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# La Revue HolsteinQuébec

## **Two herd profiles**

A look at the Croteau and Valrick herds

## Better to build or refit?

Some oft-neglected considerations

Photo : Odrey Caron



## BREEDER PROFILE

BY MICHEL DOSTIE Editor

Translation by Nicole De Rouin



## Ferme Croteau A special place for genomics

n March 2009, a fire broke out at Ferme Yves Croteau et fils inc., in Upton, near Saint-Hyacinthe, destroying both the farm's buildings and the herd. Thus Danny and Patrick Croteau are now in the process of developing a young herd, shaped by animals the breeders have acquired in co-ownership and influenced by a marked interest in genomics.

Following the fire, the brothers quickly put together a new herd to resume milk production and fill their quota. But it didn't take long for Danny's interest in genetics to emerge.

That chapter began in July 2011, with the joint purchase, in partnership with Ferme Lesperron, of Regan-ALH Domain Daya, EX-92 3\*, a top-notch daughter of Reagan-ALH Destini, VG-88 USA 5\*. Daya was sold a few months later, but not before her owners had collected a few of her embryos, resulting in four VG daughters and two sons, now with Semex. One of the latter, Croteau Lesperron Unix, classified EX, is included in CIAQ's Genomax lineup with a GPA LPI of 3025 and +16 for conformation (04/16). Daya's four heifers have been used for embryo collection and breeders are now in quest of embryos from Daya's granddaughters. Ferme Croteau also owns another of Daya's daughters, namely MS Daya Dayana, VG-87-2yr, ranked 32nd on the list of top cows by genomic LPI, with a GLPI of 3119 (04/16). A perfect cow in Danny Croteau's view.

Another animal the Croteau brothers are using to develop their herd is *Croteau Rubicon Sophie*, a daughter of *Lesperron Aikman Sophia Red*, GP-83-2yr, from the family of *Des-Y-Gen Planet Silk*, EX USA 5\*. With a GPA LPI of 3242 (04/16), *Sophie* currently ranks third among red-carrier heifers. The Croteau brothers have high hopes for this family, since *Sophie's* two full sisters, *Lesperron Rubicon Shelly* and *Lesperron Rubicon Stella*, also feature on that list, in 10th and 13th place, respectively.

On the Croteau farm, the red and white animals are among those sold, mostly for export. "They're not our best sales, but it's still profitable," Danny Croteau explains, adding that the red and white market is particularly



The team responsible for the success of the Croteau herd, from left to right: Patrick, Patrick's daughter Mégan Croteau, a student who is also actively involved in the operation, Mathieu Larocque, a permanent employee, Élodie McDuff, a part-time employee involved in herd management, and Danny.

active in Germany, where breeders are increasingly interested in genomics.

In October 2013, Ferme Croteau acquired *Gillette Galaxy Cappela*, VG-2yr, in co-ownership with the Tinber and De la carrière

farms. Although Capella was only six months old at the time, she was enlisted only two months later in Boviteq's embryo collection and in vitro fertilisation program. One of her sons, *Tinber Cancun* (GPA LPI 3110), is now with Semex. She is also the dam of many

#### Ferme Yves Croteau et fils inc. (Croteau)

**Owners** : Danny and Patrick Croteau. Danny manages the herd, but decision-making is a collegial process. Their father, Yves, has retired from the farm to devote himself to the used farm equipment business (Les équipements MYPD inc.). Their mother, Florence Moreau, handled the farm's administrative duties until the end of 2015.

Number of animals: 250

Number of cows: 125

Classification: 1 multiple EX, 2 EX, 42 VG, 72 GP

Average production per cow: 10 579 kg, with 3.9% fat and 3.34% protein.

BCA: 231-238-236

Quota produced: 175.5 kg of fat per day

**Crops:** 307 ha under cultivation, with 100 ha seeded to silage corn, high-moisture corn and grass silage for the cows and 210 ha devoted to grain corn, soybeans and cereals.



