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Holstein Québec

Ferme Del Rio

Primarily forage milk

Ferme Mondou et Robert

An interest in both milk and field crops

Refurbishing an old building

A thousand options and just as many calculations



Photo : Odrey Caron

BY
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Translation by
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Can the old barn still be put to use?

When there's a plan to build a new barn, the question of what to do with the old one often comes up. And that's exactly when you need to ask that question, agree Christian Lemay and Luc Robitaille, both engineers, the former for Consultants Lemay & Choinière inc. and the latter for Fusion expert conseil inc. Asking the question at the end, when it's time to transfer the animals, can lead to a few surprises. It's far better to plan the project as a whole.

An old building can obviously serve a number of different purposes: animal housing, office space, a new dairy, a workshop, or even a machinery shed. In some cases, the need to renovate or expand an existing building may be motivated by limitations with regard to space or terrain. The possibilities depend on the size, quality and type of construction of the building in question. The first step, stresses Christian Lemay, is to assess the state of the building, taking a close look at not only the roof, windows, siding and insulation, but also the overall stability of the structure. If there are any doubts about any of those aspects, an engineer's expertise could prove helpful.

If everything needs to be redone, however, it's highly likely that building anew will be the more economical option. If the renovation estimate climbs to 50 to 70 per cent of the cost of a new building, then you might want reconsider your plan to renovate. As Luc Robitaille points out, if the refurbished building is expected to last

a good ten years, then it's probably justifiable to renovate. On the other hand, if it's easy to see that the siding will need to be redone or the windows changed within the next five years, then a new building might make more sense. But the engineers stress that to really be able to compare, you need to have a good idea of the cost of a new building. Taking it for granted that a renovation will be less expensive is a common error.

The evaluation should include an analysis of the structure. While there are generally no problems if you don't touch anything, if you're thinking of making any changes, even minor ones, it's best to exercise caution, and consulting an engineer is strongly recommended. Modifying the structure of a building is certainly possible, and there are ways to do it, but the calculations need to be made ahead of time, as much for safety reasons as for cost, particularly if indirect action is expected, for example, snow accumulating in

a different area as a result of the changes. The structural analysis of an old building should also take into account the position of the columns that support the roof. Although they can be moved, they need to be placed correctly to ensure the stability of the building.

The low ceilings often found in these old buildings also pose a few constraints. In addition to blocking ventilation, they may also prevent the installation of an automatic feeding system, which will have an impact on labour efficiency and, consequently, on an operation's finances.

