

Canadian Dairy Industry, Past, Present and Future

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■ Take Home Messages

- ▶ Over the past 35 years, attendance at the Western Canadian Dairy Seminar (WCDS), initially known as the Alberta Dairy Seminar, has grown ten-fold from an initial attendance of 77 paid registrations to over 700 today.
- ▶ The WCDS is now recognized as one of the premier dairy conferences of its kind in the world. The WCDS has been an important contributor to maintaining the overall efficiency and productivity of the Western Canadian dairy industry by providing all stakeholders with an opportunity to keep abreast of the latest developments in research, technology, innovation and policy that influence production efficiency, environmental sustainability, milk quality, and marketing of milk and milk products.
- ▶ The past 35 years have seen many changes in the Alberta and Canadian dairy sectors. A dramatic decline in the number of producers has been accompanied by a new era of collaboration, provincially and nationally. Collaboration has strengthened our efforts in research, extension, dairy product promotion and producer sustainability.
- ▶ Pooling agreements first established in the 1980's have provided industry sustainability, stability and predictability. Consolidation and collaboration will continue as the industry evolves over the next 35 years.
- ▶ Consumers will demand that we operate in a responsible manner that meets societal standards. Producers must continue to work together to ensure a sustainable future for dairy in Canada.
- ▶ The industry has evolved over the last 35 years and will continue to do so in the future, evident by the national ingredient strategy coming into effect February 2017.

■ Introduction

The year 2017 marks the 35th anniversary of the Western Canadian Dairy Seminar (WCDS). The dairy industry in Canada has experienced numerous changes since the inception of WCDS, so we decided it would be interesting to look back over the past 35 years, and forward to 2050, through the lens of the WCDS. What lessons have we learned from the past 35 years, and how do these help us envisage what the dairy industry might look like in 2050?

On the occasion of the first WCDS in 1983, Alberta had about 1,500 milk producers and 2,800 cream shippers, and MSQ was priced at \$6 per kg. Pierre Trudeau was prime minister of Canada, Peter Lougheed was premier of Alberta and the world population was 4.6 billion. Fast track another 35 years from today and we are at 2052 when the world population is expected to be over 9 billion and perhaps climate change will mean that Canadians will no longer need to head south in the winter!

■ A Brief History of WCDS

For the benefit of a new generation of attendees, we present a brief history of WCDS here. Please see the 2007 WCDS proceedings (<http://www.wcds.ca/proc/2007/Manuscripts/John.pdf>) for a more detailed history. The WCDS was modelled on the very successful Banff Pork Seminar that was initiated by University of Alberta professor, Dr. Frank Aherne in 1972.

The ingredients that have led to the success of the seminar include: excellent speakers, a dedicated organizing committee representing a broad cross section of the industry, high quality conference proceedings, and excellent support from our sponsors.

The organizing committee for the first WCDS met at Alumni House at the University of Alberta in the summer of 1982 at the invitation of the University of Alberta. In attendance were representatives from the University of Alberta (Departments of Animal Science and Faculty of Extension), Alberta Milk Producers Association and Alberta Agriculture. The committee decided to adopt the two and half day format that had proven so successful for the Banff Pork Seminar. The first WCDS was held in Banff, April 3–6, 1983 with 77 fee-paying delegates in attendance.

The first seminar started with a wine and cheese on the Sunday evening followed by two full day programs on Monday and Tuesday and ending at noon on Wednesday. In 1985, the start date was moved to the current format with a wine and cheese reception on Tuesday evening followed by a two and a half day program, ending at noon on Friday. The introduction of concurrent sessions during the first decade of the conference allowed for an expansion of

the conference program and thus provided greater choice in program content for attendees.

From the outset, the focus was on putting on a first-class seminar by bringing in the very best speakers from Alberta, Canada and globally. However, putting on a two and a half day program with quality speakers was expensive. Thus, the big challenge during the first 10 years of the WCDS was placing the seminar on a sound financial footing, as the attendance of 100 to 120 people was not sufficient to make the conference economically viable. Although the program was very attractive to those in attendance, the seminar lost money on an annual basis and the University of Alberta had to help bridge the gap on several occasions in those early years. Efforts to boost attendance, that included moving the seminar from Banff to Kananaskis for the 1989 and 1990 seminars, met with limited success.