The herd now includes many of the daughters and granddaughters of *Regan-ALH Domain Daya*, EX-92 3\*, and their embryos are being used to improve the herd.

daughters, including *Tinber JC Bayonet Cincinnati*, born in May 2015, with a GPA LPI of 3183 (04/16).

#### Young bulls feature prominently

At Ferme Croteau, young sires with high genomic profiles are used for almost all of the matings. The brothers base their selection in part on the contracts signed with embryo buyers or artificial insemination centres. In these cases, the buyers generally identify three sires, and the Croteau brothers and their partners make the final decision with a view to offsetting the weak points of each of the heifers. When it comes to in vitro fertilisation, which entails a new mating every two weeks, the bull is generally chosen from the list of new arrivals, which means a new sire is used every time.

For Danny Croteau, animals with good genomic indexes invariably come from families that are renowned for their show performance or their indexes. Although not an exhibitor himself, Danny favours goodlooking cows and his selection is influenced by conformation scores. Accordingly, he pays close attention to family origins and the dams' indexes and conformations scores. Finally, his selection process also takes into account the various health traits. Genomics presents a certain risk, of course, and Danny Croteau is well aware of that, which is why he uses as many different sires as possible.

#### **Embryos have their place**

The Croteau brothers also purchase embryos to improve their herd. As Danny explains, it gives them the opportunity to acquire animals by sires that wouldn't otherwise be accessible to them, because of limited availability or high cost. *Progenesis Rubicon Ruthie*, born in November 2015, is the product of one such embryo purchase. The heifer is currently under contract with Boviteq and has a GPA LPI of 3311.

The embryos collected from their own animals are not put up for sale however. They are instead shared equally among the partners. Once they have the genomics results in hand, the partners decide together which animals to use jointly. The rest are left with the partner on whose farm they were born.

Recipient cows are obviously in demand with this type of breeding approach. Hence the vast majority of the herd's yearling heifers and young cows are used for that purpose. The older cows, with a lower success rate for embryo transfers, are inseminated. Proven sires are used to inseminate the elite cows, while meat sires are used for the others.

#### **Free-stall housing**

The herd is housed in a free-stall barn and the cows are milked in a carousel parlour. When the barn was under construction, the idea of installing a robotic milking system was obviously considered, but Danny, who enjoys milking the cows and considers the task as a moment of relaxation, preferred the carousel. Their installation enables them to milk 98 cows per hour, which means that milking takes about 1 h 15 min. Work is currently underway to make room for more cows and increase production, which should meet a quota of nearly 200 kg per day by this fall. The expansion will also provide more stalls for the cows. As Danny points out, while room at the feed bunk is essential for good production, available space in the barn also plays a part. In this sense, he explains, having more stalls than cows is an excellent production practice.

## Recycled manure solids used as bedding

For the past two years, the Croteau brothers have been using recycled manure as bedding. It is actually the organic matter contained in the manure that is used, which means that whatever is not digested by the cows is recovered. First the manure that is scraped away is spun to remove the liquid, which is diverted to the manure pit. The solids are then collected in a container, where some fermentation occurs to complete the dehydration process. A day later, the material, now completely dry and odourless, is spread in the barn.





## BREEDER PROFILE

BY MICHEL DOSTIE Editor

Translation by Nicole De Rouin



## The Valrick Herd Aiming for all VG or better

t was during his internship in dairy production, while completing a DVS in Saint-Hyacinthe, that Stéphane Lavallée fell under the charm of good-looking cows. Diploma in hand, he broached the subject of genetic selection with his father, Gérald Lavallée. Since then, registering animals under the Valrick prefix has been a high priority at Ferme Gérald Lavallée et fils, located in Saint-Louis, near Saint-Hyacinthe. In the early 1990s, Stéphane began building his herd with the National Livestock Identification Program (NIP) and has systematically worked his way up through the ranks.

The performance of the Valrick herd on the show circuit highlights that success. Stéphane got his start in the showring with the Godin family, from Saint-Aimé. That experience soon enticed him to show his own animals. Shortly thereafter, some Americans made an attractive offer for one of his heifers, prompting him to continue his herd improvement in that direction. In 1997, only a few short years after establishing his purebred herd, Stéphane won both Junior banners at the Sorel-Tracy show.

