



FCC Knowledge Podcast Season 4 – Episode 2

Carbon-neutral milk: Living into sustainable dairy

PODCAST TRANSCRIPT

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Interviewee: Amy Tolhurst (AT)

AS: From AgExpert, it's the FCC Knowledge Podcast, a show that features real Canadians in agriculture, real stories, and real good conversations about the business of farming. I'm your host, Aimée Stang.

AT: Whatever is being presented to us as the issue or being presented to us as the thing that has to change has to come with a defensible reason.

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AS: In this episode, we're talking with Amy Tolhurst about her family dairy farm in Howick, Quebec, and her participation in the Living Lab Carbon-Neutral Milk, an ongoing collaborative research project on Quebec dairy farms. The project is focused on testing and developing best practices in dairy production to reduce the environmental footprint of the sector. This Living Lab is focused on working with producers to develop and test beneficial management practices, BMPs, on the farm to help reach net zero greenhouse gas emissions in the dairy industry. This research project is managed by Novalait, a research organization created by Quebec dairy farmers and processors. Twenty farms, including Tolhurst Farms, in four regions of the province are involved in projects specific to their operations and priorities.

Here's Amy to give us a little history of Tolhurst Farms.

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AT: My father-in-law was brought up on a farm in Cartierville, which is north of Montreal, on the bank of the Rivière-des-Prairies. Their farm experienced the end of a land agreement with the City of Montreal and they had to leave because the city was expanding. So he was at Macdonald College at the time

and met some people from this area, and found out about this farm that was for sale. As they finished up with their installation in Montreal, his father bought a farm directly in line with this one, but on the other side of the village, and his uncle and his aunt also bought a farm right next to the farm that the original Mr. Tolhurst had purchased.

They started with a pretty good land base to get things going. He built a milkhouse. To start off with, they were milking cows in a tie stall barn. They built a home for an employee on the farm, to set them up as they were accustomed to working in their other location.

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AT: So today, we have a milking herd of around 120 cows. On the farm, we have about 220 animals in total. We have 154 kilos of quota. We milk in a herringbone double-7 milking parlour.

We have three Guatemalan employees. During the wintertime, we have two that are here, and then in the summertime we have three that are here. My son, my husband, myself, and our three daughters; Christine is actually an employee on the farm.

After Ken's dad passed away in 1994, Ken continued to work with his brothers on the farm and an employee. It started getting harder to find dependable employees to work on farms. We had to go to foreign workers, and Ken's brothers moved on to do other things as they were heading towards retirement, so that's how we came to be on the farm.

We have about 350 to 375 acres. The main goal of all the crops that we grow here on the farm is to be able to feed the cows. We have a small amount of soybeans and wheat that we sell, but we grow the wheat mostly to have the straw. Very little grain corn leftover, but if we do have some leftover we sell it, but that's not the ultimate goal. We try and have everything balanced out so that it keeps the cows fed.

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AS: So, can you tell me a little bit about what the Living Labs program is and how did you get involved?

AT: The Living Labs, or in our province we call it the Laboratoire vivant, is a research project. It's a government-grounded project and they appointed Novalait in our province to be the administrator or the facilitator. So they identified the regions of Quebec and, you know, based on the number of dairy farms they determined how many farms they needed to have from each region.

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AS: So as the official body representing all of Quebec farm and forestry producers, the UPA, or l'Union des producteurs agricoles, was the one finding these farms, correct?

AT: Locally, our UPA was the delegate that they work with, and they asked the UPA to find them X number of candidates that fit their criteria. And there was a lot of interesting criteria. We touched on probably 90% of them. You had to have succession. It was beneficial if you were living on a waterway. You had to have dairy cows. Based on what the projects are, they're looking for all different kinds of things, like weather patterns and air quality and methane and manure, and we have a good installation that can help them gather data on a lot of those things.

They've been really easy to work with. We've attended some meetings. A lot of them were done by Zoom. We've gotten together with the other farmers across the whole province, twice now. The first time was to meet with the researchers based on the priorities of our farm, what we would be looking to improve or looking to make changes on. And then this year, in January when we went, the researchers presented their projects, what they were proposing, what would be required of us, and they asked us to sign up for the ones that would interest us.

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AT: We have two projects that are ongoing here on this farm. They are more to do with soil levels of nitrogen and phosphorus and things like that. Those are very interesting topics, but it's not the meat of what I was motivated to find out. Like, manure management is a big file that I manage here at this farm. We don't have enough land to spread our manure on, so we export manure.