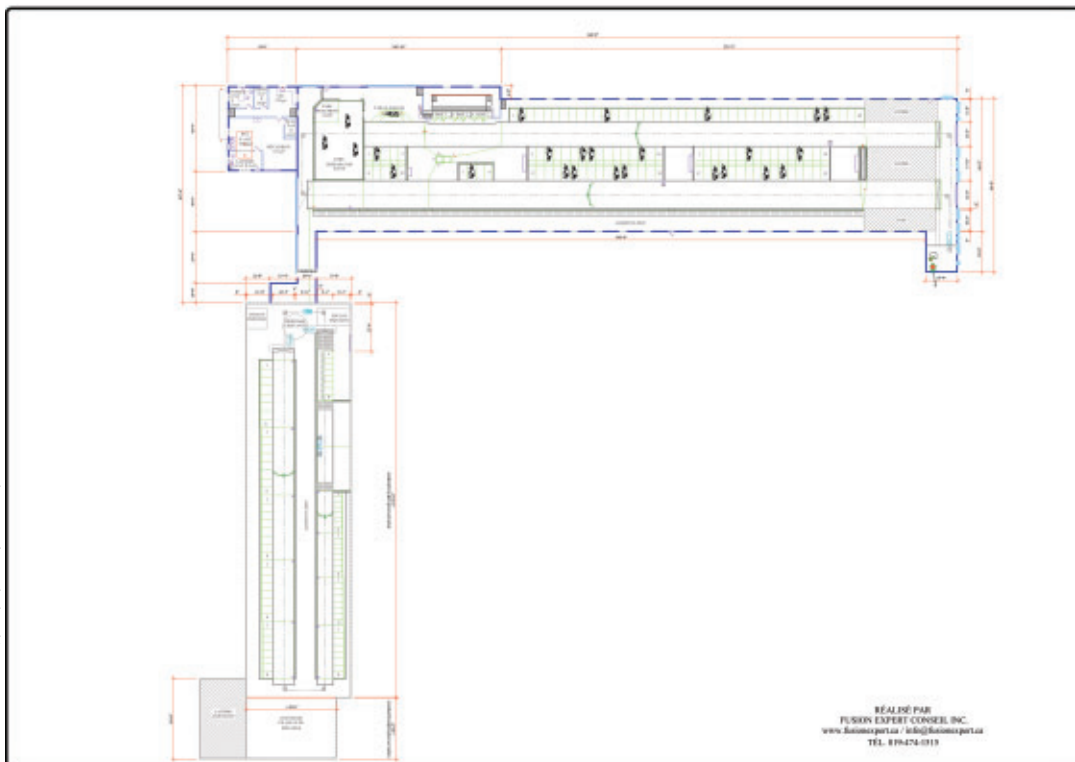
Increasing herd size

Christian Lemay points out that a new building is often planned with the aim of increasing herd size. In this case, he stresses, if you're keeping more dairy cows, unless you have no plans to raise all your replacement animals, you will also have more heifers and yearlings, which will be housed in free stalls. Hence it's important that the planning take into account the fact that open housing requires more space than tie-stall housing, maybe even double the space. So an old barn that housed 50 lactating cows probably won't be able to accommodate more than 25 yearlings or dry cows.

In other situations, Luc Robitaille explains, the reclaimed space may look expansive, making it very tempting to push the limits a little and house a large number of animals there. For example, a relatively large old barn, say 40 feet, would be too big for one row of free stalls, but too small for two. In this case, it might be tempting to reduce the space reserved for feed or traffic alleys, or the scraper, so as to squeeze in two rows of free stalls. But doing that will affect cow comfort, which in turn will reduce herd performance



This nursery facility was installed in an old mansard-roofed barn.



The refurbishment of the existing barn was planned in tandem with the construction of the new building.

and farm profitability. So it's not a good idea to cut corners on animal comfort, say the engineers, because the savings aren't likely to be worth it.

In this case, expanding the barn with a pentice might be a more valid investment. This same type of structure can also be used for narrower buildings. One of the outside walls is removed, but the support structure stays in place or is modified to ensure safety. This approach can be used to expand an existing building so as to be able to convert it to open housing and integrate a robotic

milker, which may be an economical option if you don't intend to increase the size of your herd.

Three questions

Once it has been determined that the old building can be repurposed, the question remains as to how it can be adapted to meet future needs. In short, refurbishing an old building should meet three requirements, depending on the type of animals that will be housed there. The facilities must be designed with a view to ensuring efficient feed distribution, safe handling and adequate

comfort for the animals, and adequate manure management.

Some examples

Beyond housing for heifers and dry cows, another option to consider is a nursery facility. The space available will likely be adequate and the position of the columns is not really an issue, even for cleaning. In many cases, the gutter can still be used as well. In the case of a nursery, insulation requires special attention. The new facility must also be separated from the other buildings to avoid the risk of drafts. Lastly, access to an outside wall is useful for ventilation purposes.

To transform an old building into a garage, the situation is somewhat different. Firstly, due to the height of the ceiling, the structure will need to be modified; while that is possible, it does incur costs that may be difficult to justify. So there are no pre-established rules, say the engineers; it's important to weigh the merits in each case.

Luc Robitaille explains that it is also possible to repurpose an old manure pad, especially if it is already covered. Since planning a new building often involves reworking manure management, the old pad may no longer serve a purpose. It can thus be filled with sand to raise and level the floor, before



Photo : Courtesy of Fusion Expert conseil inc.

These yearlings are comfortably housed on a former manure pad.



