valacta

ALL on the same TEAM

THE EVOLUTION OF VALACTA ATLANTIC DAIRY PRODUCTION

2016 STATS AND TIPS

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MESSAGE FROM **JEFF GUNN**, ATLANTIC REGIONAL MANAGER

We are pleased to introduce Part Two of our Annual Report titled *The Evolution of Valacta Atlantic Dairy Production: 2016 Stats and Tips*. The Publishable Stats were in your hands in March with Part One. Part Two will provide you with the provincial statistics, benchmarks and interesting tips from our expert team. Thanks to our sponsors who have joined us with this innovative format.

2016 was a year that saw some new tools and services offered by Valacta in Atlantic. We have heard from you that we need to provide more solutions when it comes to using on-farm data to better monitor and manage herd health and performance. We have answered! Last April 2016, Dr. Stirling Dorrance was hired with the mission to visit you, to develop and give workshops on subjects that matter to you. He has visited more than 50 farms to date, developed and presented our *Profit from numbers* workshops with Don Anderson and Valacta staff, and is also working closely with Valacta technicians and industry partners on the ground for the betterment of our industry. Our approach is to focus on what Valacta does as a dairy herd improvement agency – the numbers and reports we generate. Our intention is not to go onto farms and duplicate expertise and services already being provided by feed companies, veterinarians and nutritionists. We want to work with our industry partners, ensuring that our reports are being used and that the industry continues to see the value of milk recording. I firmly believe that the success and reputation of our industry has been due, in large part, to registration, classification and milk recording programs available to dairy producers. It will be no different going forward. You cannot manage what you do not measure.

Since there are more and more herds with automated milking systems, we will continue to develop our expertise and work diligently to help provide solutions for them. We have worked extremely hard to provide services to this sector of dairy producers. We are happy that more than 80% of Valacta customers who installed robots in 2016 still want their milk recording data. Data from the automated systems are a complement to milk recording data, not a replacement. A lot of producers are realizing this and the fact that there is still a need to help interpret the data to better manage their herds.

Products and tools such as milk urea nitrogen (MUN), Transition Cow Index™ (TCI) and the Valacta mobile app, continue to grow in popularity and are used by more and more Valacta customers. We also saw the launch of two new services in Atlantic in 2016: Gestalab between tests and Ketolab. Gestalab between tests provides added flexibility to manage herd reproduction between milk tests. Ketolab is a herd screening tool that will better enable herds to manage a detrimental metabolic disease that exists at a significant level on the majority of Atlantic dairy herds, negatively impacting herd performance. We are extremely pleased with the uptake of these tests already in Atlantic and we expect it will only continue to grow. We are proud to say that Valacta is an international leader as far as the analysis for ketosis in concerned.

Partnerships will continue to be extremely important to us. We want to contribute in any way we can to making this great industry, greater. The development of the Atlantic dairy industry calendar by our IT support staff at Valacta is a tremendous example of what can be accomplished through partnerships. This calendar is being administered by Valacta, with the help of Fred Vanderkloet and Brian MacDonald, dairy specialists in PEI and New Brunswick, respectively. The calendar is being used by most, if not all, organizations involved in the Atlantic dairy industry. This is important if we are to maintain this service going forward. Please remember to check the calendar out at **http://www.valacta.com/EN/Atlantic/Pages/Atlantic-infos.aspx**.

In conclusion, I want to say how much I look forward to working with our team and industry partners in 2017. Great challenges lie ahead, but I feel an energy coming from the industry lately that makes me optimistic for the future. I saw a quote recently that I would like to end with... "A tree with strong roots laughs at the wind." We work in a small but mighty industry here in Atlantic Canada with strong roots – let's not forget it.

VALACTA **WITH YOU** AT...

...PROFIT FROM NUMBERS WORKSHOPS

...AND AT THE MECHANIZATION SHOW

IS MILK RECORDING STILL RELEVANT?

BY MARIO SÉGUIN, AGR., DAIRY PRODUCTION EXPERT – MILK RECORDING AND DATA MANAGEMENT, R&D, VALACTA

Has milk recording kept pace with changes in the dairy industry and can it continue to do so? How does milk recording benefit dairy producers, now and in the future? These questions – and the answers – are important, for both milk producers and Valacta.

Founded by Dr. John Moxley of McGill University, the organization continues to pursue its initial mandate to provide milk recording services to Quebec dairy producers to improve dairy herd management and genetics in Quebec. Nearly 80% of Quebec's dairy herds are enrolled on the program.

Mario Séguin

"YOU CAN'T IMPROVE RESULTS UNLESS YOU MEASURE THEM."

Although milk recording is often presented as a tool for genetic improvement, its primary purpose is to improve herd management by evaluating the **performance of individual cows** in a herd. Without such accurate and comprehensive data, it is difficult to manage herd productivity and profitability efficiently.

Over the past few years, other data collection systems have been introduced on farms, and it is now possible to get data on each individual cow at every milking. Milk recording continues to be valued for its capacity to analyze and summarize this data, converting it into useful and meaningful information for producers. With easy-to-interpret tables and graphs, producers can see where their herd stands and monitor their progress toward specific goals, based on their herd's data history. As a management tool, milk recording can be used to achieve a range of improvement goals, in areas such as milk and component production, reproduction, udder health (reducing the SCC), drying off, improving margins (feed costs) and monitoring of breeding stock.

DEVELOPMENTS DURING THE LAST DECADE

Since it became a centre of expertise, Valacta's research and development team has reinvented milk recording by developing new herd management tools. Thanks to innovations like Ketolab, MUN, GestaLab, Transition Cow Index™, thousands of dairy producers are able to work more effectively toward their goals.

AN ERA OF NEW TECHNOLOGIES

Going Mobile

Valacta began the transition to mobile technology a little over a year ago, launching a new application that enables producers to access their milk recording data, anywhere, anytime! Simple, practical, and easy to use, the application is available to both producers and the experts they work with. Whether for herd data or individual cow data, it provides all the basic milk test information in addition to the results of the past 15 months, and new functionalities are offered with each update.

Another example of the industry's transition toward mobile technology is the new Lac-T mobile application which allows simple entry of health and reproduction events. With easy, real-time data entry, producers can stay connected to their herd at all times!

Data transfer from milking software

Equipped with robots or automated milking systems, a growing number of dairy farms are able to collect valuable data during milking, and it is important to make the most of that information. Ten years ago, Valacta introduced its *Trans-D* software, the first of its kind in America, to ensure the transfer of electronic data from milking systems to Valacta databases and the Canadian dairy industry. Now used on more than 150 farms, *Trans-D* enables producers to enter their management and production data faster and at lower cost.

Trans-D becomes Ori-Automate

Trans-D will gradually be replaced by the new Ori-Automate interface, which is designed to work with a wide array of commercially available milking softwares. In addition to "importing" electronic data from milking softwares, Ori-Automate "exports" electronic milk recording data, such as milk components and SCC, into the producer's milking software. Ori-Automate is

the result of many years of collaboration between Valacta and France Conseil Élevage. Following a series of conclusive tests, Ori-Automate will be installed on the farms of interested clients at no purchase cost.

In robotic mode

Robotic milking is a strong trend in dairy production and Valacta is working to adapt its services to better respond to this new reality. One recent improvement is a procedure that reduces the time required to label milk samples collected by robotic samplers. Valacta teams are also working on projects aimed at maximizing the volume of information generated by milking systems and exported to national data centres. Three projects have received funding from the joint provincial-federal Sectoral Development Program, *Growing Forward 2*:

- Characterization and evaluation of milk composition data generated by milking robots;
- Retrieval and analysis of massive amounts of data from automated milking systems to develop performance indicators;
- A large-scale project aimed at setting up an analytical platform for the interactive visualisation of herd management data in a self-serve format. PDF reports will thus gradually give way to a more interactive and personalized system for consulting milk recording data.

