By MICHEL DOSTIE Editor Translation by Nicole De Rouin



Ferme Bofran

Where LPI and genomics come together

ight from the start, in 1987, Jean-François Beaudoin aimed to produce a lot of milk. He felt it was his only option, under the circumstances. He had just acquired the farm from an unrelated breeder and, although he was starting out under good conditions, he still needed a substantial income to pay back his loans. Fortunately for him, the sale price of the farm was based on the operation's potential revenue, and Jean-François had been able to invest some of his savings in the farm. As the farm credit agent then observed: "Jean-François doesn't have a lot of money, but for his age, he does have a lot." Jean-François was 21 years old at the time.

To achieve his goal, Jean-François selected his sires with a strong focus on production, because, as he explains: "I'd rather a GP that helps pay the bills than a poor-producing EX." And because his first-calf heifers weren't producing to his satisfaction, the breeder also decided to add a few new milking cows to the herd. From the time LPI values for cows were first released in the early 1990s, he based his cow selection on high LPI numbers. Nowadays, he also takes into account longevity, as well as health and fertility traits. The results of all his genetic selection efforts are evident in the latest proofs (April 2014), where the Bofran herd ranked seventh in Canada and fifth in Quebec for LPI, with an index of 2366.

Two key families head the cast

Two cow families are at the head of the Bofran herd. First is Bofran Rudolph Rose, GP-84-2yr 16*, dam to 62 daughters classified 81 per cent GP or better, including 2 EX and 15 VG. Rose is a daughter of JMJ Choice Rosette, a cow born of an embryo from the family of Templedale Rosina Enhancer, EX 33*, that Ferme Bofran had purchased. In addition to her influence on the herd through her progeny, Rose earned two Superior Lactation certificates, one at her first lactation, at 1 year and 11 months, with 12 755 kg of milk (3.8% fat and 3.3% protein), for BCAs of 323-326-331. She was obviously able to transmit her excellent milking ability on to her offspring, since her 49 daughters enrolled on publishable



milk recording have a mature equivalent production average of 12 915 kg, with BCAs of 244-248-243.

Among Rose's daughters, Bofran Leduc Rosina, EX-93, has had an unusual career path, travelling far before returning home. She was first sold to the Lencrest and Ralston farms prior to her first calving. Her new owners showed her at a number of shows, where she won, among others, the Tout-Québec Junior Two-Year-Old and Three-Year-Old titles, Honourable Mention All-Canadian Junior Two-year-Old, and Grand Champion at the 2005 edition of the Holstein Québec Spring Show. Later, when Rosina was nine, and stationed at Boviteq, Ferme Bofran bought her back. She has since been benefiting the herd through her excellent ability to transmit

her traits for both production and type. Indeed, this daughter by *Leduc* is not only the dam of 16 classified daughters, in addition to many heifers, 25 of which bear the Bofran prefix, she also produced 60 931 kg of milk in four lactations, for BCAs of 257-234-244.

Rosina's daughters are obviously following in her footsteps, with an average mature equivalent production of 11 909 kg of milk per year. Among them, Bofran Goldwyn Rosany, VG-88, sold at the Expo-Poc sale in 2012, won first Intermediate Calf at the Atlantic Summer Show in 2012 and was named Reserve Junior Champion at the Atlantic Dairy Championship Show in 2013. Her full sister, Bofran Goldwyn Radieuse, GP-83-2yr, is another promising animal for the owners of Ferme Bofran, with a first lactation projected, after 144 days in milk, to yield more than 13 000 kg (324-354-321)

Rose is also the dam of Bofran Goldwyn Rosette, EX-91 2E, and Bofran Inquirer Rosie, VG-88 6*. Owned by Ferme Bauvreuil, Rosette has two Superior Lactation certificates and average BCAs of 256-305-280 for four lactations. Rosie has 16 daughters enrolled on publishable milk recording that have an average mature equivalent production of 12 862 kg of milk, for

At Ferme Bofran, Édith Gagné and Jean-François Beaudoin have always set great store by the LPI. Nowadays, their mating selections are also guided by genomics.

