25th	50th	75th	90th	25th	50th	75th	90th
Number of Cows	78	126	205	354	86	131	182	309	96	141	208	363	72	103	151	306
Standard Milk (Kgs)	34.2	37.4	39.9	42.4	35.6	38.5	41.0	43.1	37.1	38.9	42.1	1.4	33.0	36.9	40.2	42.6
Annual Milk Value (\$)	6,856	7,506	8,066	8,497	062'9	7,414	7,985	8,473	6,754	7,495	8,207	8,520	5,749	6,947	7,755	8,263
Udder Health (Linear Score)	2.6	2.3	1.9	1.7	2.8	2.5	2.3	5.0	2.7	2.4	2.3	1.9	3.1	2.8	2.5	2.2
Age at 1st Calving (Months)	26.4	25.2	24.3	23.6	26.1	24.9	24.0	23.4	26.2	24.8	24.0	23.5	27.9	25.7	24.7	23.8
Calving Interval (Months)	14.4	13.8	13.3	12.9	14.1	13.4	13.0	12.7	14.3	13.6	13.3	13.0	14.9	14.0	13.2	13.0
% of herd in 3+ Lactation	30.5	35.2	40.4	45.0	30.4	34.7	39.2	43.1	30.8	35.2	39.1	44.4	29.9	34.8	39.9	45.4
Efficiency (% of herd in milk)	85.1	86.9	88.4	90.3	82.0	85.0	87.3	8.8	80.5	84.2	86.8	88.9	79.2	83.9	87.3	88.9
Turnover (% of herd removed)	48.7	38.4	33.1	27.8	46.2	39.0	33.3	26.9	44.7	37.9	30.9	25.2	43.4	36.7	28.1	21.1
Days Dry	74	64	58	53	81	70	09	55	91	77	65	57	95	76	63	26
Days to 1st Breeding	103	92	83	75	95	83	75	69	101	85	78	75	103	98	92	69

HOW PERCENTILES WORK: If all the herds (animals could be substituted for herds) were arranged in order from lowest to highest, the 75th percentile would be the value of the herd that is better than 75% of all the other herds. The 99th percentile value is that which is better than 99% of all the other herds.

	BRITISH CO	LUMBIA P	UBLIS	HAE	BLE	HER	D LI	STING	as					
Farm	Ourse	C:+v		BCA	A		rds	305 M		Fa	nt	Pro	tein	Breed
rariii	0wner	City	Average	М	F	Р	Records	305 IVI		Kg	%	Kg	%	Bre
Tonesa Holsteins Ltd	Glenn De Groot	Chilliwack	312.3	292	342	303	110	12,670	*	551	4.3%	419	3.3%	Н
Willswikk Holsteins	William Wikkerink	Mill Bay	311.0	286	355	292	48	13,100	R	604	4.6%	425	3.2%	Н
Wisselview Farms	Wayne & Judy Wisselink	Pitt Meadows	310.3	303	318	310	142	13,966	*	545	3.9%	454	3.3%	Н
Triwest Farms	Vic & Terry Triemstra	Chilliwack	308.7	298	334	294	110	12,845	*	538	4.2%	404	3.1%	Н
Romyn Hill Farm Ltd	Brad & Jodi Romyn	Sorrento	306.0	284	340	294	38	12,240	R	543	4.4%	402	3.3%	Н
West River Farm Ltd	Grant & Eugene Sache	Rosedale	305.0	289	332	294	117	13,076	R	559	4.3%	424	3.2%	Н
Dale Farm	Robert Dale	Mission	305.0	311	292	312	96	9,026	R	459	5.1%	343	3.8%	J
Fraser Edge	Sid Stoker	Deroche	301.3	300	309	295	142	13,559	R	517	3.8%	423	3.1%	Н
Westar Holsteins	Robert Matzek	Rosedale	296.7	290	314	286	61	13,465	R	541	4.0%	423	3.1%	Н
Gordon & Angela Ferguson	_	Enderby	295.7	298	291	298	119	9,536		466	4.9%	347	3.6%	J,H,A
Hammingview Farms Ltd	Yvonne Murdoch	Pitt Meadows	294.3	297	299	287	84	13,531	*	505	3.7%	416	3.1%	Н
Prinse Farms Ltd	_	Rosedale	292.3	283	312	282	81	12,475	*	511	4.1%	398	3.2%	Н
B & L Farms Ltd	Matt Dykshoorn	Abbotsford	291.3	294	298	282	41	13,067	R	489	3.7%	397	3.0%	Н
Kish Farms Ltd	Darren Kish	Abbotsford	291.0	273	322	278	62	11,715		517	4.4%	383	3.3%	H,J
Kambro Farms Ltd	Doug, Tom & Will Kampman	Abbotsford	288.0	280	307	277	382	11,403	*	506	4.4%	373	3.3%	H,J
Lavender Farms Ltd	Gerrit Vaandrager	Abbotsford	285.0	275	302	278	149	12,177	R	496	4.1%	392	3.2%	Н
Wallyann Holsteins	Edwin Crandlemire	Grindrod	282.3	270	303	274	131	12,091		505	4.2%	390	3.2%	Н
Valedoorn Farms Inc	Tom & John Hoogendorn	Agassiz	281.0	273	295	275	299	11,834	*	474	4.0%	379	3.2%	Н
Dicklands Farms	George Dick	Chilliwack	280.7	270	297	275	296	11,869	R	483	4.1%	385	3.2%	Н
Elmido Farms	John & Debbie Aarts	Sardis	280.3	275	293	273	487	11,873	*	470	4.0%	376	3.2%	Н