Think tanks are also being held across Canada to review how lactations are published in order to adapt to the diverse needs of dairy operations and industry partners, in tandem with the automation of data transfer from computerized systems on the farm to national databases.

ALL THINGS CONSIDERED, IS MILK RECORDING STILL RELEVANT TODAY?

Absolutely! The world has changed a great deal since the organization came to be in 1966 and Valacta has had to evolve to remain relevant. Today we continue to work toward addressing current needs; new tools and services are continually being developed to maximize the return on your investment and contribute to the prosperity of the dairy industry. Of course, you're the boss! You choose what's right for you. We just want you to know, we're all in the same team: your team!

"Milk urea nitrogen testing is an excellent tool. As a nutritionist, it helps me to prevent overfeeding of protein- which saves money on the farm. Also, it helps me fine tune rations in case I am underfeeding fresh cows. I recommend it on a regular basis, as the value provided far outweighs the cost."

- DANIEL SCOTHORN, SCOTHORN NUTRITION*

**The Dairy Composition section of PEI Analytical Laboratories tests all milk samples received as part of the Valacta herd recording program. The MUN analysis are also done at the PEI laboratories.*

For more information on MUN or any other Valacta services, contact Customer Service at **1 800 266 5248**, your Valacta technician, or Jeff Gunn at **jgunn@valacta.com** or **(902) 759-4866**.

PROPER FEEDING IS CRUCIAL FOR MAXIMIZING MILK PRODUCTION.

Consequently, wasting nutrients is like throwing money out the window!

MAKING **PROGRESS** ON TRAITS THAT MATTER TO PRODUCERS

BY LYNSAY BEAVERS, INDUSTRY LIAISON AT CDN

There are some exciting new traits on the horizon - traits that matter to producers because of their impact on profitability.

Lynsay Beavers

On-going research has allowed for this wealth of new information that is to come. But researching and creating a new trait is one thing, sustaining it with the appropriate performance data is another. This is where Canadian DHI comes in - data collected by CanWest DHI and Valacta is integral to both the research and sustenance phases of a new trait.

This past December, CDN released a new index called "Metabolic Disease Resistance" (MDR), which combines the traits subclinical ketosis, clinical ketosis, and displaced abomasum into a single value for genetic selection. This tool allows producers to select for increased resistance to these costly diseases.

Canadian DHI collects the performance information behind this trait. For example, the subclinical ketosis data used in this evaluation comes from milk BHB (beta-hydroxybutyrate) analysis done in Canadian DHI labs. Further, depending on the recording method, producer record cases of clinical ketosis and displaced abomasum are recorded by the DHI technician or flow from on-farm systems to DHI, then are sent onto CDN for use in MDR calculation.

The next new trait set to be released sometime during 2018 is Digital Dermatitis Resistance. Not only is digital dermatitis the most heritable hoof lesion, it is also the most prevalent, making it a priority in terms of future genetic evaluations. Preliminary results from research on this trait have shown that daughters of certain sires are more or less susceptible to digital dermatitis than others. In addition, bulls that excel for Digital Dermatitis Resistance - in other words, bulls whose daughters experience a lower proportion of digital dermatitis than average - also experience less severe cases.

Again, the role Canadian DHI plays in evaluations for Digital Dermatitis Resistance is an important one. Canadian DHI provides herd inventory information to hoof trimmers using Hoof Supervisor software. This ensures each trimming record is attached to the appropriate animal. It also benefits the trimmer as they are better informed on the animal's status in terms of lactation number, days in milk, etc. Without the support and participation of hoof trimmers and Canadian DHI, genetic evaluations for Digital Dermatitis Resistance would not be possible.

CDN has taken the leadership role in conducting a major research initiative involving international partners, which targets the use of genetics and genomics for improving feed efficiency and methane emissions in dairy cattle. The ultimate goal is the implementation of new genetic and genomic evaluation systems for these traits in the coming years. Previous research has shown some of the key predictors of feed efficiency and methane emissions include mid-infrared (MIR) spectroscopy data, milk, fat, protein and lactose yields, as well as Milk Urea Nitrogen (MUN), all of which CDN will obtain from Canadian DHI. Body size type traits are also predictors and will come from Holstein Canada's classification system.

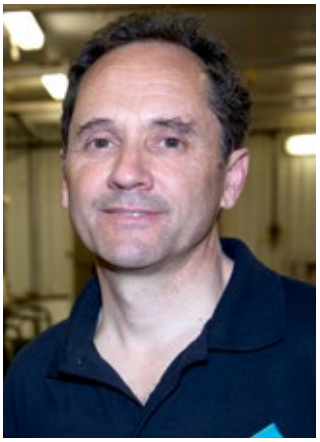
Metabolic disease, hoof health and feed efficiency all significantly affect herd profitability. The development of new traits that allow for genetic progress in these areas is of paramount importance to producers. Without the data collection and sharing partnership between Canadian DHI and CDN, the development of these new traits would not be feasible. ●

A FEW IDEAS TO KEEP CONTROL!

BY RENÉ ROY, AGROECONOMIST, R&D, VALACTA

Fieldwork usually begins in May and now that it is underway, you do not have a minute to spare. This is exactly the kind of situation in which you risk losing sight of your operation's performance.

At the end of every fiscal year, you were surprised to see that your concentrate purchases had increased considerably compared to the previous year. Because you were not able to take advantage of the additional production days in the fall, you did not get the extra income. To avoid getting caught again this year, you've reviewed your feeding program with your advisor and are monitoring your monthly feeding costs. You have put together a milk production plan that is updated regularly and you have even drawn up a budget for the year. You are set to achieve your objectives. When the fieldwork begins however, time is tight. You need to manage your priorities judiciously and respect the technical constraints to obtain the best results: seeding early to make the most of the growing season, harvesting forage crops at the optimum stage, spreading manure quickly after cutting, starting again 30 days later, harvesting your grains, corn and soybeans... not to mention getting in that third milking to capitalize on the fall incentive days. Under these conditions, is it any wonder that you lose track? If you are not monitoring your performance indicators regularly, you may be in for a surprise come fall.



René Roy

SET UP AN EFFECTIVE EARLY WARNING SYSTEM

There is no time to do an in-depth analysis of your operation's results on a monthly basis, so you need a system that warns you when a problem arises. To set up an early warning system, you first need to identify your major indicators: milk shipped, fat shipped, concentrate consumption, SCC, pregnancy rate, cash situation, etc. Next, you need to decide what sources of information you will use to monitor these indicators and then you need to define your warning thresholds.

In the case of milk and fat shipments, the website of your milk producers association provides information on the utilized margin of tolerance, which you can use as an indicator. You then decide on the difference between planned and actual milk production that will trigger a warning; for example, when actual production is 100 kg under or over the target. Repeat this exercise for all your indicators.

If the cost of concentrates per hL of milk shipped is an indicator, the warning threshold could be when the target price is exceeded by five per cent. For your cash situation, you can use your credit margin as an indicator by setting a maximum balance for each month. The best method is to work with a monthly budget, but monitoring a few specific indicators is an adequate approach.