A true cow enthusiast, Stephane decided that his dairy cows would also be involved in the show circuit. The results have certainly been encouraging, so much so that he brought home both the Breeder and Exhibitor banners from the Sorel-Tracy show four out of five years between 2011 and 2015. At the same show in 2015, the ribbons for Breeder's Herd, Grand Champion and Reserve Grand Champion all went to animals bearing the Valrick prefix. A few weeks later, the herd repeated the performance in Saint-Hyacinthe, where, in addition to winning Breeder's Herd, one of the group, Valrick Charlie Melodie, VG-89-3yr, a granddaughter of Ursuline, won top honours in the Junior Three-Year-Old class as well as Best Udder, Champion Bred and Owned, and Grand Champion.

#### A closely monitored herd

Although Valrick Storm Ursuline, EX-92 3E 6\*, was the first cow bearing the Valrick prefix to be classified EX, she never finished first in the showring, making do with many third place rankings. Stéphane Lavallée, who co-owns the operation with his father Gérald, maintains "it was because she was a small cow." Nonetheless, her family has demonstrated the value of its roots. Ursuline is dam to eight daughters, classified five EX and three VG, and



In Saint-Hyacinthe, in 2015, the Lavallée family proudly poses with Grand Champion Valrick Charlie Melodie. From left to right: Stéphane Lavallée, Sonia Fulham, and their three children, Jean-Samuel, Julien and Laura-Élyse.

the herd's performance in the showring owes much to her qualities. Her first daughter, a heifer by *Dolman*, was brought to the Judging Conference and surprised all by winning not only her class but capturing the titles of Junior Champion and Grand Champion Honourable Mention as well. That was enough to bolster the breeders' interest in the show circuit and

## Ferme Gérald Lavallée et fils (Valrick)

Owners: Gérald Lavallée and his son Stéphane

**Number of animals:** 115, all bearing the Valrick prefix with the exception of one recently purchased cow.

#### Number of cows in milk: 44

Classification: 12 EX, 40 VG and 8 GP

Average production per cow: 10 400 kg, with 4.2% fat and 3.6% protein

BCA: 220-241-227

#### Quota produced: 59 kg of fat per day

**Crops:** 27.5 ha seeded to grain corn and silage corn, 29 ha devoted to grass silage and some hay (10%), and 5 ha of pasture. The farm purchases hay to feed the herd. Gérald Lavallée is in charge of the field work.



prompt them to plan an embryo flush by *Dolman* for this "too small cow." The results exceeded their expectations. *Ursuline* produced eight embryos, generating seven pregnancies that, wonder of wonders, led to the birth of seven heifers, classified four EX, two VG-88 and one VG-86, all without recourse to sexed semen. Stéphane maintains the family is remarkable not only in the showring but on the farm as well, since the animals are so easy to raise.

The Valrick herd also draws on the family of Valrick Sid Mironde, EX-92 3E 1\*. From the family of Carsondale Mandingo Dana, TB 3\*, Mironde's dam is classified EX and her granddam VG. Like her predecessors, Mironde has been able to transmit her good conformation to her progeny and is the dam of three classified daughters, two VG-88 and one VG-87, in addition to eight heifers. In 2011, as a senior three-year-old, Mironde brought attention to the herd by winning Honourable Mention in Sorel-Tracy as well as placing fourth in her class and winning Best Udder and first Bred and Owned at the Spring Show. Numerous callers visited to the farm afterwards, thanks in particular to the CIAO's initiative, to see both *Mironde* and her progeny. Mironde has also proved to be a good dairy cow, with a yield of 66 336 kg of milk in five lactations (247-264-251).

Additionally, the herd can now count on the recently purchased *Rubis Goldsun Luminense*, VG-86-3yr. A descendant of the family of *Laurie Sheik, Luminense* is the daughter of *Rubis Alexander Lumen*, EX-91 2E, and represents the family's ninth consecutive generation of cows classified VG or EX.