I'd really like to get more benefits from our manure, put more value on our manure, because we can see the benefits on our own farm and there's many people that have given up dairying or given up having animals that are not seeing those benefits. The people that we export to aren't necessarily willing to pay for manure, and why would they? But they do have to pay for their own spreading; we can transport it to their farm but that's where our obligation stops. But I just feel like that there's so much more that we could be doing with this. And I have met the researcher and I liked what he had to say, and I really just can't wait to get him here on the farm and to give me some good ideas, some creative ideas.

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AS: So the Laboratoire vivant, the Living Lab program, that is based on a target that the Dairy Farmers of Canada have set, I believe, to be carbon-neutral by 2050.

AT: We've signed onto this research project for five years. We had to give them all our data for 2022, our fertilizer purchases, seed purchases, crop harvests, the

gallons of manure, number of cows, all of that kind of stuff. And they're supposed to be making up our first assessment, and then as we progress through the project I believe we need to do two other data collections, or bilans they call them, so we'll see how we're improving or if things are changing.

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AS: It sounds like there was quite a bit of work, pre-work, required or data collection required at the beginning to get going?

AT: For sure, but they're very organized. My mother-in-law had really handed down to us a method that worked for keeping things organized. Not just with the accounting but all of the farm projects that they had done over the years, every letter that they've exchanged with the Ministry of the Environment and things like that, she really set up a good method, so we just kind of followed her pattern. When you know where to go to look for this kind of information, it's not quite so hard. We've started converting everything on the drive.

AS: Right.

AT: Like, we keep all our documents so everybody can have access to them that's part of the farm. It was a big job, but it was doable.

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AS: And was it a tough sell to your business partners?

AT: Everybody here on this farm, including my father-in-law when he was here working with us, they very much have a sight to the future. They look to what's down the road. They don't just live for today and they don't live in the past. At a certain point, nobody wants to take on more work, and nobody had any objection to it at all, but they weren't going to have to work harder. And if I was willing to feed these people the papers and the numbers that they needed, then they were willing to go along with it. And they felt that, you know, not only ourselves if there was something to take away from it, but if, down the road, other farmers have examples that they can follow to help them make better decisions, then how can you be against that?

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AS: Can you talk a little bit about the manure management project? Who knew that value-adding manure, that would be a thing, right?

AT: Maybe I'm raising too high of an expectation for this research, or I hope not; I don't want him to feel like he's under any pressure, but I just feel that we can do better in that department.

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AS: Every farm is always striving to do better with their output and the ways that they're trying to achieve their outputs, I guess. So you had mentioned that there was some objectives that you had identified for your farm that would be in line with this research. Clearly, manure management was one of them. Were there other things that stood out?

AT: There's a couple of fellows that are doing air quality in the barn. They were looking for barns that were naturally ventilated. They were looking for barns that were traditionally, with exhaust fans and things like that. Here, we have it all: we have an old tie stall barn, we have a freestall barn with tunnel ventilation, and we have a naturally ventilated barn. Our milking groups are all housed in those areas.

This one carries a pretty big significance for me. I'm also a nurse.

AS: Right.

AT: And my father-in-law had farmer's lung. It was debilitating for him. It made him absolutely sick to go into the barn. He tried everything. He tried all different kinds of masks. It was really difficult for him, and we all tried to help him the best that we could to find solutions, but it wasn't possible. I do not want to have a recurrence of that. Like, I want everybody to stay as healthy as possible. So, I'm very interested to see what the data might show for our air quality.

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AT: I grew up on the same river, just a little bit down the road from here. I care a lot about the river. It's gone from being very polluted to improving significantly, probably in the last 30 to 35 years. They're talking about riparian strips and they're talking about many different things to solidify the river bank, and I'm very interested in that. And my son-in-law is also very keen on things like that, and that's where—we consider our whole family to be part of this farm, but they're not all employees. They all have another life somewhere, too, but they're here a lot and they help us a lot. And it's fun to be able to pull the extended family into projects like this based on things that are very interesting to them, too.

So I'm afraid I'm not a field person or a crop person. My son manages all of that work for us. Whatever things can improve in the fields would be great. He's done some things with the two researchers that were here.