LET THE "SENTINELS" DO THE JOB

It is important to have access to up-to-date information to analyze a situation rapidly and react in a timely manner. A budget is of limited use if your bookkeeping is three months behind. So how do you stay on track when time is a rare commodity?

One solution is to adopt the military commander's approach and let the sentinels take care of camp surveillance. If you want your sentinels to provide the support you expect however, they will need to be informed of your major indicators and the applicable thresholds. Your veterinarian can play that role for reproduction, if you already have a good preventive medicine program in place and maintain a sufficient number of visits throughout the season. Your Valacta advisor can act as a sentinel for milk production and concentrate costs. Your Valacta technician can also get involved in monitoring some of the major indicators on your milk recording reports, such as SCC, MUN, Ketolab and Transition Cow Index™. An example of a *Herd Performance Indicator Overview* report is shown in Figure 1.

FIGURE 1: A REPORT FOR BUSY PEOPLE

HERD PERFORMANCE INDICATOR OVERVIEW			
Farm name:	**Patrick Producer Farm Inc.**		
Test date (YYYY-MM-DD):	**2015-05-15**	**Herd no.:**	**99999**
1. SCC – TARGET : below 150,000			
Actual value	Excellent!	212,000 Careful!	Danger!
% of cows over 200,000 : 18			
Comments : Cows with high SCC: Cocotte 850,000 and Juju 645,000. Percentage of cows over 200,000: requires monitoring			
2. MILK UREA – TARGET :			
Actual value	11 Excellent!	Careful!	Danger!
% of cows in the herd within the desired range (target ≥ 85%) : 68			
Comments: Group 1: 55% of the cows are within the optimal range.			
3. KETOLAB – TARGET :			
Number of positive cows : 0	Excellent!	Careful!	Danger!
Comments : 2 suspected cows: Lisa and Juju			
4. TRANSITION COW INDEX – TARGET:			
Average at last test: 325	Excellent!	Careful!	Danger!
Comments : Last test: 3 cows out of 3 had a positive TCI; the situation is improving.			

Relying on a sentinel for your accounting could be a little more complicated, particularly if you enter the data yourself. However, by entrusting the job to someone with the right training, you will benefit from knowing where you stand at all times. You obviously do not have time to go through a pile of reports to make your decisions. You need a message that is short and sweet: "The credit margin is $3,000 higher than planned – what do we do?"

KNOW WHERE YOU STAND... AT ALL TIMES

If, despite careful planning, your results have not been meeting your expectations, the problem may be due to a lack of follow-up, simply because your day-to-day operations take up so much of your time. The most important role you have is to make decisions at the opportune moment. To do so, you need the right information. So do not hesitate to get help. It may cost you a few dollars but the control you gain is certainly worth it!

A&J BENT FARMS LTD. FINISH IN TOP 1% FOR HERD PERFORMANCE INDEX!!

BY JEFF GUNN, ATLANTIC REGIONAL MANAGER, VALACTA.

One only needs to spend a few minutes with Allen and Jacqueline Bent of Lawrencetown, Nova Scotia, to realize how passionate they are about dairy cows and dairy farming, in general. In March, with the release of the annual Herd Performance Index by CanWest DHI and Valacta, Allen and Jacqueline's passion and hard work resulted in them receiving the second highest score in Nova Scotia, finishing in the 99th percentile.

Dairy farming is a family affair for the Bent clan. Allen's parents originally bought the farm in 1959. Allen and his wife Jacqueline have been working on the farm with their family since they married in 1987 and decided to purchase the farm from his parents in 1994. They now work the farm with their four children! Switched from tie-stall to free-stall, with a double-four milking parlor back in 1968, they have also built a new barn in 2009 with a new double-ten, herring-bone, adding 40 more stalls and a new close-up group area. Today, the barn is at capacity, with 125 milking cows.

Recently, I had the opportunity to sit down with Allen to get his thoughts on what has led to his success and, dairy farming, in general. "I have had a lifetime interest in feeding cows. What works well on our farm is that everyone has their own responsibilities. We all really love cows, including our herdsman, Jonathan Crouse. We never go more than 2 hours without walking through the barn, observing the cows," reflects Allen. He believes their strength is the environment they provide for their cows. They have used sand bedding for 40 years, which Allen believes provides a clean environment with good footing, ensuring low somatic cell counts, a strong heat detection program and long herd-life. I believe we are looking after the needs of the cows, and they look after us", says Allen. "We constantly evaluate why we are culling. Our breeding goals are a 385 day calving interval, a 50 day volunteer waiting period, and having at least 70% of cows bred by 150 days in milk. Our culling rate is 20-21%." Allen also believes strongly in using tools at his disposal, such as Valacta's Transition Cow Index™ (TCI) and Ketolab, not to mention a stringent vaccination program for the prevention of diseases. Significant improvements have also been recently made to the heifer program with changes to the heifer barn in 2015. Since the changes, the breeding age for heifers is 13 months, an improvement of nearly two months. Allen attributes this to the health and feeding program (colostrum management) of the calves and heifers, translating to improved growth.

From left to right: Atlantic Regional Manager Jeff Gunn, Jacqueline and Allen Bent, owners of A&J Bent Farms Ltd.

Allen considers the hiring of the Valacta Advisor, Dr. Stirling Dorrance, a huge benefit for his operation in the future. "This is a game changer. We were starved for expertise here in Nova Scotia when it comes to interpreting and managing the on-farm data - Valacta has delivered. Stirling will continue to be an important part of our farm team going forward. We now see the value in Valacta's TCI, Milk Urea Nitrogen (MUN) and Ketolab," states Allen. "And indexes like the Herd Performance Index, will be something that we pay close attention to, each and every year. These are the numbers that we believe will help ensure profitability in the future. Healthy cows are our number one goal – happy cows are productive cows! You have to love what you do, in order to have success. We love our cows."

Looking at the numbers, the cows would appear to agree.

YORELLEA FARMS
ST-EUGENE, ON
LEROY FAMILY

THANK YOU TO CANWEST DHI FOR PROVIDING THIS CLIENT TESTIMONIAL.

Herd Management Scores improved dramatically after the LeRoy family moved their herd into a new barn and renovated the old barn for calves and heifers.

Somatic cell counts declined because of sand bedding which also greatly improved cow comfort and longevity, says herd manager Tim LeRoy. At the same time, the herd converted to robotic milking which increased milk production.

Heifers responded well to the improved housing and now are calving at a younger age. The calves are fed by an automated self-feeder and are achieving increased growth rates.

Longevity and age at first calving were both challenges in the old housing and improvements in those two areas were the main factors leading to the improved score. Yorellea moved from third to first in Prescott County and ninth overall in the province.

Another improvement came when nutritionist Patrick Denis of MacEwen Agricentre Inc. introduced a new transition cow program. Dr. Roger Sauvé began pregnancy checking every three weeks and that helped improve reproductive performance. Culling rates have dropped, particularly for lameness which was an issue in the old barn. That frees up more young stock for sale, improving farm income and shifts the culling focus to cow profitability. Many cows in the herd are now in their fourth or even higher lactations.

Tim studies his DHI reports closely, particularly Somatic Cell Counts, milk production, components and cow profitability. And he's pleased to see the big improvements in longevity and age at first calving. The herd is fed a partial TMR featuring haylage, corn silage, high-moisture shelled corn, dry hay and a protein supplement specially formulated for their herd.

Tim's father, Ralph, and uncle, Jeff, own the farm and are fully involved in daily chores. Other family members, all of them employed off the farm, occasionally help. It's a real family operation.

