



HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

43rd PARLIAMENT, 2nd SESSION

Standing Committee on Agriculture and Agri-Food

EVIDENCE

NUMBER 033

Thursday, May 13, 2021

Chair: Mr. Pat Finnigan



Standing Committee on Agriculture and Agri-Food

Thursday, May 13, 2021

• (1525)

[English]

The Chair (Mr. Pat Finnigan (Miramichi—Grand Lake, Lib.)): I call this meeting to order.

Welcome to meeting number 33 of the House of Commons Standing Committee on Agriculture and Agri-Food. Pursuant to Standing Order 108(2) and the motion adopted by the committee on Thursday, February 4, 2021, the committee is commencing its study on the environmental contribution of agriculture.

Today's meeting is taking place in a hybrid format, pursuant to the House order of January 25, 2021, and therefore members are attending in person in the room and remotely using the Zoom application. The proceedings will be made available via the House of Commons website, and the webcast will always show the person speaking rather than the entirety of the committee. I would like to take this opportunity to remind all participants to this meeting that taking screenshots or photos of your screen is not permitted.

[Translation]

To ensure an orderly meeting, I would like to outline a few rules. Before speaking, you should wait until I recognize you by name. If you are on the video conference, please click on the microphone icon to unmute your mike. For those in the room, your microphone will be controlled as normal by the proceedings and verification officer. Just a reminder that all comments by members and witnesses should be addressed through the chair. When you are not speaking, your mike should be on mute.

[English]

With that, I'd like to welcome our witnesses for the first hour. We have from Enviro-Stewards Inc., Bruce Taylor, president; and also from Nutrien Ltd., Candace Laing, vice-president, sustainability and stakeholder relations. Welcome.

With that, we'll start with opening statements of up to seven and a half minutes.

We'll start with Enviro-Stewards. Mr. Taylor, you have the screen.

Mr. Bruce Taylor (President, Enviro-Stewards Inc.): Thank you.

I sent a slide deck ahead of time. Could we show that, or could I share a screen?

The Clerk of the Committee (Ms. Alexie Labelle): Actually, the committee doesn't accept slides during the appearances, since they're virtual.

Mr. Bruce Taylor: Okay, I'll get started then.

Thank you very much for inviting me. It's a pleasure to be here.

Enviro-Stewards is an engineering company in Elmira, just north of Waterloo, Ontario, but we work across North America.

Today I'd like to outline a practical way to get to climate neutral and beyond for the agricultural sector. Our mission is to cultivate resilient business and improve lives. If you're interested, we have a TED talk on the development work we do in East Africa, but our paying work is in North America.

For example, Maple Leaf Foods is the world's first large food company to be carbon neutral. We got them there in November 2019. To do that, we assessed 35 facilities with them for conservation measures. Because they pursued a conservation-first approach, it's actually saving them money instead of costing them money to be carbon neutral. They're not waiting until 2030, 2040 or 2050. They're doing it now. It's actually economically viable to do it now.

I'd like to illustrate, first of all, a challenge I see in the typical procurement process. When people are buying water conservation for agri-food, or energy conservation, or food loss, typically the tendering is low cost. For example, we did 60 factories for York Region, for water conservation. We saved 36% of the water per factory, including many food and beverage manufacturers.

You can win many of the RFQs by saving 0% of the water. It's much easier to provide a quote to save 0% than 36%. As a consequence, anybody who's competent actually loses because they're at a competitive disadvantage in the typical tendering process. People think that the best energy audit to get is the cheapest one. The cheapest one will have the most expense when you get to the implementation, because the only way to do it is to implement what's always been done before.

You'll see in the technical brief I sent that we did one in London, Ontario, where we can heat an entire arena with the heat they're rejecting now by using a different approach from normal. What I want to put in your minds is that when you're doing your tendering, it's not the cost of the audit, it's the value of what's found that you need to do.

There was a bit of a better attempt when Agriculture and Agri-Food put out an RFP for a food waste challenge. It was better because it had the amount, so cost wasn't the issue. It was about who could give them the best proposal, and it gave the three criteria. I'll come back to that challenge in a minute.

I'll give a couple of examples in the food industry. The winery at Southbrook Vineyards is already LEED gold certified. It's organic, biodynamic and regenerative. They had a normal energy audit done. Their normal audit said they could save 5% with a 20-year payback. After that, we found and installed measures that cut the electricity by 40% and the gas by 40%. Interestingly, they had bought solar panels to replace the rest of their energy. They cancelled one-third of them. They didn't need them anymore because they're not using that energy. That saved half an acre of vineyard from getting covered with solar panels.