The big breakthrough came in 1991 when the seminar moved to Red Deer, as the attendance immediately jumped to about 200. Each successive year saw new attendance records, reaching 350 in 1995, followed by the 500, 600 and 700 attendance records being broken over the next decade. As the attendance grew, so did our sponsorship, which has placed the seminar on a strong financial foundation today. Thus, we can look ahead to the next 35 years with confidence knowing that the excellent attendance and the support of our sponsors provide the resources to continue to put on an excellent program each year.

The seminar was initially called the Alberta Dairy Seminar, but the name was changed to Western Canadian Dairy seminar in 1989 to reflect the fact that an increasing number of attendees were from out of province. Today, the conference attracts people from across the country, and indeed internationally, and is Canada's premier dairy conference. Over the years, the organizing committee was expanded to include a broad cross section of industry stakeholders who have played a critical role in helping ensure that the seminar program covered topics that were of interest to producers as well as other industry stakeholders.

The formula that has served the WCDS so well over the past 35 years has a number of key ingredients:

- an Advisory Committee that is representative of a broad cross section of the industry to provide guidance on the annual WCDS program
- excellent speakers who are at the forefront of knowledge in the subject area, and a quality conference proceedings that serves as a reference after the conference
- program directors who dedicated the time needed to put on a quality program, and conference coordinators who ensured that all the details for

the smooth operation of the conference were taken care of so that those in attendance had a positive experience

- ▶ a recognition that a lot of the learning occurs outside the formal talks; thus, the program is designed to provide adequate opportunity for one on one dialogue and learning among producers and other industry stakeholders
- ▶ strong sponsorship support so that the seminar has the resources to put on a first class program

■ **The WCDS Program Over the Years — Fundamentals Unchanged but New Areas Emerged**

In 2007, on the 25th anniversary of WCDS, Kennelly stated, “that more than three hundred (300) different speakers, drawn from academia, government and industry, have participated in the seminar. This represents an average of 13 original speakers per year for the 25-year history of the seminar. The extraordinary breath and diversity of talent represented by this diverse group of speakers is what has made the WCDS so special over the years. Those attending the seminar could always be guaranteed a fresh viewpoint on a wide range of topics – there was always something for everyone”.

Although there have been significant changes in program emphasis over the years, it is perhaps not surprising that some subjects have formed the core of the program throughout the history of WCDS. Nutrition has featured in one form or another every year, reflecting the importance of this subject to the overall success of a dairy operation. Similarly, mastitis, reproduction and herd health have been top of mind for producers on an ongoing basis. Other areas that have received a lot of attention were forage quality, feeding management, lameness, replacement heifers and genetics. The relationship between level of milk production and profitability is a subject that also continued to be popular over the years.

As time passed, there was also a growing emphasis on the human resources needed to successfully operate dairy operations that were increasing in size and complexity. Dairy policy was a subject that often generated a lively debate, especially during those years when new trade agreements were being negotiated that were a threat to supply management.

Although the above topics were a recurring theme at the seminar, new areas emerged over the years. These included a growing emphasis on the environment, starting out with manure management and progressing to greenhouse gases and the carbon footprint of dairying. Animal welfare is another area that has steadily grown in importance, driven in part by

consumers who are demanding the highest standards in the humane treatment of animals. Cow comfort has also received a lot of attention ranging from the design of free stalls to the bedding material used to ensure optimal comfort.

The impact of continually increasing levels of milk production on reproductive performance and longevity has also been debated at length over the years. Interestingly, this theme has continued from the early days of the seminar when production levels were relatively low compared to those achieved today. The challenge of maintaining a healthy cow immediately post-partum has been addressed by many speakers. This has included new approaches to feeding during the peripartum period that have included differential feeding programs during the far off and close up dry periods.