Photo: Michel Dostie

BCAs of 243-259-248. One of her daughters, *Bofran Lucky Star Rally*, VG-87, produced a 305-day yield of 13 360 kg of milk, at 5 years and 3 months, with 4.0% fat and 3.2% protein, for BCAs of 260-280-266.

Jean-François Beaudoin and Édith Gagné also pay tribute to *Comestar Louve Rudolph*, VG-2yr 20 *, a cow they acquired as a heifer. *Louve* is the dam of 38 daughters classified 97 per cent GP or better, including 14 VG and 23 GP, and the bull *Bofran Lucky Star*, VG-Extra, owned by the Semex Alliance. In addition to being a regular embryo donor, *Louve* also managed to maintain a high level of production, as demonstrated by her two Superior Lactation certificates, including one at 2 years of age, with a 305-day yield of 11 029 kg of milk (4.1% fat and 3.5%

protein), earning BCAs of 292-321-318. Like *Rose, Louve* has also been able to pass her lucrative milking ability on to her descendants.



Bofran Leduc Rosina, EX-93, dam to 16 classified daughters and many heifers, produced 60 931 kg of milk in four lactations, for BCAs of 257-234-244. She also distinguished herself in the showring, winning, among others, the Tout-Québec Junior Two-Year-Old and Three-Year-Old titles, Honourable Mention All-Canadian Junior Two-Year-Old, and Grand Champion at the 2005 edition of the Holstein Québec Spring Show.

Among *Louve's* daughters, the owners of Ferme Bofran particularly appreciate *Bofran Estimate Louany*, VG-87 10*. This full sister to

Lucky Star is the dam of 23 daughters classified 97 per cent GP or better, a group that includes Bofran Morty Flavie, VG-86-3yr 2*, herself dam to 3 VG and 5 GP daughters. Flavie's progeny includes Bofran Man O Man Floralie, VG-86-2yr, and Bofran Oman Franchise, VG-88-3yr, both holders of a Superior Lactation. According to Jean-François Beaudoin, "Floralie is the most complete cow bred here." With a GLPI of 2966 and a 305-day yield of 12 925 kg of milk at 2 years and 4 months (304-330-340), her owners consider her to be an excellent breeding cow, as she is already dam to 15 heifers and 9 bulls, including Bofran Festival, currently at Semex. They thus ensure that all her offspring, both bulls and heifers, are genomically tested. Jean-François also points out that Floralie produces

good heifers with all of the sires they've used. One of her heifers, *Bofran Brewmaster Faby*, born in September 2012, has a GPA LPI of 3087

Ferme Bofran and its origins

From a very young age, Jean-François Beaudoin dreamed of having a dairy farm. That interest later motivated him to take a course in dairy production. He then worked for a number of producers, including Michel Blais, for whom he worked for a short time. Mr. Blais was interested in selling his farm, but he didn't want it to be broken up, so he based his asking price on the income that a buyer could expect to get from the operation. He then put his trust in Jean-François, who, only a few months after starting work there, became the farm's new owner. Thus Jean-François was finally in a position to fully live out his passion for the Holstein breed. Four years later, he married Édith Gagné, who became a co-owner of the farm the following year. She brought to the farm both a knowledge of the agricultural community and a passion for Holstein breeding, which she acquired on the farm belonging to her parents, Gabrielle Roy and Jean-Paul Gagné (Ferme Bauvreuil). A propos, her father was the founding president of the Dorchester Holstein Club.

With the purchase of the farm, Jean-François acquired a purebred, classified herd enrolled on milk recording that had benefited from good herd management. Today, the 160-head herd has 70 milking cows, a group that includes 1 EX, 22 VG and 34 GP and produces an average of 11 393 kg of milk per year, with 4.1% fat and 3.3% protein, for BCAs of 251-279-258. Ferme Bofran is now a well-known operation and sells about 20 cows per year to dairy producers in the area.