If you do a cheap audit, you're going to end up with the wrong solution at the end of the pipe. In their case, it was four months. It's two months if you value the wine that would have been lost by covering it with solar panels.

We're advocating this prevention-first approach. It's much more lucrative. That gets into the design of these programs. Most of the programs are designed to put money into capital and to basically make unattractive projects attractive. We did one project where, under one program, it was \$2,500 to assess a factory for what should be done and \$500,000 to implement it. All it did was implement stuff that would have been implemented anyway because they didn't have time to find what they should do.

If you take the time to find what you should do, you don't even need the capital funding. Our average payback for everything we've ever done is one year. If you find those ones, you don't need the capital, so it's much less expensive to provide the programs, and you can get what you're wanting to buy in the first place. I'm happy to comment on the design of these programs.

On social justice, after you reduce as much as you can.... In our own office, we've reduced our greenhouse gas footprint by 78% per employee through conservation. To get the last bit, you need to offset that. We sustainably offset it, but what are you going to do with that? Most of the programs in Canada are designed to benefit Canadians and Canadian companies instead of the people who are suffering from the climate change that we've caused in developing countries.

- (1530)

For example, we went to South Sudan and repaired solar panels on the roof of an orphanage. We get twice as much electricity, because there's twice as much sunlight in South Sudan. A generator was shut off that used to be running just to run the water pump. Instead of buying fuel for the generator, food is now bought for the kids. Socially, economically and environmentally, it's much better, but we get zero credit on any environmental program in Canada. We would get it only if we put it on our own roof in Elmira and had limited daylight all winter.

We have these XPrizes for carbon. The best way to sequester carbon is to just leave it as coal. It's never going to be more inert than that.

Planting trees is great. We should do that, but how about not cutting down trees in the first place? When you go to developing countries, they're cutting down trees to boil the water to make it safe to drink. If you just gave them safe water in the first place, you don't have to deforest, you don't have to.... If we get smart about it, we actually get much better impacts on all of the sustainable development goals, not just one at a time.

On the food loss angle, this is probably your biggest opportunity. You probably know the big numbers, that one-third of all the food on the planet is wasted. If it were a country, the third-largest greenhouse gas emitter would be food loss, after China and the United States. The second-largest water consumer on the planet is the growing of food that's wasted. In Canada, it's \$49 billion per year of lost value.

Almost 100% of the effort has been on how we divert that from landfill, because if it gets to landfill, it's going to turn to methane gas. If you divert 100% from landfill, you still waste one-third of the food. It's still the third-largest greenhouse gas emitter; it's still the second-largest water consumer on the planet, and you still lose most of that \$49 billion. The only way to not do that is to not waste the food in the first place, and there are almost no programs targeting that.

We did Campbell Soup in Toronto. We first did energy and water, with a process integration. We found savings of \$1.6 million per year of energy and water. Then we did food. We found them \$700,000 per year of food that didn't have to be wasted. That food was going to a waste energy plant, but it's 4,000 tonnes less greenhouse gas to keep it as food, because it was in that supply chain.

We leveraged that, and the Walmart Foundation co-funded us to do 50 audits across Canada. This was a program administered by CFIA and the Provision Coalition. We went to 50 factories—

- (1535)

The Chair: Mr. Taylor, I'm sorry. Your time is up, but you'll get a chance to.... There will be questions after.

We'll go to Ms. Laing, for seven and a half minutes.

Ms. Candace Laing (Vice-President, Sustainability and Stakeholder Relations, Nutrien Ltd.): Thank you, Mr. Chair. Thanks for the invitation to appear.

My name is Candace Laing, and I am Nutrien's vice-president of sustainability and stakeholder relations, coming to you today from Saskatoon. I would like to acknowledge I'm coming to you from Treaty 6 territory and the traditional homeland of the Métis.

As a bit of background for anyone who is less familiar with our company, which is just a little over three years old, Nutrien was created through a merger of equals between Agrium and the Potash Corporation of Saskatchewan, previously two of Canada's leading agriculture and mining companies. Together, as Nutrien, we've become the world's largest provider of crop inputs and services. Our business spans operating segments including our retail division, known as Nutrien Ag Solutions, and the manufacturing and mining of potash, nitrogen and phosphate fertilizers.