One cross-cutting trend across all disciplinary areas is the increasing level of precision evident in the presentations by the various speakers over time. For example, in the nutrition area, we have moved from protein requirements to the quality of protein and the amino acids needs for milk production. Similarly, we have progressed from concentrates and forages to emphasis on particle size, impact on rumen environment and link to metabolic disorders. This trend reflects a growing understanding of the complex mechanisms underlying the biology of milk production and cow health. This understanding allows for greater precision in diet formulation to optimize both milk yield and milk composition. A relatively new trend in dairy is the emphasis on feed efficiency reflecting both increased feed costs as well as a realization that maximum milk production does not equate to maximum profitability.

There have been big shifts in emphasis on milk components over the years. These have reflected changes in demand for milk components that have ranged from minimizing milk fat to maximizing milk fat content, as market demand for milk components changed.

It is 20 years since the first talk on Johne's disease at WCDS, but it has been on the program just about every year since then reflecting its importance from both an animal health perspective as well as its potential link to human health.

Dairy producers have always been leaders in employing new technology as evidenced by the fact that technology underpins every aspect of modern dairy operation, from the use of robotic milking systems to precision feeding of dairy cattle. Times have certainly changed since Mark Varner's 1996 presentation entitled "The Information Superhighway" – Getting Your Learners License".

Finally, it is nice to know that the dairy cow continues to be an amazing metabolic factory that produces high quality human food with ever-increasing efficiency despite the rather foreboding title of a 1985 talk entitled "Is the Dairy Cow an endangered Species".

■ **The Evolution of Dairy Research and Extension in Alberta**

As the mandate of the WCDS is to provide a forum for the exchange of information about recent research results, let us reflect on the evolving research and extension activities in Alberta over the last 35 years.

Producers in Alberta have a long history of commitment to supporting research. Originally, a 0.01/hL assessment was collected for the sole purpose of supporting dairy production research in Alberta. In 1992 there was support to increase this assessment to \$0.02/hL and effective May 1, 2007 Alberta producers supported an increase in the assessment to \$0.05/hl. Also in 2007, agreement was reached between the University of Alberta and Alberta Milk for the university to sell its quota holdings to establish an endowment fund of \$1.6 million to support dairy research at the U of A. In exchange, Alberta Milk agreed to extend their commitment, originally made in 1999, to provide quota accommodating the university's production of milk to a maximum of the production capability of the equivalent of 150 cows, the maximum capacity at the U of A research facilities.

The U of A quota sale and the creation of the endowment fund was an excellent opportunity to crystallize the value of the quota held by the U of A by securing long-term support for dairy research at the U of A. Since the establishment of the endowment fund in 2007, an additional \$500 thousand was added to the fund from the sale of the quota held by the Canada/Alberta Livestock Trust and used by the Lethbridge Research Centre. In May 2015, the U of A was successful in securing in excess of \$933 thousand in matching funds from the government of Alberta.

A more collaborative, cooperative and coordinated approach to research was formalized through the creation of the Dairy Research and Technology Centre (DRTC) in 1999. The DRTC agreement facilitated collaboration and the sharing of resources and expertise between the U of A, Alberta Agriculture, and Alberta Milk. It also helped provide the support needed to enhance the physical facilities for dairy teaching and research at the U of A. In April 2010, a new agreement was reached, the Dairy Research and Extension Consortium of Alberta (DRECA) that added the University of Calgary, Faculty of Veterinary Medicine to the partnership. DRECA continues to be the platform for the coordination of research, extension and education activities that contribute to the sustainability and advancement of the dairy sector.

Since 1995, \$5.4 million dollars in producer funding has been invested in research to increase productivity and profitability of the dairy industry. These funds have leveraged over \$35.6 million in additional funds from 35 funding partners that includes the government of Alberta, the U of A, the U of C and

the federal government. These funds have supported research in five key areas: dairy animal health and welfare, nutrition, reproduction, new product development and economic development. Also of significance is that the collaboration between the universities and many of the funding partners has resulted in the establishment of three NSERC Industrial Research Chairs (IRC) in Western Canada. The IRC in dairy cattle welfare at UBC; the IRC in infectious diseases at UCVM and the IRC in dairy nutrition at the U of A.