In Saint-Hyacinthe, in 2015, Valrick Charlie Melodie, VG-89-3yr, won first Junior Three-Year-Old and Best Udder in addition to Champion Bred and Owned and Grand Champion.

#### High conformation sires

Stéphane Lavallée bases his sire selection first and foremost on conformation, since one of his breeding goals, in addition to earning a Master Breeder shield, is to own a herd of animals all classified VG or better. To that end, 10 per cent of the bulls he selects are proven sires that rank among the best of the breed and score at least +15 for conformation. The other 90 per cent of services are reserved for genomic young sires with a minimum score of +16 or, ideally, +17 for conformation. The second factor to be considered is fat. Stéphane is confident that their preference for genomic sires is not a risky strategy for the herd; instead he sees it as is a requirement for anyone who wants to keep pace with breeding today.

Three or four times a year, some of the matings are done for the purpose of collecting embryos. The cows they use for this operation are those that have established their worth in the herd. As Stéphane explains: "They must have some experience." Hence, even if a yearling heifer is the daughter of an elite cow, she will have to produce a calf before being used for an embryo flush. Likewise, adds Stéphane, even a cow classified EX will not be used for embryo production until she has demonstrated the ability to transmit her good traits. This approach greatly reduces the risk factor that is often associated with genomics, explains Stéphane. Ordinary yearling heifers and milking cows are used as embryo recipients. Stéphane believes that relying solely on beauty may jeopardize the herd's development. For now, the embryos harvested on the farm are used primarily to improve the herd, with the exception of those of *Valrick* Charly Melodie, which may be made available for sale.

In line with the breeders' agenda for herd improvement, all the heifers are reared until their first calving. Any animals from the Valrick herd that are sold are thus good milk producers. There is no question of selling cows to clean up the herd, says Stéphane. "We like to keep our customers happy," he concludes.



Valrick Storm Ursuline, EX-92 3E 6\*, the first cow bearing the farm's prefix to be classified EX, is the dam of eight daughters, classified five EX and three VG.



BY MICHEL DOSTIE Editor

Translation by Nicole De Rouin



## Some superb construction projects Put in some thought before getting out the tool box

Ianning the construction of a new barn or refitting an existing building requires a good deal of preparation. Do you want a conventional cow barn or free-stall housing? What type of materials and equipment do you want? There is no shortage of options. For an experienced breeder, it may seem quite simple, but when the project involves investing one or two million dollars ... you can be sure that an ounce of preparation is worth a pound of cure!

Some of the many aspects that need to be considered are often forgotten or overlooked. Christian Lemay, an engineer with Consultants Lemay et Choinière inc., in Ange-Gardien, in the Montérégie area, and Luc Robitaille, junior engineer with Fusion expert conseil inc., in Drummondville, agreed to answer some questions for *La Revue*.

The first item that producers tend to overlook is the legal aspect of a project. Not only does one need to obtain a permit from the municipality concerned, but permits are also required from the Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques as well as the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec (MAPAQ). Municipal regulations concern aspects such as building location, required separation distances, building characteristics, in particular those of the milkroom, manure pits, etc. Because municipalities are autonomous in this regard, they are the first door to knock on. It generally takes at least three months to obtain the necessary permits. and it may take longer if a special dispensation is required. Hence, Mr. Robitaille advises starting the application process at least a year in advance.

Furthermore, Mr. Lemay points out that a certificate of authorization that is valid today will probably not be valid if changes occur, for example, an increase in the size of the herd or the levels of phosphorous (P205) produced. He stresses that when filling in the application forms for the various permits and the certificate of authorization, it is important to plan for medium- to long-term needs to avoid having to repeat the whole process a few years down the road.

## Planning requires more than just a plan

According to Luc Robitaille, the planning phase of a new construction project should take longer than the actual construction phase. In a conference he gave at the 2015 Dairy Cattle Symposium, he presented a typical timeline for a construction project scheduled to begin in the spring of 2016. He suggested in this case that the planning begin during the winter of 2015, more than a year before the construction work was scheduled to begin (Table 1). Mr. Robitaille also mentions that breeder satisfaction with regard to a construction project is directly proportional to the time devoted to planning it. He stresses that it is essential to control the inclination to build as fast as possible, quoting the old saying: "The devil is in the details." He also emphasizes that thorough planning is not costly and leads to more appropriate choices that can result in considerable savings for producers.