Though our company has grown—we now span 13 countries and three continents—our operations in Canada remain extensive. We have six potash mines in Saskatchewan, four nitrogen manufacturing facilities in Alberta, and nearly 300 ag retail outlets, primarily across western Canada. This is in addition to two corporate offices in Calgary and Saskatoon.

Our purpose as a company is to grow our world from the ground up. With nearly 10 billion people expected by 2050, we have a big challenge in front of us. Feeding this growing population without increasing land use and while tackling climate change is one of our biggest challenges and greatest opportunities. The future of agriculture depends on industry leaders, partners and governments taking concrete actions to support sustainable farming practices. Last month at Nutrien, we launched our feeding the future plan. This includes commitments to help reduce our carbon footprint. We see these commitments as critical in driving the next shift in agriculture. We've set out to decrease emissions directly related to our operations, while supporting growers with our products and services so they can store more carbon in their soil and reduce emissions with better nutrient management.

Some of our commitments, set to be achieved by 2030, include enabling growers to adopt sustainable agriculture on 75 million acres globally; a comprehensive carbon program that empowers growers to accelerate climate-smart agriculture and soil carbon sequestration, where growers are rewarded for their efforts through the generation of carbon credits and assets; and at least a 30% reduction in our greenhouse gas emissions per tonne of product produced, while we're also pursuing the transition to low-carbon fertilizers.

[*Technical difficulty—Editor*] speak to the emissions-reduction and sequestration opportunity in crop production, and what Nutrien is doing to accelerate the nature-based climate solutions from agriculture and reward growers for those efforts.

This growing season we are piloting our carbon program. We targeted 100,000 acres in North America, 20,000 acres of which were in Alberta, Saskatchewan and Manitoba. Interest from growers has been extremely encouraging and exceeds our target for acres applied. We are now executing our pilots on 200,000 acres across North America, 45,000 acres of which are in Canada.

The carbon program empowers growers to accelerate climate-smart agriculture and soil carbon sequestration. At Nutrien we work

directly with our growers to build customized crop plans that reduce their carbon footprint. We assist in verifying carbon performance, and currently we are paying growers directly for their participation, anticipating we need to be ready to support [*Technical difficulty—Editor*] in a compliance or voluntary offset market.

Nutrien's long-term goal is to put learning from these pilots to work and scale the program globally to build real, lasting change and impacts. A significant component of our pilots includes troubleshooting existing offset protocols and their barriers to adoption. The nitrous oxide emissions reduction protocol, or NERP, in Alberta's carbon compliance framework is world leading, yet it has not been transacted on in 10 years due, in part, to the significant administrative burden and relatively low return on investment for growers.

Early findings from our pilots have shown us two things. First is the value of digital tools. They capture and create credible evidence, making it easier for growers to measure their carbon reduction progress. Digital [*Technical difficulty—Editor*] when most offset protocols, like NERP, were first developed. Embedding them, as we are, with existing and new protocols will make carbon credits more accessible to growers.

● (1540)

Second, we have learned that protocols must be stackable. Our pilots stack soil organic carbon and nitrogen management protocols to deliver the highest emissions reductions. Stacking protocols makes economic sense for the grower, who may not see enough value and return in a single protocol in order to invest in the practice changes.

We are in regular communication with Environment and Climate Change Canada and Agriculture and Agri-Food Canada on our findings, as well as with provincial governments. The NERP has not been prioritized for development in our federal offset program, but at Nutrien we are hopeful that learnings from our pilots will accelerate this.

Adopting the NERP will also help the federal government achieve its goal of reducing nitrous oxide emissions from fertilizer by 30% by 2030. Let me be clear: Reducing N₂O emissions by 30% is extremely ambitious and perhaps even unachievable without compromising crop yields and thereby threatening global food security and our position as a global leader in agriculture. However, we believe that by creating a value in carbon assets from agriculture, we can make significant progress. More to the point, we can help Canada tap into the significant opportunity in agriculture to deliver on our nationally determined contributions.

In summary, our recommendations to the committee are as follows.

Number one, partner and work with us. Enable Nutrien's carbon program by helping create a suite of stackable, accessible agricultural protocols within the federal offset system that combine both nitrogen management and carbon sequestration.

Second, ensure that any policies to reduce agricultural greenhouse gas emissions use the carrot and not the stick. We need policy support to help us scale climate solutions while we maintain productivity and enhance grower resilience.

We have an opportunity to give credit to Canadian producers, who are already among the most sustainable in the world.