■ Dairy Industry — Changes Over the Past 35 Years

As we pause to reflect, is there any simple way to summarize the past 35 years in the dairy industry? Maybe it can best be done through two words “consolidation and collaboration”.

Collaboration in the dairy industry was clearly demonstrated in 1983 when all provinces except Newfoundland signed the National Milk Marketing Plan (NMMP) and Memorandum of Agreement, replacing the Interim Comprehensive Milk Marketing Plan that had been in place since 1971. The agreement had three main objectives: manage the supply of industrial milk to meet the Canadian requirements, provide a basis for determining provincial shares and provide a basis for collecting fees for surplus removal. A point of contention that arose almost immediately after signing revolved around the determination of provincial shares. It took until 1989 to reach an agreement to allocate quota on a 90:10 basis (90% on historical shares and 10% on population growth); this was revised to 10:90 in 2000. Newfoundland joined the NMMP in 2001. The NMMP continues to serve the industry to collectively meet the demand for milk. These agreements were not easy to achieve, balancing the political and processing realities of the Canadian dairy industry. The withdrawal of British Columbia from the National Plan in 1982 set the stage for special status of allocation of industrial quota to BC, the “65:35” formula that ensured sufficient MSQ to meet provincial processing requirements. The Western Milk Pool Agreement ended this “special arrangement”.

In 1995, the Canadian Dairy Commission (CDC) Act was amended to allow the CDC to operate revenue sharing pools. In August of that same year, the Comprehensive Agreement on Special Class Pooling signed by all provinces except Newfoundland came into effect. Newfoundland joined in 2001. Under the special class pool, revenue from products in the special classes was shared equitably among all nine provinces. The national harmonized milk classification system allowing for end use pricing came into effect at the same time. Multiple component pricing, implemented in 1993, changed the way producers were paid for milk. It meant that producers were paid on butterfat, protein and other milk solids instead of volume (with a differential based on butterfat content).

In 1995, the Dairy Industry Advisory Committee noted that market changes dictated that expanded pools were the future in order to adapt to the challenges created by disappearing provincial borders. The All Milk Pooling Agreement involving PEI, NS, NB, QC, ON and MB (P6) came into effect in 1995. Pricing differentials on fluid milk between BC and Alberta were based upon a “gentleman’s agreement” between processors. When this broke down, the potential of a race to the bottom price war between producers became a reality. The solution was found in the Western Milk Pool (WMP) formed in 1997. The WMP pooling agreements meant the pooling of all revenues from milk sales among all producers, sharing of markets, and establishing a common price for milk components by class. Manitoba joined the WMP, operating in both pools, but withdrew from the P6 pool in 2003. The pools continue to operate to the benefit of the industry.

Through the 35-year period in which the WCDS has operated, there were also significant international trade deals that impacted the Canadian industry. Driving the formation of the pooling agreement was the loss of Article XI within the General Agreement on Tariffs and Trade during the Uruguay round of negotiations that started in 1986 and concluded in 1993. The loss of Article XI meant the exemption for supply management was lost and tariffs were introduced to protect the domestic dairy market. The World Trade Organization officially commenced on January 1, 1995 replacing the GATT. During the same time period, the Canadian government negotiated and signed the Canada-United States Trade Agreement, which in 1992 became the North America Free Trade Agreement when Mexico joined. The impact of these agreements also resulted in new rules governing export subsidies and resulted in exports to the USA being significantly impacted.

The other trade deal having a significant impact on the dairy industry is the Comprehensive Economic Trade Agreement (CETA) reached between Canada and the European Union in October 2013. When fully implemented, the CETA agreement will provide additional access of 17,700 tonnes of cheese, namely fine and specialty cheese. The full legal text was signed in October 2016 and implementation will commence in 2017. The federal government also reached an agreement with 11 other countries including Japan, the U.S., New Zealand and Australia on the Trans Pacific Partnership. The agreement was signed on February 4, 2016. The agreement must still be ratified by each of the 12 countries and with the new U.S. President opting out of the TPP; it is unlikely that the agreement will come into effect.