	ALBER <sup>*</sup>	TA PUBLIS	HABL	EΗ	ERD	LIS	TING	iS						
F	0	Oit.		ВС	:A		rds	205 M		Fa	nt	Prot	tein	Breed
Farm	Owner	City	Average	М	F	Р	Records	305 M		Kg	%	Kg	%	Bre
Mars Dairy	Gert & Sonja Schrijver	Stettler	334.3	322	362	319	232	14,541	*	607	4.2%	458	3.1%	Н
Cawithca Dairy	Richard & Katie Veldkamp	Fenn	332.7	318	357	323	51	14,896	*	624	4.2%	482	3.2%	Н
Vanden Pol Dairy	Gys & Silia Vanden Pol	Coaldale	311.0	307	315	311	43	13,463	*	513	3.8%	435	3.2%	Н
New Mars Dairy Ltd	Henk & Lizette Schrijver	Millet	303.3	299	317	294	325	13,505	*	533	3.9%	423	3.1%	Н
Lucky Hill Dairy	_	Lacombe	302.7	287	334	287	190	13,187	*	572	4.3%	419	3.2%	Н
Chubanna Holsteins	_	Lacombe	301.3	284	322	298	90	12,935	R	544	4.2%	430	3.3%	Н
Aspenridge Farms Ltd	Dick & Steve Tenhove	Blackfalds	300.0	294	312	294	49	13,412		526	3.9%	427	3.2%	Н
New Rockport Colony	Simon Waldner	New Dayton	296.7	283	319	288	102	12,611		525	4.2%	407	3.2%	Н
Houweling Farms Ltd	Pete Houweling	Coaldale	296.0	286	322	280	368	12,764	*	532	4.2%	398	3.1%	Н
Klooster Farming Corporation	_	Rocky Mtn House	294.7	286	315	283	61	12,848		526	4.1%	404	3.1%	Н
Nifera Holsteins	_	Nobleford	292.3	287	300	290	87	12,852	R	499	3.9%	414	3.2%	Н
Huntcliff Dairy	Martien & Tietsia Huyzer	Olds	289.3	292	282	294	126	10,541	R	458	4.3%	367	3.5%	J,H
Fairville Farming Co. Ltd	_	Bassano	286.7	286	284	290	131	12,797	R	471	3.7%	414	3.2%	Н
Duane G. Zimmer	_	Daysland	286.7	288	279	293	65	13,366	R	482	3.6%	433	3.2%	Н
Breevliet Ltd	J. Th. De Goeij	Wetaskiwin	286.0	282	297	279	416	12,424	*	487	3.9%	392	3.2%	Н
Vanden Dool Farms	Mike Vanden Dool	Picture Butte	285.7	285	292	280	336	12,414	*	472	3.8%	390	3.1%	Н
De Wildt Dairy	Kees De Wildt	Barrhead	285.7	288	284	285	107	12,937		473	3.7%	407	3.1%	Н
Will & Rob Rommens Dairies Ltd	_	Duchess	285.3	279	297	280	194	12,277		486	4.0%	393	3.2%	Н
Sylvanside Dairy Ltd	Sipke & Margreet Dijkstra	Ponoka	284.7	275	307	272	155	12,148		502	4.1%	382	3.1%	Н
Couleeview Farms	Gerrit Haarman	Shaughnessy	284.0	280	297	275	218	12,402	*	489	3.9%	389	3.1%	Н