With that, I'd like to thank members of Parliament for their time today, and I am pleased to answer any questions.

The Chair: Thank you, Ms. Laing. You must have had a timer, because you are right on time. Thank you so much. There is a bit of an issue with your sound, and I think the technician will probably be in touch with you on that.

We will go to our question rounds. The first round, for six minutes, will start with Mr. Epp.

• (1545)

Mr. Dave Epp (Chatham-Kent—Leamington, CPC): Thank you, Mr. Chair.

Thank you to the witnesses for your testimony.

I'd like to begin with Mr. Taylor, please.

My understanding of the agriculture value chain is that it begins with the suppliers and goes to primary producers, then on to value adders or food processors, and then on to our retail sector, either through the wholesale or direct retail markets.

Am I correct in understanding that your business is primarily focused on only one area, value-adding or food manufacturers, or do you do any work in primary agriculture as well?

Mr. Bruce Taylor: We submitted an application under the Agriculture and Agri-Food program, the food waste reduction challenge, which included the Holland Marsh Growers' Association, where we've done a bunch of work in the past. We've previously worked with the Ontario Tender Fruit Growers and others. We start there.

Interestingly, if you save something in a manufacturing plant, you automatically save it all the way back to the field, because you're making the same output with less input. The primary agricul-

ture manufacturing and distribution centres are where we make our primary impact. About half of the total food loss in Canada is in that wedge.

Mr. Dave Epp: Thank you.

I'll go to Ms. Laing.

I am assuming that you are familiar with the 4R strategy. Where does that fit into your request to us to make the initiative stackable and complementary? How does that fit into your ask of government?

Ms. Candace Laing: The 4R nutrient stewardship, as a suite of best management practices, is built into the protocol to reduce nitrous oxide emissions—the NERP. We would encourage that the NERP be incorporated and then stacked, along with protocols that look at soil organic carbon.

Mr. Dave Epp: Thank you.

We heard testimony at our last study that Ag Canada officials have basically stated that since 2005, greenhouse gas emissions from agriculture have remained steady.

The Chair: Mr. Epp, could I ask you to pull away a little from your mike?

Mr. Dave Epp: How's that? Is that a lot better for the interpreters?

The Chair: Yes, I hear that it's good. Thank you, Mr. Epp. Sorry to interrupt.

Mr. Dave Epp: No worries—I'm sure you'll double the time back.

Canada's track record, according to AAFC officials, is that greenhouse gas emissions from agriculture have remained steady since 2005, yet our output has obviously been increased. Nutrien's goal is a 30% reduction per tonne. Can you talk about the rate of drop? Obviously, that rate of drop has been happening over the last 15 years already. Can you comment on that and going forward?

Ms. Candace Laing: Certainly. If I don't quite answer your question, please reframe it.

When we look at our emissions in agriculture, I think we often hear that up to a quarter of global emissions are from agriculture, 3% of which are from production and use of fertilizers globally. One of our challenges is that whether we look at a national inventory or a company's emissions baseline, we are looking at estimates of our emissions. They're not measured directly but are estimated based on global emissions factors, and they don't necessarily capture reductions from differences in nitrogen use. Emissions factors that we use globally draw on available science, and the science will improve as we actually enhance measurement on the farm.

We are anticipating and monitoring some work globally, out of New Zealand and the Netherlands, which are experimenting to determine emissions levels from nitrogen-based fertilizer application. That emerging research will lead to a new set of emissions values that are lower than what we use now from the Intergovernmental Panel on Climate Change refinement estimates, so there's a potential for lower values to be applied as well, which we're focused on.

Mr. Dave Epp: Thank you.

You asked the government to use the carrot instead of the stick. Can you comment about the pace of regulation, the pace of change and cost structures? How quickly can we produce food more sustainably? When you talk about the carrot, what tool is the best tool, in your estimation, that we could use?

Ms. Candace Laing: That's a great question.

There are some barriers to the speed and scaling of climate-smart agriculture. One of them is basic digitization. We have a lot of precision agriculture and technology, but actually measuring and getting sustainable outcomes out of the farm level is one of the challenges. I will often sound like a farmer, because my whole family farms, but we also need to think about what would incent growers to share their data, which we need in order to scale sustainable agricultural practices. Really, carbon finance is a key lever that will bring speed to the scaling of sustainable agriculture and our being able to realize environmental outcomes.

• (1550)

Mr. Dave Epp: Thank you. I'd like to get one more question in, if I can.