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AS: Well, and it sounds like you all bring your own strengths and interests to the table, including the extended family, so that really gives a whole holistic view to the operation and to this project that you're involved in. There's clearly a link to progressive change. Obviously, you're talking about, too, the river and how it's

continually improved over the last 35 years. Can you tell me about how your farm's view, your business values align with that perspective?

AT: One of the values that we have here is guardianship or stewardship of the land. Everybody farms for a different reason. You know, everybody's motivation is different. The men that I've known, and the girls, really have a passion for the farm, the land, the animals. They're natural dairymen. My father-in-law was that way as well. It's a common trait that we see in them all. They take that responsibility quite seriously and they take the use of best practices very seriously.

That example was started with Ken's dad and the progressive moves that he made, not just so that the cows would be more comfortable or better cared for, but also the people that were doing the work, too. He was very conscious, taking care of his body and making things not as hard as they needed to be.

That's the philosophy that we work with. It's hard to make change. Everybody gets very comfortable in the things that they do, but progressive change or change in degrees often sticks better than massive change. It's very hard to cope with massive change, good or bad. That's the slow and steady nature of the family here. They're the tortoise, not the hare. It's very much reflective of our region, I would say. This is a very mixed Francophone, Scottish, Irish region. That seems to be the nature of the people around here. It's easy to do when you have a lot of like-minded people around you.

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AS: So thoughtful, incremental change is really what your approach is for any type of innovation?

AT: Whatever is being presented to us as the issue or being presented to us as the thing that has to change has to come with a defensible reason as well. You know, they're not people to jump on the bandwagon and say, "Okay, let's do this and do it tomorrow."

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AS: So it's a multiple year project, you were saying, right?

AT: Yeah.

AS: And so, when you first met with the UPA and then Novalait, who's managing this Living Labs program, and you said that the researchers presented their projects, you met in person with the researchers. What was that like?

AT: [laughs] It was like speed dating! Based on what your priorities were, you were assigned as a group. Everybody was given a number and that was the group that you stayed with. You rotated around or, in some cases, you stayed where you were and the researchers came to you, and they had so many minutes to make their presentation. Or vice versa, like when we were telling them what our needs were, you have a certain allotted time to ask your questions, and after that they either took the data and said, "Okay, we'll come up with a project," or, on the second time around, we signed up if the project was interesting for us.

It was interesting because by staying with the same group all the time, you got to know different people and different regions. My understanding was that one of the reasons that the Province of Quebec was chosen is because we have such a varied land base within our territories that it was pretty representative of the whole of Canada in terms of types of soil or weather patterns and things like that. That's something I'm very proud of because I didn't even realize that myself, and that we can represent the whole of Canada I found to be very significant.

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AS: It's such a cool project, and the things that you're going to be learning on your farm, in terms of better practices or best practices, dairy farms across Canada are going to benefit from this and be able to take what you're learning and consider applying it to their own operations, and in the end be better. That's the theory; that's the plan, right? I think it's super cool and I think it's right for you to be super proud of that.

AT: And if you're making such a significant investment in some cases, like financial investment, you have to have something to base it on and it can't just be data. Like, you have to have people's personal experiences in terms of what the challenges were. How feasible is it or how complicated is it? And that's where I see the benefit is on both sides.

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AS: If there was another farmer that was considering participating in a program like this, either in the dairy sector or another sector, because there's Living Lab projects in different ag sectors across Canada, what would you tell them about this type of research and why would you encourage them to participate?

AT: I like to encourage people to participate in everything, but you cannot be convinced to be a participant. I really feel that it has to come from the person or

the team themselves to say, “This is a really great idea and we really think that this is something very positive, and let’s try and move it forward.” But you also have to recognize the commitment to that and you have to recognize the willingness to go along with whatever you might be asked.

We only had two researchers this year, and the only requirement that we were asked to do was to seed a portion of our field on a diagonal direction instead of vertical/horizontal directions so that he would be able to recognize where his plot was and take his data accordingly. We have a manageable number of acres: that’s not too hard. But for somebody, it is.

You really can’t take on a project like this if you’re already overwhelmed because it’s not going to be functional for you. You have to be able to say to yourself, “Okay, like, I can commit to this and I’ll do my best,” and feel good about doing your best. If that’s everybody’s case, well, then there’s no problem, but people should not be guilted just because we’re talking about the environment and we’re talking about achieving goals and we’re talking about a significant worldwide situation. I would hope that nobody would feel badly for not participating if they felt they really couldn’t.