To be included, 50% or more of total records contributing to the herd's average must be Publishable. Min. 10 records required / \* 3× Milking Per Day or Greater / R: Robotic

	SASKATCHE	WAN PL	JBLISH	IABI	LE H	ERD	LIS	TINGS	5					
Form	Oumor	C:t-v		BCA	١		rds	20E M		Fa	nt	Prot	tein	Breed
Farm	Owner	City	Average	М	F	Р	Records	305 M		Kg	%	Kg	%	Bre
Elkrest Farms	Brad Jason Trevor Kornelius	<b>Osler</b>	310.7	302	324	306	631	13,327	*	535	4.0%	431	3.2%	H,J
Rynview Holsteins	Michael Wesselingh	Saskatoon	299.3	303	301	294	32	13,977		518	3.7%	433	3.1%	Н
Robella Holsteins	Reg & Juliann Lindenbach	Balgonie	295.7	288	314	285	58	13,290		543	4.1%	418	3.1%	H,J
Dept Animal & Poultry Sci	_	Saskatoon	294.7	292	296	296	96	13,048	*	489	3.7%	421	3.2%	Н
Alley Holsteins	Albert Leyenhorst	Dalmeny	290.3	290	291	290	168	13,223	*	494	3.7%	421	3.2%	H,J
Broyhill Holsteins	Brian, Lucas & Adam Lindenbach	Balgonie	289.3	283	302	283	108	12,864	R	509	4.0%	408	3.2%	Н
Pennant Colony	Dan Wipf	Pennant	288.0	283	291	290	88	12,422	R	473	3.8%	406	3.3%	Н
Benbie Holsteins	Neil Crosbie	Caron	281.0	268	300	275	135	12,337	*	510	4.1%	401	3.3%	Н
Smiley Hutterite Colony	Leonard Kleinsasser	Smiley	280.3	269	292	280	122	11,793	R	473	4.0%	390	3.3%	Н
Calvin & Diane Vaandrager	-	Langham	279.3	272	287	279	79	11,816	*	463	3.9%	386	3.3%	Н
Foth Ventures Ltd	Melvin Foth	Hague	272.0	261	282	273	564	11,681	*	468	4.0%	389	3.3%	Н
Baumann Holsteins	Emanuel Baumann	Kipling	271.7	270	269	276	48	12,593		465	3.7%	410	3.3%	Н
Quill Lake Colony	Robert Tschetter	Quill Lake	271.3	261	290	263	103	11,487		473	4.1%	368	3.2%	Н
Dalvoorde Dairies Ltd	Jason Wildeboer	Warman	271.0	264	282	267	139	11,912	*	474	4.0%	384	3.2%	Н
Kenbert Acres	Ken & Ryan Friesen	Drake	269.0	267	268	272	109	11,890		445	3.7%	386	3.2%	H,J
Marfay Farms Ltd	Merlis & Mark Wiebe	Osler	268.0	260	289	255	245	11,676	*	483	4.1%	366	3.1%	Н
Vandenbrink Dairy Farms	Henk Van Den Brink	Saskatoon	267.0	255	285	261	182	11,424	*	474	4.1%	372	3.3%	Н
Star City Colony	Ruben Tschetter	Star City	265.3	259	274	263	172	11,377	R	446	3.9%	368	3.2%	Н
Kessel Family Farm	Raymond Kessel	Balgonie	264.7	263	274	257	136	11,883		457	3.8%	368	3.1%	Н
Bruinsdale Farms	Luke Bruinsma	Osler	264.0	250	275	267	54	10,778		440	4.1%	367	3.4%	Н