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Photo : Ferme Roystein, gracieuseté des Consultants Lemay & Choimière inc.

An old tie-stall barn was converted into a heifer barn.

pouring a new concrete slab. Once the finishing has been done, the equipment can be installed and the area can then be used as a barn for yearlings or dry cows, or the robotic milkers can be installed there so the new structure can be used exclusively to house the herd.

A few surprises

Obviously, as with any renovation project, there will likely be a few surprises along the way. The least foreseeable of them, says Luc Robitaille, is what you find when you remove

the old concrete floor, particularly in barns built before 1990. Instead of simply having to break up four inches of concrete, as would normally be expected, the farmer is often faced with two or even three layers of concrete, which – another surprise – are sitting on a bed of rocks rather than sand. The “unexpected” can certainly delay the completion of the project, and increase the cost as well. So it’s a good idea to ask all your questions and get as much information as possible before undertaking the project. ■



Photo : Ferme Poutre, courtesy of Consultants Lemay & Choimière inc.

Building a new barn frees up an old building. The use of that space for animal housing or other purposes should be planned at the same time as the new building



BY
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Del Rio Herd

Where longevity abounds

At Ferme Del Rio, in Saint-Eugènes-de-Guiges, in the Témiscamingue region, purebred Holsteins have been in residence since 1957. Today, with two Master Breeder shields to their credit (1988 and 2001), the owners operate a herd that has more than earned those honours.

DEL RIO HERD

Number of head : 175, including 82 lactating cows

Production : 12 161 kg of milk with 4,6 % G et 3,3 % P

BCA : 262-324-271

Quota : 100 kg BF/day

Classification : 10 M EX, 6 EX, 45 VG and 30 GP

Crops : 52.6 ha in alfalfa and bromegrass for silage; 56.2 ha in timothy, bromegrass and orchardgrass; 18 ha in silage corn; 102 ha in barley; and 24.2 ha in oats.

consecutive Superior Lactation certificates, a Super 6, and has a lifetime production of more than 160 000 kg of milk, with more to come. At the age of 13, she is currently in her seventh lactation. Following her sixth calving, *Deesse* ranked fourth in Quebec for total milk production for the period ending 30 November 2018.

Another example of a high-producing cow is *Del Rio Missy Baxter*, VG-87, a descendant of *Del Rio Pauline Chieftain*, VG 5*. *Missy* has produced 69 617 kg of milk in four lactations, and the 5.9 per cent fat content of her milk, with a BCA of 465 for that trait, is much appreciated by her owners. *Del Rio Venus Dundee*, EX-91 4E 2*, another high-yielding member of that family, has a lifetime production of 72 479 kg of milk and is the dam of two EX daughters. One of them, *Del Rio Matilda Final Cut*, EX-92 5E 1*, a My Favorite Cow candidate for the Témiscamingue Holstein Club in 2017, has a lifetime production of over 80 000 kg. At the age of 9 years and 8 months, she recently began her



Del Rio Matilda Final Cut, EX-92 5E 1*, a My Favorite Cow candidate for the Témiscamingue Holstein Club in 2017, is now in her seventh lactation. Her lifetime production to date tops 80 000 kg.

seventh lactation, which is expected to yield 13 129 kg, with 4.6 per cent fat and 3.3 per cent protein. Her daughter *Del Rio Diva Paramount*, EX, represents the family's third generation of EX cows.

Now it's the line of *Del Rio Splendeur Blitz*, EX 3E, that seems set to shape the future of the herd. *Splendeur* is a high-producing cow, with five Superior Lactations, a Super 5, and a lifetime production of more than 100 000 kg of milk in six lactations. One of her daughters, *Del Rio Nora Final Cut*, EX 3E, has recorded three Superior Lactations, a Super 3, and a lifetime production of over 80 000 kg of milk in five lactations. She also stands out for the 5.7 per cent fat content for her last lactation.

Selecting for conformation

Sébastien Jacques, who is responsible for the herd, explains that their selection process focusses on conformation. "With large, well-fed cows, the milk comes naturally," he says. Accordingly, the herd has a classification average of 85 points, with 67 per cent of the cows classified VG or EX.