FIRST AGAIN

IN ATLANTIC, SUNNY POINT FARMS, NOEL, NS.

Eef Vroegh, the father, Phillip Vroegh, son and owner, Laurie Singer, staff, Tony Mumford, herdsman.

Did you know?

VALACTA REPORTS ARE UNIQUE COMPARED TO OTHER MANAGEMENT PROGRAMS AS THEY ALLOW YOU TO COMPARE YOUR PERFORMANCE ON SEVERAL CRITERIA WITH OTHERS IN THE INDUSTRY (BENCHMARKING).

Valacta reports track your herd performance and guide you to:

- Increase production
- Optimize milk components
- Lower somatic cell count
- Lower feed costs
- Improve reproduction
- Optimize replacement program
- Improve profitability

SWITCHING TO ROBOTIC MILKING: OUR PRODUCERS ARE UP TO THE CHALLENGE

BY GERVAIS BISSON, AGR., DAIRY PRODUCTION EXPERT - MILKING ROBOTS, AND JULIE BAILLARGEON, AGR., TECHNOLOGY TRANSFER AND RESEARCH PROJECT COORDINATOR, R&D, VALACTA

A move to robotic milking is a major undertaking and is probably one of the most important projects in a dairy producer's life.

Gervais Bisson

Julie Baillargeon

In most cases (60%), the robotic milking project will also involve the construction of a new barn. And if the old tie-stall system is being replaced by a new free-stall setup at the same time, the challenges are even greater.

In 2015, 88% of Quebec's dairy farms housed their cows in tie stalls (Figure 1). Comparatively, 46% of farms in the Atlantic provinces used a tie-stall system. Ontario more closely resembles Quebec, with 67% of farms equipped with tie stalls. As for the western provinces, the trend is actually reversed, with only 11% of farms using a tie-stall system.

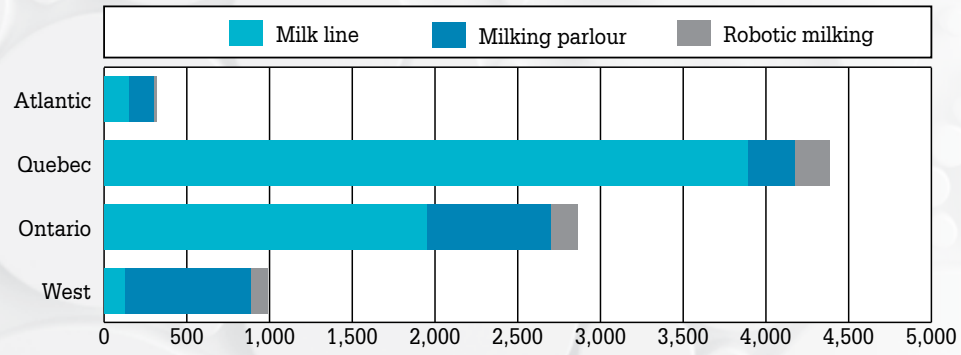
In Europe, only 38% of farms (2010) house their cows in tie stalls, and in France that number drops below 10%. In the United States, while 39% of farms use tie stalls, only 13% of dairy cows are housed on those farms.

In Quebec, it seems that most farms that adopt robotic milking also switch from tie stalls to free stalls. This certainly makes the project even more challenging.

A CHALLENGE FOR THE COWS AS WELL

Adapting to living in a free-stall system is a big adjustment for a cow that has always lived in a tie-stall, even more demanding than learning to go to the milking robot, which is no small feat either. So having to deal simultaneously with both these changes is quite the challenge for a cow.

FIGURE 1. NUMBER OF CANADIAN FARMS ON MILK RECORDING (VALACTA AND CANWEST DHI) BY MILKING SYSTEM (2015)



In a tie-stall system, food and water are always easily accessible for her. However, in a free-stall setup, she will have to walk a lot more in order to find out where the forage and grain rations are, where the water bowl is, and where she needs to go to get milked or lie down to rest. Moreover, she will now have to walk to meet those needs. While exercise is certainly good for the cow, a sudden transfer to a free-stall system will be physically demanding for her.

A BELLIGERENT BUNCH

Cows are naturally gregarious animals, re-establishing their social hierarchy every time there is a change in the group. For those housed in tie stalls, the hierarchy is limited to their stall neighbours. However, when the cows are first transferred to free stalls, they often behave aggressively, engaging in vicious head butting, to establish their ranking within the tribe. Once the animals are installed in the new facility, it is thus important to ensure that the dominant cows in the group have access to the feed bunk and resting areas.

CONQUERING NEW TERRITORY

Cows like to explore their new environment and the more space they have, the more they will be inclined to move about. You'll have never seen claws wear out so fast! After the move, it is a good idea to confine cows to a smaller area initially, and then gradually increase the available space. For more information on preventing hoof problems at start-up, read our article published in the April 2016 edition of the *Quebec Farmers' Advocate* which is available in the archive section of their website.

Some cows may initially exhibit perplexing behaviour:

- **Lying in the alley**: Not knowing where to go or how to use their new stalls, some cows simply lie down in the alley, particularly if it is covered with rubber flooring. You may need to show your cows around and provide them with a guided tour of their new surroundings.
- **Difficulty exiting the stall**: Cows accustomed to tie stalls may have trouble backing up and initially take more time to exit their stalls. Some will try to turn around first. Give them some time; they generally catch on quite quickly.
- **Standing**: Cows may spend more time standing than usual during the first few days, and may even remain standing in their stalls a while before deciding to lie down. Give them a few days to establish their new routine.

ALL IS WELL WHEN THE COWS ARE EATING!

In the days following their arrival in the new barn, the cows will not be readily drawn to the feed alley. They will need time to get accustomed to their new feeding routine. Headlocks at the feed bunk may make them uneasy and curb their appetite for a time. One thing is certain however: the cows will eventually find the feed.

An initial drop in dry matter intake is thus to be expected, and this will in turn result in a temporary decrease in production. The rule of thumb is as follows: 1 kg of dry matter = 2 kg of milk. If all goes well, production will drop slightly during the first week in the new barn but return to normal once the cows have regained their appetite.

KEYS TO A HAPPY ENDING

The challenges of the shift to robotic milking are certainly greater when combined with a move from tie stalls to free stalls, but proper preparation will ease the transition.

Visit other producers who have already made the switch and feel free to ask them questions to help avoid some of the pitfalls. You can also talk to our robotic milking specialists: they can support you at every step of the process, from planning to start-up.

Make sure you have the time and the resources needed to properly prepare your robotic milking project and give your story a happy ending!