The owners have 202 ha under cultivation, including 81 ha that are rented. Their crops are primarily used to feed the herd, with 32 ha devoted to grain corn production and 24 to soybeans. The harvest

is then micronized and added to the TMR, and any surplus is sold. Soybean straw is also harvested. Another 16 ha are used to grow barley for straw, while the grain is sold. And lastly, 16 ha are seeded to corn for silage, and the remaining 114 ha are used to produce hay and grass silage.

To help get the farm work done, the couple counts on Jean-François' sister Manon, a full-time employee. A second employee is added to the team during the summer months. Their four children also take part in the work at different levels.



Édith Gagné and Jean-François Beaudoin have four children:
Maxime, aged 17, will be starting CEGEP this September;
Lina, 20, is a graduate of the ITA, La Pocatière campus, and will
start studying agronomy at university this fall; Pascal, 16, a high
school student, shows animals with the young farmers' group and
intends to study agriculture and eventually take over the farm; and
Mariane, 10, is in elementary school.

Welcome to the Holstein Québec Picnic

On July 12, it is to Ferme Bofran, rang Saint-Jean-Baptiste, in Sainte-Marguerite, that the Dorchester Holstein Club invites Holstein breeders and their various partners to take part in the traditional Holstein Québec Picnic.

The board of directors of the Dorchester Holstein Club had been eager to invite all of Quebec's breeders to their region, so when Jean-François Beaudoin volunteered to carry out the plan, the directors happily accepted his offer. Since then, says Jean-François, a dynamic team has been working to ensure the success of the event.

Jean-François Beaudoin says that hosting the Picnic a great opportunity to get involved in promoting the much-loved Holstein breed, a commitment he has been unable to make before now. It's also a good way to demonstrate the economic importance of the Holstein breed for rural areas. And finally, it's a way to introduce everyone to the quality of the Holstein herds in the region. Indeed, the day after the Picnic, four Dorchester Club breeders will open their doors to visitors.

and is due to calve in December of this year, under contract with Semex.

An eye to the future

The owners of Ferme Bofran occasionally buy young animals to continue to improve and diversify the genetics of their herd. Their latest acquisitions are *Stepido Trump Tease* and *Alphagen Sudan Super Love*, purchased in 2011 and 2013, respectively. *Tease*, VG-2yr, from the family of *Stepido Super Mega*, has a GLPI of 2638. Her first lactation yielded 12 246 kg of milk, in 305 days, for BCAs of 307-352-304. As for *Super Love*, born in 2012, she has a GPA LPI of 2888 and is a daughter of *Parile Man O Man Love*, VG-2yr, a cow that has a GLPI of 3007 and comes from the family of *La Presentation Daurel*.

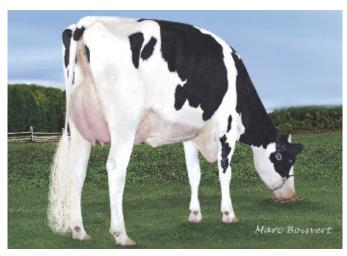
Embryo transfers and genomics

Embryo transfers are an important part of the Bofran operation, where only the top 2 per cent of the herd is used for 90 per cent of the services completed. To maintain embryo production, 80 per cent of the herd, cows and yearling heifers alike, are used as embryo recipients. The animals are chosen based on both LPI and genomic values.

These breeders are convinced that it's no longer necessary to compromise on conformation to get good milk production, and they anticipate that genomics will lead to more rapid improvement within the breed. For that reason, the majority of their heifers are genomically tested. Still, they find it unfortunate that their good old cows no longer measure

up. Jean-François Beaudoin points out that with genomics, and in particular the GLPI, it is now possible to really compare one animal with another, regardless of environment. He also emphasizes that genomics is an essential tool to meet the requirements of the artificial insemination centres.

As genomics make many new sires available each month, Ferme Bofran plays it safe by selecting a large number of these young bulls, but rarely using more than two doses from each. Finally, even if the embryos harvested on the farm are used mainly to improve their herd, these breeders are well aware that without genomic values there are very few markets available today.