	MANITO	BA PUBLIS	SHAB	LE F	HER	D LIS	STIN	GS						
F	0	0:4.		ВС	:A		rds	305 M		Fa	nt	Pro	tein	Breed
Farm	Owner	City	Average	М	F	Р	Records	305 W		Kg	%	Kg	%	Bre
<b>Hueging Dairies</b>	Hermann & Curtis Hueging	Woodlands	322.3	327	327	313	118	15,214	*	563	3.7%	460	3.0%	Н
Readore Farms	Rheal Simon	Notre Dame	301.7	298	308	299	105	13,848		529	3.8%	441	3.2%	Н
Current Holsteins	Darren & Allison Hueging	Woodlands	300.7	294	319	289	85	13,653		546	4.0%	424	3.1%	Н
Holmestead Dairy	Russ & Crystal Holme	Anola	298.7	311	284	301	78	14,136	R	479	3.4%	435	3.1%	Н
Isaac Dairy Ltd	Brent & Victoria Isaac	Kleefeld	296.7	289	327	274	80	12,966	*	543	4.2%	391	3.0%	Н
Sturgeon Creek Colony	Samuel Waldner	Headingley	296.7	305	299	286	49	12,882	*	467	3.6%	386	3.0%	Н
Friecrest Holsteins	Ed & Kathy Friesen	Kleefeld	287.3	281	303	278	84	12,644		505	4.0%	398	3.1%	Н
Plemark Holsteins	Matt & Tanya Plett	Blumenort	286.7	288	296	276	70	12,682	*	487	3.8%	388	3.1%	H,J
Columbine Holsteins	Jacob & Annita Benthem	Elm Creek	284.0	276	289	287	102	12,469	R	485	3.9%	413	3.3%	Н
Fehr Farm	Jakob, Ana & Andreas Fehr	La Broquerie	283.7	285	284	282	139	12,657	R	468	3.7%	398	3.1%	Н
Dueck Holsteins	Jeremy Dueck	St Anne	283.0	292	264	293	55	12,769	R	430	3.4%	408	3.2%	Н
Streamline Dairy	Martin & Jennifer Hamming	Roseisle	280.0	272	292	276	128	12,158		483	4.0%	392	3.2%	Н
Tri Lea Farm	Richard Boonstoppel	Grunthal	280.0	279	286	275	80	12,473	R	474	3.8%	392	3.1%	Н
James Valley Colony	Tim Wurtz	Elie	273.7	267	286	268	76	12,470	*	495	4.0%	398	3.2%	Н
Muller Farms	Richard Muller	Notre Dame	272.7	274	270	274	82	12,172	R	445	3.7%	388	3.2%	Н
Labass Holsteins Ltd	Jan & Tracy Bassa	La Broquerie	271.7	263	287	265	469	11,438	*	464	4.1%	367	3.2%	Н
Sweetridge Farms	Harold & Miriam Sweetnam	Winkler	271.3	270	278	266	261	11,347	*	449	4.0%	361	3.2%	H,J
Lifewind Holsteins	Christophe Roulin	Stonewall	271.0	263	289	261	94	11,936	*	488	4.1%	377	3.2%	Н
Noreydo Holsteins	Norbert, Kevin & Ryan Rey	St Claude	270.0	265	275	270	89	11,749		453	3.9%	380	3.2%	Н
Boonstra Farms Ltd	Brian & Rob Boonstra	Marquette	269.7	273	270	266	692	12,057		444	3.7%	375	3.1%	Н