BENCHMARKS

MILKING SYSTEMS - PREDOMINANT BREED HOLSTEIN - DECEMBER 31st, 2016

	ATLANTIC		QUEBEC	
	Robot	Total[1]	Robot	Total[1]
Number of herds	21	313	204	3,755
Number of cows per herd	103.8	95.7	95.5	65.4
Annual milk (kg/cow/year)	10,087	9,405	10,092	9,479
Annual fat (kg/cow/year)	403	374	398	379
Annual fat (%)	3.98	3.98	3.94	4.00
Annual protein (kg/cow/year)	335	305	332	313
Annual protein (%)	3.32	3.24	3.29	3.30
305-day milk (kg)	10,045	9,535	9,973	9,528
305-day fat (kg)	392	373	386	377
305-day fat (%)	3.90	3.91	3.87	3.96
305-day protein (kg)	323	304	323	310
305-day protein (%)	3.22	3.19	3.24	3.25
Days at peak	49	44	47	44
Peak milk (kg)	41.3	38.3	41.2	38.7
Lactation persistency	97	98	97	97
Transition cow index	315	118	351	204
Longevity (% 3rd lactation plus)	34.7	39.3	37.9	40.5
Age at 1st calving (mo.)	25.7	27.1	25.5	26.0
Herd age at calving (mo.)	43.3	47.6	44.8	47.1
Herd turnover (%)	40.9	34.2	34.4	33.4
Mortality (%)	3.2	2.9	4.4	4.3
Disposal for feet/legs (%)	2.3	2.8	3.5	2.8
Disposal for reproduction (%)	4.7	6.5	5.6	5.8
Disposal for mastitis/high SCC (%)	4.2	4.5	4.4	4.6
Sold for milk production (%)	5.8	4.7	3.0	3.3
Calving interval (days)	394	426	410	418
Days to 1st breeding	87.9	85.9	75.5	77.1
Days dry	74.0	70.5	64.1	63.3
Annual SCC ('000/ml)	234	230	223	216
Milk value ($)	6,741	6,591	6,943	6,769
Herds with feed	3	52	47	1,039
Annual feed cost ($)		2,126	2,303	2,236
Return over feed cost ($)		4,197	4,627	4,547
Feed cost ($/hl)		24.71	25.05	24.49

[1] *Number of herds with a known milking system.*

ONTARIO		WEST		CANADA	
Robot	Total[1]	Robot	Total[1]	Robot	Total[1]
197	2,501	124	867	546	7,436
103.8	84.3	135.9	158.5	108.0	83.9
10,491	9,656	10,640	10,184	10,361	9,618
409	379	405	399	404	381
3.90	3.92	3.81	3.92	3.90	3.97
341	313	345	330	339	315
3.26	3.25	3.25	3.25	3.27	3.27
10,477	9,778	10,779	10,408	10,342	9,715
403	378	403	401	396	380
3.85	3.87	3.74	3.86	3.83	3.91
336	312	345	334	333	313
3.21	3.19	3.20	3.21	3.22	3.22
50	46	55	52	50	46
42.5	39.2	42.4	40.8	42.0	39.1
98	98	98	97	97	97
				348	198
35.9	36.9	35.0	34.9	36.4	38.6
25.3	26.1	26.2	26.0	25.6	26.1
43.3	45.0	44.2	44.1	44.1	46.0
37.9	38.2	40.0	40.9	37.2	35.9
4.3	4.7	6.9	6.8	4.9	4.7
2.2	2.2	2.8	2.7	2.8	2.6
7.1	7.2	6.1	6.7	6.2	6.4
3.7	3.9	5.0	4.6	4.3	4.3
5.8	7.0	5.4	6.4	4.7	5.0
411	423	424	421	413	421
79.2	79.4	90.7	87.3	80.8	79.4
66.4	68.5	73.3	74.6	67.4	66.7
236	238	241	216	232	224
7,476	6,973	7,488	7,358	7,252	6,899
				50	1,091
				2,297	2,231
				4,619	4,531
				25.10	24.50

FEWER MEASUREMENTS, GREATER GAINS!

DÉBORA SANTSCHI, PH.D., AGR., NUTRITION AND MANAGEMENT EXPERT AND
STEVE ADAM, AGR., DAIRY PRODUCTION EXPERT ON COMFORT, BEHAVIOUR AND WELL-BEING,
R&D, VALACTA

Measuring your heifers takes time and patience, so why do the experts insist on it? Because it's important!

Because the latest research shows that the greater the weight gain in early life (0-2 months), the greater the milk yield in first lactation. Because the ideal time for first breeding depends on the heifer's weight, not age. Because once pregnant, the heifer needs to keep growing properly to produce a healthy calf and maximize milk production. The good news is that if you do your measuring at strategic times during growth, you do not need to measure your heifers as often as was previously thought.

A SIMPLE METHOD AND SPECIFIC TARGETS

A simple method for monitoring your heifers' growth is to measure them 4 times, at the most critical periods of their lives: at 2 months, at 6 months, at first breeding (around 13 months), and then again during pregnancy, to ensure that weight gain is maintained. So instead of measuring all your heifers on the same day, you can measure them as they reach the ages indicated in the table below. Then you just need to compare your results with the target weights to determine if your rearing practices are effective or not, and adjust them as needed.

Age	Target body weight (kg)				
	HO	AY	JE	BS	CN
2 months	100	90	65	95	75
6 months	200	180	135	190	150
13 months	400	330	255	350	280
Pregnancy	Ensure weight gain is maintained				

The ideal time for first breeding depends on the heifer's weight, not age.

Monitoring your heifers' growth is critical to determine if your rearing practices are effective or not, and adjust them as needed. - Débora Santschi

TARGET AT 2 MONTHS: 100 KG

The first 2 months of life are critical, as they influence a heifer's health, growth and future milk production. It is generally recommended that heifers double their birth weight by 60 days of age. If we assume a birth weight of 45 kg for Holsteins, heifers should weigh at least 90 kg at this age, and there is no maximum. If you are falling short of that target, consider the following:

- 4 L of colostrum within the first 2 hours of life;
- 8 L/d of milk or milk replacer;
- Consistency: temperature of the mixing water, feeding times, temperature of the milk at feeding;
- Milk replacer mixed according to the supplier's instructions;
- Continuous access to clean water from birth;
- Access to palatable feed from the first days of life;
- Minimum competition;
- Optimal biosecurity to prevent disease.

The greater the weight gain in early life (0-2 months), the greater the milk yield in first lactation.

Young calves are particularly sensitive to poor air quality, which can greatly reduce growth. But ensuring an adequate supply of fresh air at ground level is not easy with conventional ventilation systems, particularly since calves spend most of their time lying down, often in solid-sided pens. Fans, ducts or tunnels may be required to redistribute fresh air in the vicinity of the calves. In cold weather, however, air speed at calf level must be kept below 60 feet/min (1 km/h) to avoid drafts. Until the age of 4 to 6 months, calves also need an ample supply of bedding to help maintain body heat; before this age the rumen is not fully functional and generates little heat.

You can now predict when your heifers will be ready to breed.

Valacta now offers a free web tool that predicts the growth curve of a heifer based on individual measurements. The curve is used to estimate the age at which the heifer will reach the ideal weight for first breeding. All Valacta clients and their service providers now have free access to this tool on their personal Valacta site.

TARGET AT 6 MONTHS: 200 KG

At 6 months, heifers are often in groups and more difficult to measure, but an assessment at this stage allows you to ensure that the transition to puberty is going well. If your heifers are weighing in under 180 kg at this age, you probably need to review your practices. Likewise, heifers over 250 kg at 6 months are likely a little overweight and gaining inefficiently. Here are a few avenues to explore if you are too far off the 200-kg target:

- Wean gradually by reducing the quantity of milk fed by half every five days;
- Implement one change at a time during weaning (housing, feeding, treatments);
- Offer palatable calf feed that maximizes lean gain.

Before breeding your heifers, make sure that all the heifers in a group have access to the feed bunk at the same time. Animals forced to wait until the others have finished eating may suffer from nutrient deficiencies, with a consequent delay in conception.

Group size should also be limited to a maximum of 10 animals to minimize competition. In Quebec's smaller herds, a maximum two-month age range is recommended to limit the weight difference within the group (65 to 100 kg, depending on age).

A simple method for monitoring your heifers' growth is to measure them four times, at the most critical periods of their lives.