Since the farm hasn't purchased an animal since 1964, the herd has essentially been developed from within, and is particularly noted for its longevity. In fact, among the cows currently in the barn, 8 have a lifetime production of over 95 000 kg, and several of them are over 7 years old and a few have even reached the age of 12.

Del Rio Karine Tempo, VG 9*, is the source of 50 per cent of the herd's animals. Bred when Yvan Jacques was at the helm, *Karine's* descendants include *Del Rio Deesse Blitz*, VG, representing the eighth generation of VG or EX cows. *Deesse* has earned six



Photo : Courtesy of Ferme Del Rio

The buildings at Ferme Del Rio inc., in Saint-Eugènes-de-Guiges, in the Témiscamingue region, where 67 per cent of the cows are classified VG or EX.

A family operation

Ferme Del Rio inc. currently has five shareholders: Marjolaine Lavigne, Yvan Jacques, and their three sons, David, Jonathan and Sébastien. Yvan's father, Jacques Jacques, an avid farmer who appreciated good-looking cows, started the operation in 1957. Yvan has followed in his footsteps, with the same passion for breeding. He affirms that without the purebred herd, he would have been far less interested in taking over the farm. That enthusiasm motivated him to take part in three annual shows for a number of years and to keep tabs on breed development, all of which led to hosting the 1999 Holstein Québec Picnic on the farm.

For the younger generation, however, taking part in the show circuit is so time-consuming that they no longer show their animals. Moreover, since a large part of their livestock business is with Ontario, profitability is less evident. They do, however, register their animals in the Coupe des éleveurs, organized by the Témiscamingue Holstein Club.

Nowadays, Sébastien is in charge of the herd while David manages the crops and the field work and Jonathan takes care of the machinery. Their mother, Marjolaine, assumes the farm's administrative duties. Despite that allocation of roles, however, the whole family is active in all aspects of the operation, with six of them in the barn every morning for the milking. One permanent and one casual employee complete the team.



The Jacques family, from left: Marjolaine Lavigne, Sébastien, Jonathan, Sandra, David and Yvan Jacques. Sandra and her partner, Justin Holeksa, operate the Sanexa herd and specialize in breeding heifers with high genetic value.

The breeders thus focus their attention on sires that have a conformation proof of +13. Proven sires are used for 95 per cent of their matings while genomically proven bulls are used for the rest. They make one small exception to this principle, however, for fat yield. "We've always selected for that," Sébastien affirms.

Obviously, the individual traits of each cow are taken into account as well. So a bull with strong confirmation traits but lower scores for milk could be used with high-producing cows. Since 1980, embryo transfers have also been used as a tool for genetic improvement. But that was an expensive endeavour at the beginning, explains Yvan Jacques, because they had to bring in two veterinarians by plane to have access to the service. Nowadays, a veterinarian from the region visits four or five times per year, and the breeders intend to use this technology more often in the future. Lower ranked heifers are used as embryo recipients.

A second focus: forages

The Jacques family hopes to produce as much milk as possible with forages, which explains why they breed cows that are able to consume a lot of it.

They have been growing silage corn since 2005, and it constitutes 35 per cent of the ration, while alfalfa-bromegrass silage, stored in three different silos, makes up the

bulk of the ration. As Sébastien explains, emptying the three silos simultaneously ensures that feed quality remains constant. Two cuts are sufficient, Sébastien says, and it means the pastures can be kept productive for four or five years. The ration is completed with high moisture barley and a supplement containing 40 per cent protein. A mix of timothy, bromegrass and orchardgrass hay is also harvested to feed the yearling heifers and dry cows.

A third Master Breeder shield

Obviously, the breeders hope to get a third Master Breeder shield one day, but that dream has been delayed somewhat since they lost several good cows, including four EX, in 2004, from a problem with stray voltage resulting from the installation of a new milkline. "We had new cases of mastitis every

week," recalls Yvan Jacques. While that difficulty has slowed the accumulation of points, the breeders say that it's only a matter of time.■



Del Rio Diva Paramount, EX, a daughter of Matilda, represents the family's third successive generation of EX cows.