■ Alberta Milk

Consolidation has been a part of Alberta Milk over this period. In 1989, Alberta Milk Producers organization moved from being registered under the Cooperatives Act to the Societies Act. Alberta Milk Producers Society (AMPS) was the provincial umbrella organization for the eight local producer

organizations. AMPS received a universal assessment to support policy and advocacy activities on February 1, 1996 based on support from producers. In 2000, Alberta Milk Producers started two initiatives. Producers supported the merger of two producer lead and funded organizations, the Dairy Nutrition Council of Alberta (DNCA) with AMPS. This merger was predicated on the desire to better align marketing and nutrition education messaging and activities at the consumer level and to add efficiencies in administration. The merger of the two organizations took effect August 1, 2001. At the same time, based on a request from the AMPS, the provincial government initiated a governance review of the dairy industry in October 2000. The objective of the review was to consider merging the activities of the Alberta Dairy Control Board with those of the AMPS. The result would be a new producer lead marketing board under the *Marketing of Agricultural Products Act* that had the responsibility for all aspects of the dairy industry, quota and production management, advocacy, milk quality and food safety, promotion and nutrition education. A producer plebiscite held in the fall of 2001 resulted in 91.8% of the producers in Alberta that voted endorsing the establishment of Alberta Milk as a marketing board. Alberta Milk as a marketing board came into effect August 1, 2002. In 2005, the consolidation of the control board and Alberta Milk was enhanced when the organization moved into its own office merging the offices located in Wetaskiwin and Edmonton.

Consolidation in marketing and nutrition education has been ongoing since the merger of DNCA and the marketing activities in 2001. Marketing and nutrition education activities were targeted to educate consumers, mostly targeting children up to age 18 and mothers who do most of the grocery shopping in Canadian homes. It has been a multi-pronged approach. There is advertising, nutrition education (why milk is good for you), education of the consumer about dairy farming (as the consumer is further removed from the farm), and encouraging children to drink milk on a daily basis through a school milk program.

The elementary school milk program, Club Moo, was originally pilot tested in 1985 and celebrated 30 years in 2015. Club Moo is a milk program that encourages children to develop the healthy habit of drinking milk everyday by making it fun and rewarding. The school milk program was extended to junior and senior high schools through a collaborative initiative across western Canada.

Nutrition education activities in Alberta have collaborated with Alberta Education in offering programs that fit in the Alberta school curriculum such as Power 4 Bones program within the Alberta grade 5 curriculum and Power to Play, targeted to younger children in kindergarten to grade 3, that launched in January 2008. Programs aimed at health professionals have also been a focus for nutrition education and messaging. The Alberta Milk run Nutrition

File Seminar has been hosted by Alberta Milk since 1998. Annually this event attracts over 250 participants.

Prairie Milk Marketing Partnership (PMMP) that included Manitoba, Saskatchewan and Alberta formed in 2002 with the collaborative launch of a joint fluid milk campaign - *Never Stop. Milk.* For 10 years, the PMMP ran successful TV, radio, billboard and print based campaigns across western Canada focused on white and chocolate milk and cream. Chocolate milk promotion focused on the benefits of chocolate milk as a sports recovery beverage while white milk activities spoke to the enjoyment of milk and its many benefits in a healthy diet. Further collaboration happened with the formation of Milk West and the Strategic Milk Alliance. Milk West was an extension of the PMMP when BC joined the prairie provinces in 2012. Partnering with Dairy Farmers of Canada (DFC), the Strategic Milk Alliance adopted the "*Milk Every Moment*" campaign for all of English speaking Canada. Alberta Milk has taken this collaboration one step further with the transfer of all marketing and nutrition education resources to DFC effective January 1, 2017. In an ever-increasing global environment, national collaboration only makes sense.

■ Producers

The dairy industry is often accused of being static, and that supply management discourages change at the farm level. Let us reflect on some of the most significant changes and policy adjustments at the farm level that have occurred or been implemented over the last 35 years.