To be included, 50% or more of total records contributing to the herd's average must be Publishable. Min. 10 records required / \* 3× Milking Per Day or Greater / R: Robotic



# Will the Dairy Industry Give Gene Editing a Chance?

Dr. Michael Lohuis, VP, Research and Innovation, Semex



The dairy industry has benefitted from the adoption of new breeding technologies such as artificial insemination, Best Linear Unbiased Prediction (BLUP) evaluations, embryo transfer, IVF, sexed semen and genomic selection. With many of these technologies, rates of genetic improvement have accelerated, dairy products are being produced more efficiently and the industry has been changed for the better. Today, gene editing appears to be the next candidate for development and possible adoption by our industry. Gene editing, specifically CRISPR, has been described as the biggest scientific breakthrough of the twenty-first century to date. Why all the excitement? For the first time, scientists can easily and reliably make tweaks to targeted stretches of DNA (e.g. a specific gene). This is a fundamental difference from GMO technology which introduces genes (often from other species) into the genome in unpredictable locations with unpredictable results. Gene editing is akin to using the "findand-replace" function of a word processor instead of cutting and pasting words from a newspaper.

The benefits to animal health and well-being are obvious and the risks are minimal because these traits already exist naturally.

### **Trait Improvements with Gene Editing**

The genomics era has taught us a great deal about the roughly 30,000 genes that control an animal's phenotype. Many traits such as growth rate or milk production are controlled by hundreds of genes, and therefore, are unlikely candidates for gene editing. This technology holds greater promise for traits controlled by one or very few genes, because one edit could allow a very significant change in the trait. Two examples of gene edits being developed in the cattle industry are the Hornless (polled) trait and the Slick (heat tolerance)

gene. In both cases, edits are being made that confer a trait into breeds that don't contain that trait or only at very low frequency. The benefits to animal health and well-being are obvious and the risks are minimal because these traits already exist naturally. Conventional crossbreeding could also be used to introduce these traits, but the loss in productivity and increased inbreeding presents an unacceptable tradeoff for farmers.

As with many new technologies, adoption is often accompanied by skepticism and controversy. The reasons are varied but often include poorly understood risks, perceived loss of choice and worry about long-term consequences. New food technologies are particularly fraught because consumers can be emotional about the foods they ingest. As an example, refrigeration was invented by James Harrison in 1857 for the meat and brewing industry, but it faced significant controversy from fears of loss of flavor and potential long-term health effects. However, in the 1920's, when refrigerators were developed that fit in every kitchen, consumers quickly saw the benefits and the controversy was over.

### **Communication as an Antidote**

With today's social media, information travels very quickly. Unfortunately, unsupported opinions and fears often are propagated faster than scientific facts. In this way, fears such as those surrounding GMOs, vaccines and glyphosate have been easily stoked online and not easily rebutted. So far, there appears to be less fear surrounding gene-editing, but consumers and retailers are still wary, and they want to see an accompanying benefit for them. Fortunately, there is an antidote to fear that involves transparency and consumer choice. If we clearly communicate why gene-editing is being used, the associated benefits and offer clearly-labeled choices, consumers will simply vote with their purchases instead of being fearful of what they are buying.

### **Final Thoughts**

Will the dairy industry give gene editing a chance or will it back away from potential controversy? What are the consequences of withholding a powerful new tool from the breeding toolbox? Will the challenge of feeding almost 10 billion people by 2050 without harming the environment be solved with yesterday's technology? Will existing breeding tools be sufficient to help animals adapt to a warming planet or fend off new pathogens? As society demands higher standards for animal welfare (e.g. banning dehorning practices), how will farmers respond without a complete toolbox? Hopefully, with transparency and open-minded discussion, our industry will find answers to these questions.