The engineer in charge of drawing up the plans will need to take a number of factors into consideration, such as the particulars of the site, the location of existing buildings, any regulations that apply to the project, in addition to the topography of the site and specific soil characteristics. He will need to validate each step of the plans in accordance with existing regulations. All this while also taking into account the producer's preferences for carrying out routine tasks. These concerns are presented in Figure 1. The engineer may have some suggestions, but both Mr. Lemay and Mr. Robitaille stress that producers must do their homework first.

#### Farm visits are a must

Part of that homework is to visit other farms that have facilities that are likely to be of interest to the producer. A short stop is not enough however. Mr. Lemay suggests a oneto two-day visit or, ideally, working on the farm, since the work routine may differ considerably among individuals, particularly in the case of a breeder whose animals are currently housed in a conventional barn and who is thinking of building a free-stall barn. Not only will the breeder have to choose between the various systems for feeding and milking, such as robotic milking, a milking parlour or a carousel setup, he will also have to envision how and where, for example, veterinarian, inseminator, hoof trimmer and delivery visits will take place.

## Planning after a fire

Major construction projects often take place following a fire. Because breeders are always in a hurry to resume production in these circumstances, one might expect the planning to be botched.

This is not usually the case however, says Mr. Robitaille, since producers in this situation are freed from the daily work of animal care and have more time to devote to planning the project. Hence the project is generally efficiently planned and can be executed in a shorter period of time. According to Mr. Lemay, it is important to look at more than just the equipment during a farm visit to get the whole picture. Visiting producers need to imagine what it would be like to work there, and take note of, for example, the arrangement of barriers used to quide the animals. All these details must be assembled to ensure that the proposed plans correspond exactly to the producer's needs. Any new facility will inevitably require changes to a producer's routine, and the more the producer is aware of his preferences, particularly with regard to actions that are repeated frequently in the course of day's routine work, the more likely the plan will be a good fit. During the planning phase, it is important to think beyond the cow barn and also look at any accompanying infrastructure needed and its location, such as housing for replacement animals, silos, the hay barn, the manure pit, and even the bedding shed. A farm visit should also be an opportunity to identify any equipment or facilities that a producer deems unsuitable. "Eliminating options is not a waste of time," Mr. Robitaille adds.

The need for medium- and long-term planning applies to facilities as well as to permits. As Mr. Lemay explains, more cows often go hand in hand with more farmland and more efficient machinery. That means producers have to plan for the investment needed to acquire such equipment, in addition to building or expanding the garage and the shed.

The engineers also stress that it is important to ask specific questions during these farm visits. Obviously most people would rather avoid dwelling on their mistakes, which means the host producers may keep some information to themselves. So it is the visitor's job to glean as much information as possible by asking the right questions. Nothing is every completely black or white so the important thing is to pay attention and listen carefully to identify the compromises the producer has been willing to accept. For example, says Mr. Lemay, one producer may look back unhappily on the five days last year when his system wasn't operating properly, while his neighbour may be very pleased that his system is functioning well and cite as proof the mere five days when it malfunctioned. It is a question of the glass being half full versus half empty. Breeders need to demonstrate good critical thinking skills and analyze the information in line with their own personalities, and be aware of how they would react in particular situations.

Table 1 : Proposed planning schedule Planning schedule		
Farm visits	Winter 2015	
Preliminary plan	Spring 2015	
Budgetary assessment, financing	Spring 2015	
Environmental study	Spring 2015	
Application for permits and environmental approval	Early summer 2015	/
Plan for tendering	Early fall 2015	1
Tendering period	Late fall 2015	
Confirmation of financial framework	Late fall 2015	
Decision-making visit	Fall 2015 – winter 2016	
Choice of equipment and contractor	Fall 2015 – winter 2016	
Review of building plan	Winter 2016	11/1
Construction	Spring 2016	11

L'INGÉNIERIE EN ÉBULLITION

Source: Image taken from a conference given by Luc Robitaille, junior engineer, at the 2015 Dairy Cattle Symposium.