TARGET AT 13 MONTHS: 400 KG

Once your heifers have reached puberty, it is important to breed them at the right time to avoid unnecessary rearing costs. By measuring your heifers at 13 months, or even before, you will be able to determine the ideal time for first breeding, with a better chance of conceiving.

Breed	Recommended weight at first breeding (kg)
Holstein	400
Ayrshire	350
Jersey	260
Brown Swiss	375
Canadienne	300

TARGET DURING PREGNANCY: MAINTAIN WEIGHT GAIN

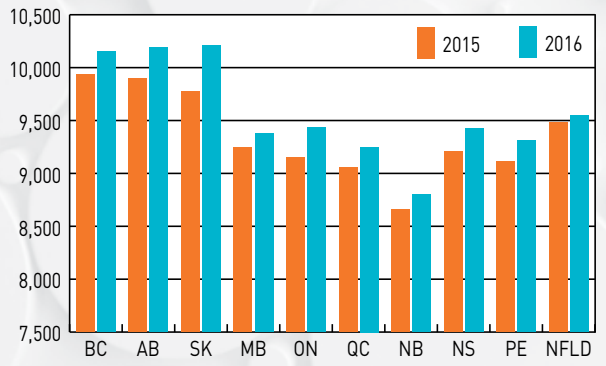
The measurements in Valacta's database show that weight gain in most heifers slows down after conception, but this shouldn't be the case! Pregnant heifers need to continue growing and support their calf's development. The demand for protein is high in the last trimester of pregnancy to sustain both calf and mammary gland development, enable the heifer to produce good quality colostrum, and ensure she continues to grow. It is therefore imperative that you measure your heifers at least once, mid-way through pregnancy or when transferred to pre-fresh pens, to monitor weight gain and determine if you need to make any adjustments.

NATIONAL STATISTICS

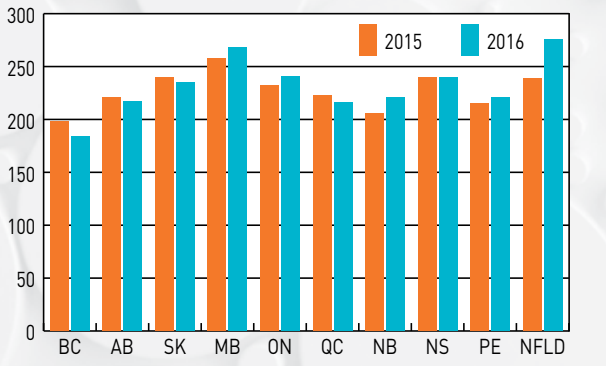
DAIRY HERD STATISTICS BY PROVINCE

Province	Recorded Herds		Recorded Cows		Average Herd Size		% Herds >100 Cows	% Recorded Herds
	2015	2016	2015	2016	2015	2016		
Newfoundland	6	7	872	1,256	145.33	179.4	85.71	24.24
PEI	106	96	8,503	8,272	80.22	86.2	22.92	57.80
Nova Scotia	138	135	11,557	11,400	83.75	84.4	24.44	60.44
New Brunswick	135	131	11,646	11,882	86.27	90.7	28.24	68.66
Quebec	4,731	4,505	283,134	282,422	59.85	62.7	9.94	79.73
Ontario	2,982	2,883	233,151	233,378	78.19	80.9	20.92	
Manitoba	193	180	27,975	27,540	144.95	153.0	47.78	
Saskatchewan	105	94	18,215	17,090	173.48	181.8	70.21	
Alberta	422	401	58,606	57,461	138.88	143.3	66.83	
British Columbia	307	310	48,639	52,425	158.43	169.1	61.29	
CANADA	**9,125**	**8,742**	**702,298**	**703,126**	**76.96**	**80.4**	**20.19**	

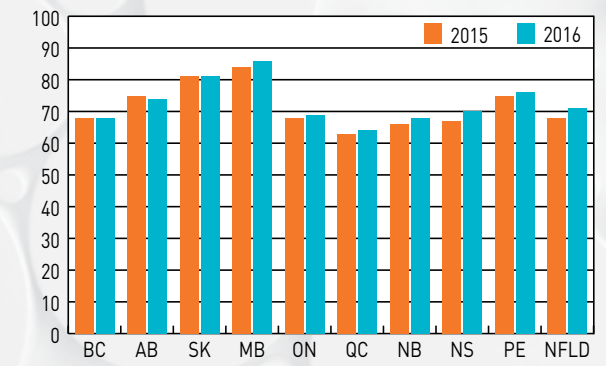
MILK PRODUCTION (KG) PER COW PER PROVINCE



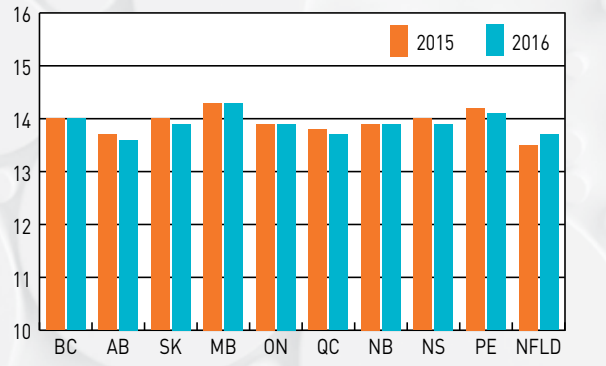
SOMATIC CELL COUNT ('000) AVERAGE BY PROVINCE



DRY PERIOD (DAYS) AVERAGE BY PROVINCE



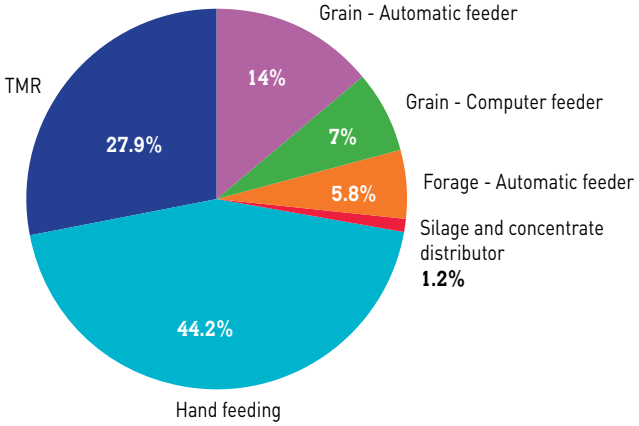
CALVING INTERVAL (MONTHS)