Del Rio Splendeur Blitz, EX 3E, is at the head of the herd's next brood family, a bloodline noted for its high milk yields.



Del Rio Nora Final Cut, EX 3E, a daughter of Splendeur, has three Superior Lactations and a Super 3 to her credit, with a lifetime production of over 80 000 kg of milk in five lactations.



BY
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Ferme Mondou et Robert Where breeding and field crops go hand in hand

In 1999, Michel Robert, at the age of 33, became Holstein Québec's youngest president, a position he held until 2001. The experience taught him a great deal about teamwork and delegating responsibilities, he says, and it also had a decisive influence on the future of his farm. In 2001, he and his partner, Lorraine Mondou, attended the National Holstein Convention in Western Canada, where he had the opportunity to visit some impressive free-stall barns, a discovery that overturned a number of prejudices.

FERME MONDOU ET ROBERT AND SERVICES AGRITEM INC.

Number of head : 310 cows, 160 of which are lactating

Production : 10 508 kg with 3.8% F and 3.3% P

BCA : 226-231-236

Quota : 230 kg BF/day

Classification : 3 M EX, 4 EX, 49 VG, 93 GP and 27 G

Crops : 810 ha under cultivation, of which 570 ha are devoted to cereal production, 50 ha to silage corn, and 182 to an alfalfa-timothy (70%-30%) mix, 80 per cent of which is stored as silage. The corn is seeded early, under a biodegradable film, and harvested in mid-September.

Michel and Lorraine's plan to build a new 100-head tie-stall barn would need to be reconsidered. A neighbouring farm that had been for sale for some time but had never interested the couple became an opportunity they couldn't pass up.

For the next 11 years, the cows were housed in two barns, as Michel was set on keeping his best cows in the old facility. But then a

The free-stall facility at Ferme Mondou et Robert, in Saint-Eugène-de-Guigues, in the Témiscamingue region.

study conducted by Valacta on labour efficiency made him realize that that practice was hindering the productivity of his workforce. Since then, all of the dairy cows have been housed free stalls.

The next chapter for Ferme Robert et frères

Until Michel acquired it in 1993, the Cameroun herd was operated by his father and his uncle. Among the animals in the herd at the time, Michel especially remembers *Cameroun Anthony Ronita*, VG-3yr 2*, a cow that, with four Superior Lactations and a lifetime production of over 90 000 kg, was influential in the herd's development. One of *Ronita's* daughters, *Cameroun Jubilant Rosina*, EX 4*, drew a great deal of attention to the farm after she was sold to Ontario interests, and then ended up at Alta Genetics. In 1993, she was nominated All-Canadian Senior Three-Year-Old.

Michel also remembers *Barka Mark Anthony Renelle*, EX 2*, a cow that recorded a lifetime production of more than 100 000 kg, with four

Superior Lactations. *Renelle* produced seven daughters, four of which were classified VG. *Cameroun Stormatic Realy*, EX-91 8E 2*, a descendant of that family, completed her tenth lactation at the age of 14, with a lifetime total of 115 207 kg of milk.

The herd also benefited from the presence of *Laurenda Astre Cynthia*, VG-86-3yr, a cow that Michel and Lorraine acquired in 1999, when they purchased a small herd. A daughter of *Laurenda Carolina*, VG-86 3*, *Cynthia* produced two VG daughters, including *Cameroun Lheros Cygne*, VG-86-3yr 1*.