With a GLPI of 2966 and a yield of 12 925 kg of milk at 2 years and 4 months (304-330-340), *Bofran Man O Man Floralie*, VG-86-2yr, is, in her owners' eyes, an excellent breeding cow, as she is already the dam of 15 heifers and 9 bulls, including Bofran Festival at Semex.



Bofran Goldwyn Radieuse, GP-83-2yr, holds great promise, with a first lactation projected, after 144 days in milk, to yield more than 13 000 kg (324-354-321).

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The breeding school celebrates its 10th anniversary –

and many former participants are now hoeing their own row



Ithough taking part in the breeding school doesn't lead to a diploma like CEGEP or university, it can certainly give one wings. Indeed, conversations with some of the school's first students attest to it. They registered with the aim of learning, but also discovered a whole network of friends, breeders and resource people.

Denis Hallé, of Saybec, in the Bas-St-Laurent Holstein Club's territory, attended the second edition of the breeding school, in 2005. A CEGEP student in Matane at the time, Denis was prompted to sign up because of his passion for dairy farming. As much as he appreciates the valuable knowledge he gained with regard to the breed, he considers that the discussions he had with other participants and experts were one of the most striking aspects of his experience at the breeding school.

Christine Breton, who grew up on Ferme Martinclerc, in the Bois-Francs region, is extremely interested in breeding and dairy shows. Inspired by friends who had taken part in 2007, Christine registered for the training session the following year. Describing herself as a competitive person, she says she was also motivated by the prospect of winning the trip to Belgium awarded to the top participant. And her wish was granted, as she did indeed earn the highest score and flew to Europe that same fall, just before she began studying agronomy at Université Laval. Likewise, Christine particularly appreciated meeting other young dairy enthusiasts, with whom she still maintains contact. "The ambiance was terrific," she recalls.

Dave Bérubé, of the crop of 2006, in Sherbrooke, is of similar mind. For him, the opportunity to make contacts and share his passion with other young people brought him great satisfaction. And it is precisely for those incentives that he recommends the school to others. As he puts it: "Hanging out with a gang of young people who share the same passion certainly helps you forget about life's little problems."

Philippe Lafontaine, another graduate of the school's third edition in Sherbrooke, registered for the training session after an invitation from his friends who were studying agronomy at



David Cyr, a participant in 2005 and host farm in 2007, and Myriane Garon, a student in 2007, with their son Charles-Olivier, at his baptism.

Université Laval. The previous year, he had taken part in the Royal Agricultural Winter Fair in Toronto and realized that he had some catching up to do as far as breeding was concerned, a gap that the breeding school would be able to fill. "It was a great experience," he says today.

As for David Cyr, his experience with the breeding school was a dual one. He first participated as a student in the 2005 edition, held in La Pocatière, and then, two years later, he and his parents welcomed the young people attending the 2007 edition to their farm in Sainte-Marie, in the Beauce. With his passion for breeding – the family farm was already very interested in genetics – he found that his education put too little emphasis on the animal. So the breeding school, with its focus on genetics, was an excellent opportunity for him to further his knowledge.

David's partner, Myriane Garon, raised on Ferme Marbras, in Saint-Denis, in the Kamouraska region, took part in the 2007 edition, and she too particularly appreciated the school's practical approach, especially during the farm visits, where she was able to grasp the importance of the ancestry of a good cow family and learn about the career paths of the breeders they visited. As was the case for David, her experience at the school helped her understand the ins and outs of animal registration and enabled her to explore a range of subjects, such as Superior Lactations, Star Brood Cow status and the calculation of Master Breeder points. As David points out, "After three days surrounded by professionals, you understand the concepts 100 per cent."

Gabriel Marois, of Saint-Éphrem-de-Beauce, became interested after he was invited to join friends from the ITA, who intended to be at the school as well, but also thanks to his mother, who knew he was interested in breeding and who had in fact already registered him. It's understandable that his mother got involved, explains Gabriel, because she attaches a great deal of importance to expertise and training. Along with seven fellow students from the Beauce, Gabriel took part in the 2007 edition, and acknowledges the experience was better than he had anticipated.