Consolidation has been no more obvious than in the number of producers. There has been a decrease in producers by 64% from 1983 to 2016, from 1,458 to 530. At the same time, production has increased by 28% (Table 1)

At the introduction of supply management, production was geared primarily to the fluid market. In the early 70's, Alberta was divided into milk sheds, where fluid producers supplied individual dairy plants. Milk in excess of table demand was directed to the "industrial" market. Creameries dotted the province, producing butter along with other "industrial" dairy products. Fluid quota was traded amongst the producers shipping to those plants and fluid milk attracted a substantial price differential. The two provincial cooperatives, Alpha and NADP, provided the "balancing wheel" for the industry, handling the often volatile demands of the fluid market, ensuring a home for all farm production. In 1975, producers voted to move to an Alberta wide quota system, in which all producers participated in the fluid and industrial quota system. Dairy farmers have continued to work together, both provincially and nationally, to develop an integrated production and transportation system that is both equitable and efficient.

Table 1. Number of producers and milk production in Alberta from 1983 to 2016.

	1983	1993	2003	2013	2016
No. Producers	1,458	1,312	775	571	530
Total Shipments, hL	5,672,000	5,430,000	6,169,963	6,626,993	7,250,436
Butterfat, %	3.52	3.68	3.60	3.93	4.01
Average Blend Price, \$/hL	N/A	52.35	58.47	79.41	81.14

Source: Alberta Milk

Skim-off

In the late 1970's a processor in Alberta developed a "new" product in response to a perceived consumer demand for "low fat" products. With the introduction of 1% milk, a new source of butterfat became available to processors, one that was not covered by MSQ. As this product was adopted across Canada, producers of industrial milk soon noticed the subsequent reduction in MSQ. Especially hard hit were Quebec farmers, who held almost half of the MSQ in Canada. A skim-off levy was introduced in 1977. With the leadership of DFC, a skim-off agreement was developed and signed in 1991, demonstrating the strength of our national system and the commitment of Canadian dairy farmers to work together.

Move to Single Quota

The move to a single total production quota (that would combine the fluid and industrial quotas) was a discussion in Alberta that originally happened in 1994. Following a similar initiative in Nova Scotia, a 60% threshold was determined to be required before AMPS would recommend the change to the Dairy Control Board. Producers voted 58% in favour of the Alberta Integrated Quota in the fall of 1994, resulting in no request for change. Discussions on moving to a single quota happened again unsuccessfully in 2000. Finally, driven by the discrepancy in price between fluid and industry classes, due to increased use of special classes and given that industrial classes were not experiencing the same price increases as fluid milk, a renewed effort to move to a single quota was initiated in the spring of 2008. It was also felt that a single quota system would allow for greater policy harmonization across Canada.

Producers endorsed the switch to single quota by over 80% based on a net revenue basis. As a result, Alberta Milk converted to a single quota for all producers on August 1, 2008, ensuring equitable treatment of all producers.

Milk Pricing

The change to the way fluid milk is priced at the producer level transitioned from the Alberta Utilities Commission (AUC) to Alberta Milk effective September 2009. It goes without saying that the AUC served the industry well over the last 70 years, but as the industry evolved there was a need for new approaches. Having the authority and ability to enter into national discussions and make decisions with our counterparts from across Canada, and with processors, also helped position the industry for the future with an approach that treats all producers in Canada in a similar manner. A national fluid milk pricing formula was first implemented for the February 1, 2010 price adjustment.

Social License to Operate

The consumer demand to know how, where, and when their food is raised is ever increasing. At the same time, the consumer has less direct connection to agriculture and farming practices. As a result, the agriculture industry has responded by adopting best management practices. One of the first programs aimed at addressing these consumer demands was the Canadian Quality Milk (CQM) program. This national program was developed on behalf of farmers by farmers under the guidance of DFC. The CQM program is a HACCP based on-farm food safety program. CQM was first introduced in 2002 with 35 herds volunteering to take part in a pilot project. CQM became mandatory, as a condition of a producers license, on August 1, 2009.