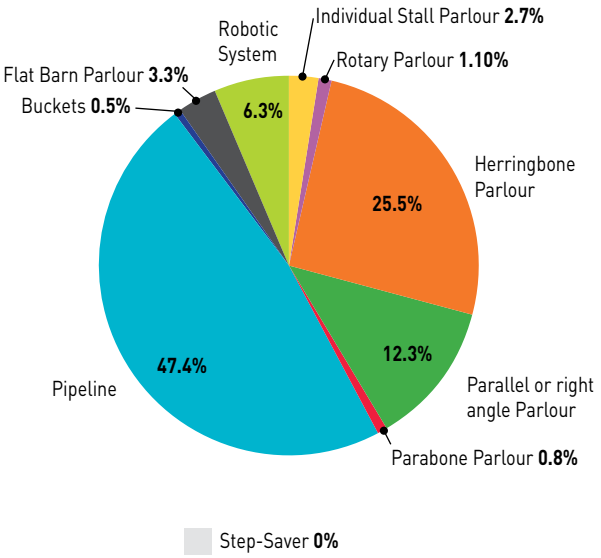
MANAGEMENT SYSTEM TYPE

IN THE ATLANTIC PROVINCES

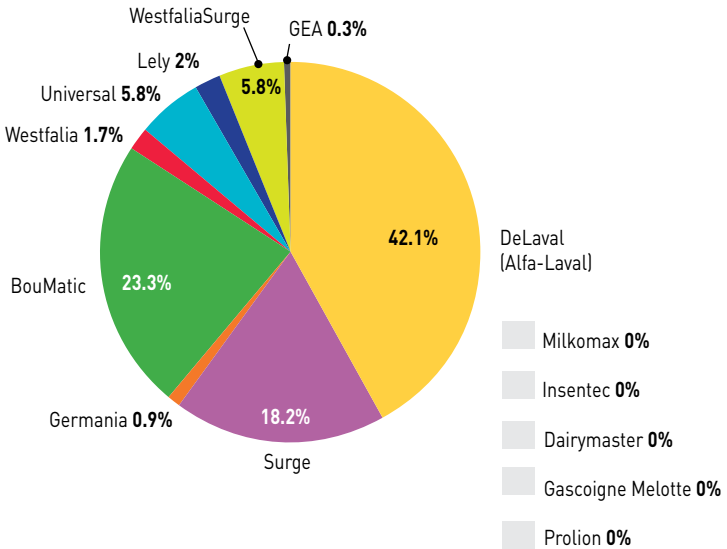
FEEDING SYSTEM



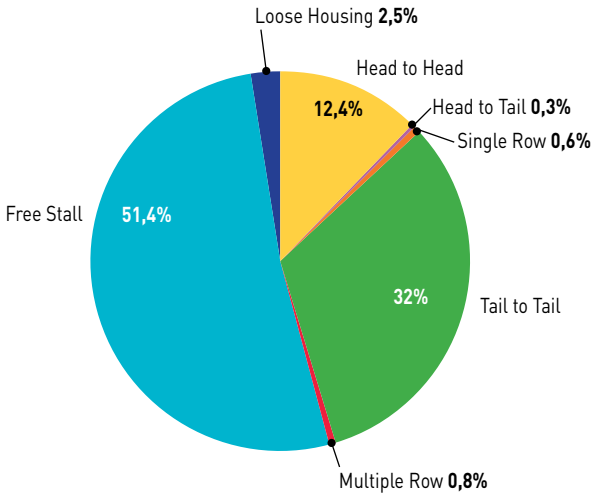
MILKING SYSTEM TYPE



MILKING SYSTEM BRAND



BARN TYPE



PROVINCIAL STATISTICS

VALACTA-ATLANTIC PRODUCTION AND MANAGEMENT AVERAGES - DECEMBER 2016

Breed	Average	Percentile 10	Percentile 90
MILK PRODUCTION (KG)			
Holstein	9,430	7,576	11,163
Ayrshire	7,030	5,734	7,986
Jersey	6,528	5,451	7,718
All Breeds	9,223	7,147	11,150
AGE AT FIRST CALVING (YY-MM)			
Holstein	2-3	2-6	2-0
Ayrshire	2-5	2-8	2-3
Jersey	2-2	2-4	2-0
All Breeds	2-3	2-6	2-0
WEIGHT AT FIRST CALVING (KG)			
Holstein	606	566	639
Ayrshire	N/A**	N/A**	N/A**
Jersey	N/A**	N/A**	N/A**
All Breeds	595	553	639
LONGEVITY (% 3rd LACTATION PLUS)			
Holstein	39,2	28,2	50,6
Ayrshire	47,8	40,5	61,4
Jersey	44,4	37,0	56,0
All Breeds	39,7	28,9	50,8
SCC ('000 S.C./ML)			
Holstein	232	334	133
Ayrshire	183	283	115
Jersey	201	268	150
All Breeds	230	334	132
OTHER PARAMETERS (ALL BREEDS)			
Cows in Milk (%)	86	80	90
Replacement Rate (%)	33,5	20,3	46,0
Dry Period (days)	71	98	52
Calving Interval (days)	423	470	391
Linear Score	2,6	3,2	2,1

Average	Percentile 10	Percentile 90
FAT, KG (%)		
374 (3.96)	299 (3.70)	455 (4.24)
295 (4.20)	256 (4.06)	349 (4.47)
325 (4.97)	276 (4.78)	394 (5.18)
370 (4.02)	288 (3.71)	452 (4.32)
PROTEIN, KG (%)		
304 (3.23)	245 (3.11)	245 (3.11)
235 (3.34)	195 (3.23)	195 (3.23)
243 (3.72)	201 (3.59)	201 (3.59)
299 (3.25)	238 (3.12)	238 (3.12)
AVERAGE HERD WEIGHT INCLUDING COW-HEIFERS (KG)		
663	617	707
N/A**	N/A**	N/A**
N/A**	N/A**	N/A**
652	612	706
MARGIN OVER FEED COST ($/COW/YEAR) *		
4357	3124	5611
3487	3145	3937
N/A**	N/A**	N/A**
4,282	3,104	5,539

* *Milk value minus feed cost.*

** *A minimum of 5 herds is required to calculate an average; this minimum is not met.*

PROVINCIAL 305 DAY PRODUCTION AVERAGE

Province & Service Level	Herds	Milk kg	Fat kg	Protein kg	BCA M	BCA F	BCA P	Avg BCA
NEW BRUNSWICK								
Publishable	98	9,075	360	292	209	215	208	210.8
All	127	8,883	351	286	204	209	203	205.3
NOVA SCOTIA								
Publishable	104	9,697	382	313	216	226	218	219.9
All	134	9,528	373	308	212	220	214	215.4
PRINCE EDWARD ISLAND								
Publishable	77	9,691	382	306	215	227	213	218.4
All	98	9,446	374	298	209	222	208	213
NEWFOUNDLAND								
Publishable	5	10,554	428	338	231	253	232	238.7
All	6	9,990	401	319	218	236	219	224

** For AY, HO and JE breeds, a minimum of 10 publishable lactations is required for a publishable herd average; all other breeds require 5.*