Philippe Lafontaine, who attended the 2006 edition, with his partner Émilie and young Alexis.

A boon for self-confidence

Interacting with others and being able to express one's ideas is a confidence booster, and Christine Breton exemplifies that principle. Describing herself as rather reserved, she explains that "the school forced me to come out of my shell, to surpass myself. It made me grow." This was especially evident during the team interviews with the instructors.

Dave Bérubé agrees wholeheartedly. Not being a farmer's son and finishing sixth for individual score and second with his team allowed him to think that there might indeed be a place for him in the breeding world, despite a background that did nothing to make things easier for him.

Practical training

For Dave Bérubé, a self-proclaimed knowledge hunter, the breeding school taught him "to put both hands on the wheel and make a decision," particularly by educating him about the different tools available to breeders through the breed association. An intense three days, with some theory, a lot of practice - especially during the farm visits - and time enough to talk with the other participants and instructors. "It's education through immersion," he says today. Both Dave Bérubé and Philippe Lafontaine emphasize that the program is well thought out and that, given their limited knowledge of genetics at the time, the school probably had a greater impact on them than on others who had less to learn.

Philippe Lafontaine adds that the practical content of the breeding school also means the participants have to be well-informed about what they're doing, and define clear



Dave Bérubé, of the 2006 edition, and Nadia Roy have three children: William, Rose-Émilie and Marc-Antoine. Inset, Vincent, Dave's son from a first union.

and measurable goals, all for more efficient management. He says the importance of "knowing where you're going" is an element from his experience at the school that he continues to keep in mind.

This young breeder also says that the practical training helped them realize that it's possible to ask for help, that there are tools available, and that they can consult different people who are in a position to advise them.

For his part, David Cyr underlines the value of the message communicated by the breeding school, namely, the crucial importance of genetics. By conveying that message, he explains, the school inspires young farmers by showing them that it's possible to attain a high level in breeding. Brigitte Breton says the same, giving emphasis to the marketing knowledge she acquired at the school.

About the trip

At each edition of the breeding school, participants are invited to complete different questionnaires or exams and be interviewed by the instructors. Students accumulate points as they go through the different tests, and the student with the highest score for the series of assessments wins a trip to Belgium.

Christine Breton made that trip the year the European Young Breeders School, in Battice, Belgium, was celebrating its 10th anniversary. A competition among national teams was organized to highlight the occasion. Canada's team included Christine, whose experience left her with lifelong memories.

But then Gabriel Marois is perhaps the one for whom the upshots of the trip have been the greatest. Not only did he develop a close friendship with the family with whom he stayed in Belgium, but he's been making the trip back once or twice a year since his first visit in 2008. The Belgian family has also come to visit him in Quebec. Moreover, they've set up a business in the embryo trade.

An effect on professional life

Although Dave Bérubé was not a farmer's son, he acquired a taste for farming on the farm of one of his uncles, who unfortunately was not in need of a successor. After completing a DEC in Farm Management and Technology, he worked on different farms, including six that earned the title of Master Breeder, and then involved himself in his inlaws' pig farm near Disraeli. Thanks to the milk quota for dairy producers, Dave has



Denis Hallé, of the 2005 edition, with his partner, Jessie Lavigne, and their two children, Félix and Ariane.

since been able to develop a Jersey and Holstein herd (Caberoy prefix). He is especially proud of the performance of his Jersey herd, ranked 18th in Canada for LPI (April 2014). He attributes his success in part to the knowledge he acquired at the breeding school, in particular how to take advantage of the tools available to breeders.

David Cyr, who works with his parents on Ferme Cyrale, in Saint-Elzéar, in the MRC de Nouvelle-Beauce, remembers that the school imparted the message that genetics are a valuable tool. This lesson continues to influence the way he manages his herd on daily basis, where he applies one of the important tips he has retained: "Take the time to look at your leading cow families and develop them. There's no point in pushing all your families, it's better to work with the top 25 per cent."

Denis Hallé, of Ferme Saybecoise, has developed a similar attitude since his experience at the school. In partnership with his parents, he also applies himself to carefully selecting the families in the herd, as much in terms of phenotype as genotype.