Looking to the future, the breeders are focussing their attention on *Cameroun Gillespy Stony341*, EX, a cow that earned a Superior Lactation with 15 949 kg of milk after her second calf, at 2 years and 10 months. She is currently 130 days into her fourth lactation, which is projected to yield 15 257 kg. Now that embryo transfers are more easily accessible in their region, with a veterinarian coming in four or five times a year, this winner of the Témiscamingue Holstein Club's *Coupe des éleveurs*, will be



Photos : Ferme Mondou et Robert



***Cameroun Gillespy Stony341*, EX, earned a Superior Lactation certificate for her second lactation, at 2 years and 10 months, with 15 949 kg of milk. With embryo transfers now more readily accessible, this cow will be particularly involved in developing the herd.**

exploited more intensively for that purpose. Michel Robert justifies the decision, saying “the family has good scores.” Indeed, *Stony* has an LPI of 2976, her daughter has an LPI of 2966, and her granddaughter a PA LPI of 2937.

Selecting for open housing

Their daughter Amélie’s partner, Michaël Courtemanche, manages the herd. For him, selection is based first on meeting the requirements for free-stall housing, and there’s is no room in that environment for cows that are overweight or slow to milk. Hence, he looks for proven sires that have a proof of at least +10 for conformation, or genomic young sires with at least +12. He takes into consideration not only the rump, but also the feet and legs, in particular heel quality and rear leg rear view. Lastly, for health traits, such as herd life, SCC, and dermatitis, proven sires must score over 100 and genomic sires over 110.



Michaël Courtemanche, herd manager, with his daughter Flavie at milking time.

When a new proof is published, between six and ten sires are selected. Computer matches are then done for each mating. Right now, the best cows are inseminated with sexed semen, those in the middle of the pack with conventional semen, and the rest with beef sire semen. Those three groups will soon be reduced to two: the best and the rest for beef sires. The number of good cows inseminated with sexed semen will depend on the number of heifers needed.

The next generation gets involved

The Mondou-Robert family has five children. Amélie, who graduated as a high school math teacher, is devoting all her energy to her two young children at the moment, but she keeps a foot in the door as a substitute teacher, in addition to taking care of the farm’s bookkeeping. Michaël, an ITA-La Pocatière campus graduate, has been working on the farm full time since finishing school. As for the other three children, Marie-Christine works for Les Chocolats Martine, in Ville-Marie, while Cédric and Yannick work in computer science and electromechanics, respectively.

One permanent employee and two foreign workers complete the team. Thanks to the latter addition, the cows are now milked three times a day. During the summer months, Michel’s father and uncle lend a hand as well.

A family meeting is held every Monday morning, a routine that is part of the management tools developed by Lorraine and Michel, both members of the Groupes conseils agricoles, who pay close and constant attention to efficiency.

The transfer of the farm to the younger generation is underway, and the family has set a 5-to-10 year time horizon to complete the process. To that end, a strategic plan has been developed and the psychometric profiles of each of the family members are used to enhance communication.



The Mondou-Robert family: in front, Amélie, Marie-Christine, Lorraine, Michel and Yannick; behind, the two sons-in-law, Michaël Courtemanche and Danik Sarrazin, with Cédric and Michaël.

The field crop sector

In addition to running the farm, Michel Robert also worked as a seed sales representative for Semican, where his responsibilities included crop conditioning and marketing, a sector that was of particular interest to him. Michel and Lorraine had been toying with the idea of doing the same on their farm, when, in 2016, a field crop operation with a dryer, a crib, a 4500-t grain storage capacity and 324 ha of farmland went up for sale. The couple decided to take the plunge, launching Services Agritem inc. and engaging their son-in-law, Danik Sarrazin, an agronomist and crop production specialist, as their sales representative.

With that purchase, in addition to another 122 ha of farmland acquired in 2018, the breeders now grow 810 ha of cereal crops, with 194 ha in malting barley, 80 in wheat, 75 in canola, 48 in buckwheat, 134 in soybeans, and 40 in hullless oats. In addition to crop production,

this second business also includes conditioning and marketing operations. More specifically, food wheat, grown according to *Agriculture Raisonnée™* specifications, with no pesticides applied between seeding and harvest, is supplied to Les Moulins de Soulanges.■



Cameroun Stormatic Realy, EX-91 8E 2*, completed her tenth lactation at the age of 14. Her daughters and granddaughters are now positioned to shape the future of the herd.