Likewise, Luc Robitaille underlines that it is important to visit farms in regions other than the one in which one resides. Due to established practices or a particularly active equipment supplier, it is highly likely that any new facilities in a given region will be similar. Getting out of one's comfort zone to see how things are being done elsewhere gives breeders the opportunity to discover methods and equipment that may be better suited to their needs or likes. Hence farm visits are more important in terms of planning one's daily work routine than just seeing the equipment.

Odours are another factor that needs to be considered. Legislation stipulates separation distances, but breeders are responsible for ensuring that stale air expelled from the buildings isn't blown right back in by the wind, thus reducing air quality for both animals and workers. All of these factors will influence the construction plans and specifications. Producers will have choices to make and the engineer can only present the strengths and weaknesses of the various options available. Breeders need to have given the matter a great deal of thought and clearly explain their needs and wants to the consultant before the plans can be drawn up.

In the likelihood that today's choice may need to be altered later, breeders would be wise to opt for a setup that can be modified easily. As Mr. Lemay points out, it is easier and less costly to add concrete than it is to remove it and build a new structure.

#### **Everything has a price**

Breeders also need to think about the budget available for this type of change to the productive structure. A realistic budget must be drawn up and breeders are strongly advised to take advantage of the expertise of financial advisors at the financial institutions or farm credit organizations and make sure that financing is secured prior to the start of construction. The budget must account for the buildings as well as the equipment they house and any machinery that may be required because of the increase in herd size and acreage under cultivation. Finally, thorough planning should eliminate the "while we're at it" factor, which generally sends costs soaring.

The budget should also reflect two practical considerations. First, say the engineers, it is important not to make the budget too tight, allowing a five per cent margin for contingency. Moreover, producers need to be able to compromise between their ideal and what is economically justifiable. Bearing in mind that every choice impacts the cost of the project and the profitability of the farm, putting the square metres in the right place and knowing how to strike a balance between the minimum standard, which is often sufficient, and one's ideal is a sound approach. Moreover, adds Mr. Robitaille, no amount of equipment can replace good management, and efficient management is the key to greater profitability.



Figure 1:

Topics to investigate before undertaking a construction project and for which the engineer is available as a resource person.



The engineers point out that producers generally want to manage their projects themselves, based on the plans and specifications provided by the engineer. Hence they consult the various suppliers and contractors who can then submit a quote based on the plans. Three guotes from different suppliers or contractors are generally sufficient. Before making a choice, it is a good idea to speak with producers who have already done business with the people in question and to go and see some of the work they have done to make sure it is to one's taste and meets one's requirements. If there are any doubts or inaccuracies, the engineer can provide advice.

Mr. Robitaille mentions that it is important to be wary of quotes that specify an hourly rate without making any commitment as to the total cost to be paid by the breeder. This type of proposal is often seen for excavation work or electrical installations. It is the type of situation where the extras can multiply insidiously, to the detriment of the operation. Hence, it is in the breeder's interest to request quotes based on a specific plan and to get a fixed price from each potential supplier. Once an agreement has been reached, it is essential to make sure one has a signed contract that clearly defines the responsibilities of both parties. Choosing a contractor that one knows and relying solely on their word can result in some unpleasant surprises.

Finally, one should be wary of suppliers that are overly insistent, claiming that the special price will end soon, etc. It is important to be familiar with the particulars of the plans and specifications in order to make good choices, which must be confirmed with suppliers before the work begins to avoid the delays in delivery that are the norm rather than the exception.

#### **Site supervision**

Most producers like to supervise the construction site themselves. Mr. Robitaille suggests designating a specific person from the farm team to be in charge of supervision, someone who is always present on the site and to whom all the service providers can refer. This implies however that the other owners or employees will have to accept an increased workload during the construction phase. Since workloads are almost always overwhelming on a farm, planning the work during the construction period must be a priority.