Gabriel Marois says that the school has also had an influence on his personal life, firstly for the outcome of his trip to Belgium, but then on his work as a dairy producer as well. Currently employed on his parents' farm (Maroch herd), and expecting to take over the operation in the next few years, he says the breeding school encouraged him to think more, and to ask himself questions, which in turn prompts him to seek advice. Perhaps the greatest value of the breeding school, says Gabriel, it that it demonstrates the importance of having an open mind, and "not just clinging to what you know from the farm." This openmindedness applies as much to genetics as to marketing and other aspects of breeding.

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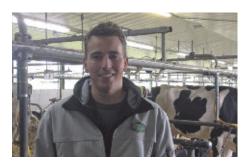
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The breeding school has been a decisive factor in Philippe Lafontaine's career as well. As a farmer's son on a farm where genetics wasn't a priority, Philippe, with a bachelor's degree under his belt, was headed for a career as an advisor. But discovering the world of breeding opened other doors and introduced him to a different way of managing a farm. He thus decided to take over the family farm (Phily prefix) in Hérouxville, in the Mauricie region, and says that all the knowledge he acquired has had an effect on his operation, which now produces an average of 13 017 kg of milk.

But the breeding school is not only worthwhile for future breeders; some former participants have become agricultural professionals as well. This is the case of, among others, Christine Breton and Myriane Garon, who both studied agronomy and are now working in farm financing. Christine says the breeding school taught her, among other things, to communicate her expertise, in particular during the interviews with the instructors. She continues to use that skill, as well as the store of knowledge she acquired at the school, when advising her clients. Employed in the Saint-Hyacinthe area, she



Gabriel Marois, a participant in 2007, works with his parents, the owners of Ferme Maroch.



Christine Breton, of the 2008 edition, works in farm financing by day, but heads to the Roclairson farm in the evening. where she enjoys helping with the milking.

heads to La Présentation and the Roclairson farm every evening to help her boyfriend. Pier-Olivier Tétrault, and his parents, with the milking. "I don't have to do it, I have no responsibilities, but I just love doing it," she explains. As for Myriane, she mentions that the breeding school made it very clear to her that genetics has an influence on farm profitability and says she uses her knowledge to better explain that to her clients.

Likewise, two other participants and winners at the breeding school, Geneviève Drolet, who attended the first edition in 2004, and Myriam Côté, in 2012, now work as advisors for Holstein Québec.

A bit of matchmaking too

For David Cyr, the impact of the breeding school has been twofold. As he explained, he got a great deal out of his experience in 2005, but his personal life was changed completely when his family's operation was the host farm in 2007. When organizers approached him, he gladly accepted the invitation. Firstly, he says, it provides an opportunity to make new contacts, and the more you have, the better it is. Likewise, he looked forward to meeting other young breeding enthusiasts like himself. Little did he know how right he was!

Indeed, the group included a young woman named Myriane Garon, who didn't escape his notice. A first meeting at the Fondation Audrey-Lehoux inc. event, organized as a part of the breeding school's programme, was followed by a second encounter at the farm the next day, and then a third, and a fourth... until a marriage was finally celebrated. Today, Myriane and David are the happy parents of voung Charles-Olivier. An unplanned collateral effect of the breeding school, but vou just never know...

Holstein Québec must keep the school going "I'm giving this testimonial to encourage young people to register," concludes Dave Bérubé. He and all the others who were interviewed agree it's important that the breeding school continue its work in sharing information with regard to genetics and succeeding in dairy production in addition to encouraging contact among young people and with experienced resource people in the agricultural community. People we need to listen to, insists Dave Bérubé.

As for Gabriel Marois, he recalls that the instructors knew how to avoid the "boring" side of formal teaching and encouraged discussions among the students. He, who admits he didn't really like studying, says the breeding school introduced him to a group of enthusiasts and a social network that he considers of utmost importance to the young people of his generation. In his view, developing a network of contacts is essential to the community. "Gone are the days of being isolated on the farm," he says firmly.