However, consumers want further proof and they want to know that the products they buy are safe, are produced responsibly, and meet social standards. To further maintain and enhance processor and producer confidence in the quality and sustainability of the Canadian milk supply, DFC developed, and is implementing through the provincial organizations, the proAction initiative. proAction encompasses six key elements under one program: milk quality (the Milk Grade and Price Program), food safety (CQM), animal care, livestock traceability, biosecurity and the environment. proAction was fully endorsed by all members of DFC in July 2013. proAction is designed by farmers for farmers and is designed to allow for continuous improvement. The milk quality program in Alberta has been in place for many years. The on-farm food safety program was introduced in 2002 and animal traceability is a legal requirement in Alberta. The Animal Care module will become a requirement as of September 2017. The environmental and biosecurity modules are under development and will be fully implemented by 2023.

Modernizing the Industry

At the 2007 WCDS, Pierre Doyle, Director Dairy Programs with Agriculture and Agri-Food Canada, presented a paper on Dairy Protein Ingredients in Canada: A Perspective. The take away message was that new ways to use dairy ingredients, namely protein, was changing the industry at a rapid pace. The need for better utilization of solids non-fat (SNF) has been an industry challenge for more than 20 years. Structural surplus grew from a low of 15,000 MT around the year 2000, gradually increased to 50,000 MT, and had climbed to 70,000 MT by 2014.

On December 1, 2004, a number of producer policies were put into effect to help deal with the amount of structural surplus in the system. The first was a minimum butterfat policy of 3.25 kg/hl. This meant that all milk delivered will continue to be paid for the actual butterfat content, but for producers with butterfat tests lower than 3.25, their quota will be calculated as if they had shipped 3.25% milk. The objective of this policy is to ensure producers are shipping milk that contains at least 3.25% butterfat. It targets producers with very low butterfat levels, who are contributing the most to the structural surplus. The second policy was a pricing policy. The price paid to producers for protein was reduced by \$3/kg and this amount was shifted to the price paid for butterfat. The third policy was the introduction of a SNF/BF ratio. Just as each province must contribute to reach the national target ratio, each producer was asked to do their part.

Nationally, each province accepted responsibility to fill at least 97% of its quota allocation in the first six months of the dairy year. The 97% calculation is based on all milk shipped, both fluid and industrial. If a province does not achieve this mid-year accountability, the cumulative under production was not carried forward into the last six months of the dairy year. Simply, each province had to ship 97% of its total allocated quota in the first six months or lose the ability to ship to that differential (the amount under 97%). Should the above occur, the producers who are under 97% were held accountable and had their quota adjusted accordingly.

However, the fixed year-end and mid-year accountability had its own challenges. Producers were pushing to get production in the fall and often needed to slow down in July for year-end. A continuous system would allow provinces to make more gradual quota adjustments, easier to manage provincial quotas and more flexible at the national level. A national continuous quota system at the provincial level was adopted for August 1, 2008. Each province had flexibility limits of +0.5% and a lower limit of -1.5%. The following year (August 1 2009) there was agreement to adopt continuous quota at the producer level. In Alberta, producers were provided with flexibility limits of +10 days and -30 days.

Concentrated efforts to find new ways to use domestic SNF were first initiated in 2006, when the federal government established the Dairy Industry Working Group, led by Agriculture and Agri-Food Canada, involving producers and processors. A second attempt at finding a way to deal with structural surplus and modernize the industry was the 2012 Dairy Industry Producer Processor Dialogue, also facilitated by the federal government. Neither process reached a conclusion.

Dairy Farmers of Canada initiated its own process in 2007, known as the Montebello Working Group. This group explored the opportunities to use dairy ingredients. While the Montebello process did not lead to any new initiatives, DFC continued to pursue a new environment for the Canadian dairy industry. In May 2014, producers presented a proposal to processors and governments that had three main elements: stabilize producer income that had been eroded over the two years, deal with the surplus removal that would greatly reduce or eliminate the mountain of skim milk powder, and provide market growth for both producers and processors. In January 2015, processors presented a response with their own proposal. A negotiation process started in August 2015 and concluded in July 2016 with the announcement that a Memorandum of Understanding had been reached. The new strategy will be implemented starting February 1, 2017.

Consolidation and collaboration has been the focus of the dairy industry in all aspects — from research to marketing and promotion. Consolidation will continue and could very well lead to the industry being governed at a regional level - Western Milk Pool Board governing the industry in Western Canada – in the next 35 years.