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AS: That’s such a great perspective. You only have a certain amount of time and resources and energy. It doesn’t mean that the project’s not important, but the people that do have that ability and the resources to do it, then they can step up. And sometimes that might not be at that point in time, but it might be you later. The whole concept of guilt is a big one.

AT: I don’t think I’ve ever met anybody in the farming world that does not want to do their best. If somebody is struggling or having difficulty getting their work done, it’s not because they’re not really trying, because farmers prioritize this type of life, this type of work. I think it’s a similar thing where you might say, “Okay, yeah, I think it’s important and we’ll listen to you, but we can’t do more than what we’re doing right now.”

If there was ever any message that I would like to pass on to any kind of policymakers or decision-makers, and even just the general public, like, we can’t work harder than we are. We’re trying to find ways to manage the tasks that we have, but we can only manage based on our revenue and everybody is struggling with that, especially right now. So, it takes a little bit of a tolerance level from all areas to help things move forward.

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AS: Yeah. Regardless if it's time or finances, you have to have those resources available to you to implement these changes and to do more or to change your approach.

Why do you feel it's important for agriculture, specifically dairy, to work towards reducing carbon emissions? Like, you talked about this is a worldwide situation, obviously. Why do you think that these objectives have been set and it's important to support these objectives?

AT: Well, I don't think it's any secret that animals are big producers of methane gas, and that seems to be what the priority challenge in terms of managing our global climate situation right now is. This group of people that I work with here are natural dairymen. This is where their passion lies, and none of us want that to change. And in order to do that, then we have to be smart and we have to figure out solutions to be able to continue doing the work that we love. And the consumers, or the general population, are also trying to find some solutions that work for them because they have their own values that they base their purchases on, and that's fair. But at the same time, dairy cows and milk are not going to be eliminated from the market either, and we have to come up with the solutions that we need to make this happen.

We're all in this together and this universe is going to continue one way or the other, but I think it's a general concept that if you do nothing, nothing happens, and if nothing happens then things don't improve.

AS: Right.

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AT: I think that we have to look back a little bit to see what challenges the people before us faced. Perhaps they weren't facing climate change, but maybe they were. We're on a big wheel that just keeps going around and around, but they also had significant problems and significant issues that they had to address, and they did it sensibly and they did it carefully. And we can chip away at this if we all work at it together, but I would just like people to recognize that we're all in it together and that we need to work together.

And hopefully, based on the results of what these researchers find, we're going to make some changes with the support of, again, our policymakers and our federations that govern our industry to see a decline in the trends that we're currently seeing. And a big part of the challenge with that is communicating the information to people and communicating it in a way that it makes it doable for them to implement. That's always a challenge, no matter what, but the more ambassadors that we can have to support and encourage people to jump on board with this, the better it's going to be in the long run.

AS: Well, yeah, and this is such a great thing about this program, is that it's farmers at the ground level, right? So, congratulations to you for participating on this project and I can't wait to hear where it takes you.

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AS: I did get to talk to Amy again since recording this interview. Her farm had just received their bilan, or evaluation, from the Living Lab. The farm summary showed that they provide milk to 21,472 people, an equivalent of their local community having 10 glasses of milk per day.

In the days that they work so hard, Amy said that this gives their work meaning, knowing just how much they provide for their community, let alone the Province of Quebec. The Laboratoire vivant gives them the opportunity to have input from people with different ideas that they can work towards implementing to improve their score. She'll be using these results to motivate her team to keep up the good work and continue to work towards good habits and thoughtful decisions, she said. Change, however, can sometimes be painful and difficult, and the best practices of an industry built on stability and routine are often met with resistance, Amy said.

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AS: To quote Amy, "We are comfortable with the way we work, and the result is clearly not a failing score. Farming and feeding our nation are the grassroots of our country. Agriculture is the foundation that stabilizes our economy and reinforces the meaning, purpose, and value that many are searching for. I believe with programs like the Laboratoire vivant, the results and research reinforces what we have and builds on this base to help improve the direction that we need to follow for improvement. The choice to do this belongs to us. Making thoughtful choices enables us to be the example for those in our sector and in other industries." End quote.

Illustrating how the world will benefit from good choices is the pathway to success, and Amy is well on her way to helping influence some smart business practices going forward.

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