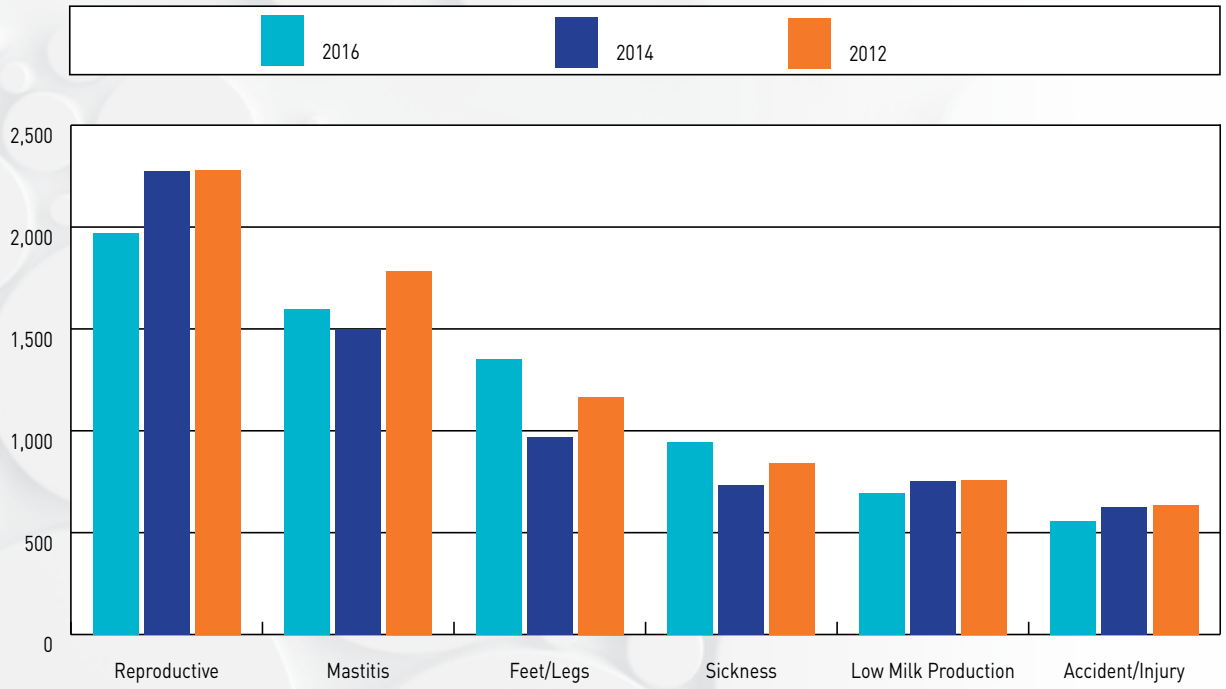
ANNUAL PROVINCIAL HERD DEMOGRAPHICS - ALL HERDS

Herd Size (Cows)	% Herds	% Animals	Annual Average Herd Size	Annual Milk Production	Annual Fat Production (kg)	Annual Fat Production (%)	Annual Protein Production (kg)	Annual Protein Production (%)	Annual Average SCC ('000/ml)
NEW BRUNSWICK									
1-39	9.8	3.0	28	7,206	308	4.33	246	3.44	191
40-79	48.0	30.0	58	8,647	338	3.92	279	3.23	216
80-119	20.3	21.1	96	9,015	361	4.02	297	3.31	234
120+	22.0	45.9	194	9,629	391	4.05	310	3.23	228
NOVA SCOTIA									
1-39	7.7	2.3	28	8,010	320	4.05	266	3.35	248
40-79	48.5	29.2	55	8,979	359	4	297	3.31	248
80-119	26.2	26.7	93	9,428	372	3.93	306	3.24	272
120+	17.7	41.8	215	10,860	431	3.98	350	3.23	210
PRINCE EDWARD ISLAND									
1-39	6.3	2.1	30	8,357	345	4.11	270	3.23	203
40-79	52.6	33.4	56	9,002	359	4	289	3.21	226
80-119	22.1	23.2	92	9,558	395	4.12	309	3.23	213
120+	18.9	41.2	192	10,220	407	3.99	327	3.2	223

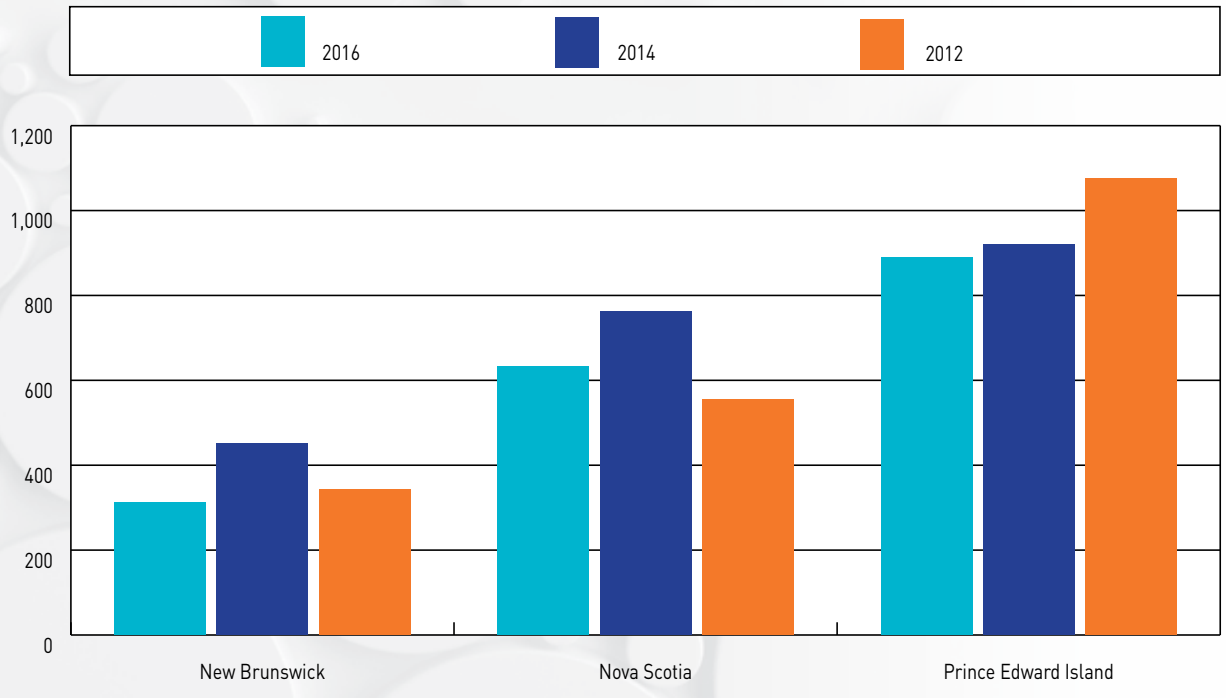
MANAGEMENT CENTER BENCHMARKS

Measure	New Brunswick Percentile				Nova Scotia Percentile				Prince Edward Island Percentile				Newfoundland Percentile			
	25th	50th	75th	90th	25th	50th	75th	90th	25th	50th	75th	90th	25th	50th	75th	90th
Annual Milk Value ($)	5,461	6,207	7,010	7,647	5,776	6,693	7,368	8,037	5,943	6,535	7,035	7,643	7,071	8,828	9,109	9,401
Somatic Cell Count ('000/ml)	330	265	214	156	338	289	244	179	327	268	213	164	368	256	222	204
Udder Health (SCC Linear Score)	3.1	2.9	2.6	2.3	3.2	3.0	2.6	2.3	3.3	3.0	2.7	2.4	3.1	2.7	2.6	2.5
Age at 1st calving (Year-Month)	2-7	2-4	2-2	2-1	2-6	2-4	2-2	2-0	2-4	2-2	2-1	2-0	2-6	2-4	2-2	2-1
Calving Interval (months)	15.6	14.2	13.6	13.1	15.1	14.4	13.8	13.0	15.4	14.6	13.8	13.2	14.5	13.8	13.1	12.9
Longevity (% of herd in 3+ lactation)	35	41	46	52	34	41	47	52	32	37	44	48	29	41	42	47
Herd Efficiency (% of herd in milk)	85	87	89	90	84	86	89	90	83	86	89	90	84	85	87	89
Herd Turnover (% of herd in removed)	41	36	30	25	45	38	30	25	52	41	34	27	49	43	35	23
Number of Cows	50	71	109	166	50	65	100	156	49	68	94	150	92	119	198	216
Management Milk (kg)*	28	31	36	38	29	34	37	40	32	34	36	39	30	36	39	40
Days Dry	89	73	64	55	93	76	65	58	110	89	69	59	87	73	66	54
Days to 1st Breeding	103	94	82	73	108	94	83	77	109	94	84	72	92	87	78	64

TOP DISPOSAL REASONS ALL PROVINCES



LIVE CATTLE MOVEMENT



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