You talked about the changes in your nitrogen-processing capability. Are there any other changes you've been making in your potash and phosphate operations that would contribute?

Ms. Candace Laing: In our potash operation we have a focus on renewable energy and self-generation/co-generation, because scope 2 emissions are most material in that business unit, but when we look at our corporate footprint and what is most material, it's emissions out of nitrogen production. That's where we're focused on a decarbonization road map of various projects for abatement, and other options as well.

Mr. Dave Epp: Thank you.

I see the chair nodding, so I won't try it.

Thanks.

The Chair: Thank you, Mr. Epp.

Thank you, Ms. Laing.

We will now go to Mr. Louis for six minutes.

Go ahead, Mr. Louis.

Mr. Tim Louis (Kitchener—Conestoga, Lib.): Thank you, Mr. Chair.

Just the fact that we want to keep asking questions is a testament to the level of expertise on this panel. I appreciate both witnesses' time. Thank you.

I will address my questions to Mr. Taylor, because we've actually had conversations before in the riding of Kitchener—Conestoga. I can hear the passion that both witnesses bring here, and it's much appreciated.

You talked about companies becoming climate positive. We've had discussions about companies with higher profit margins and smaller carbon footprints at the same time, and the levels of innovation that can bring. My initial question would be around the scalability of this. Can these procedures work for smaller producers and large companies as well, as far as energy efficiency, water efficiency and food losses? What is the scalability on this?

Mr. Bruce Taylor: Yes, it works from.... We're doing some right now in a circular food economy demonstration project where there might be half a dozen employees, right up to Campbell's or Molson or Labatt, with thousands of employees. It's the same thing. The percentage is the same but the magnitude is different. Right now we have an offer in. We did the 50 assessments across Canada.

To give you an idea of the scale, if you put a grocery bag beside the CN Tower and another one beside it, you would get to London, Ontario, before you ran out of grocery bags, every year, just with what we found in those 50 factories. Each of those 50 factories would save \$230,000 per year on their operating costs with under a one-year payback, which protects every job in those factories from moving to another country.

With Campbell Soup, we implemented some of the stuff, but before we could implement the rest they decided to move their factory to a different country. How much harder would that decision have been if we'd embedded all of that and there was \$2.5 million in additional profits on the books when they were making that decision?

What we need to do is embed this efficiency in the factories. The best way to do that is to find that efficiency. Invest in finding that efficiency. That is my advice, whether you're a mom-and-pop or whether you're a multinational.

Mr. Tim Louis: I've read some of your research, and you talk about "triple bottom line wins", which is operation cost savings, the job protection you just mentioned, and footprint reduction as well. You also referred to energy efficiency work being "skewed towards procuring the least expensive opportunity assessments". In your opinion, if we focus on the least expensive opportunity assessments rather than the most economic environmental benefits, we're not maximizing that potential.

Can you tell me a bit about that paradigm shift and expand on that, and on how we need to focus on those economic and environmental benefits?

Mr. Bruce Taylor: On the least expensive opportunity assessments, yes, basically you want to look for the value and not the cost of the audit. In the cheapest audit you cannot find new opportunities. You can only recommend what you've always recommended before. You can't measure anything.

You actually want to buy that value, because that gives you the right answer later on. When you do that, your average payback is under one year. You want to design the programs...and it's any of them, whether it be food or water. We do them all at the same time, because it's much more efficient. We're in the plant. It's minute by minute. We measure everything. We get the opportunities. You want to have that step of what you should do versus how to get this done. When you get to how it's done, if it's the right thing, then you don't even need help to do it. If it's the wrong thing, you need a lot of expensive help to put that in.

• (1555)

Mr. Tim Louis: Many of the projects you referred to seem to want to reduce water, reduce energy and reduce waste, mostly food waste. Is that the standard you've been applying to most of these companies?

Mr. Bruce Taylor: That's correct. We also do toxic use reduction. They all intertwine. If you reduce the toxic, you need less ventilation, so you need less energy. They're all together. We don't try to pry them apart. We assess them all together. It's the most efficient way to go about it. There are no programs that are designed around that. We just cobble together what we can as programs come and go.

I would encourage you, when you're doing your programs, to think of conservation. Each of those 50 factories will save \$350 for every tonne of carbon they avoid. That's without a carbon tax. That would be on top of that. When you look at your scales, it's plus 100 to minus 100 on the marginal abatement for carbon. The food loss is \$350 avoided per tonne of savings. These are the most lucrative things these factories can do, and they then protect those factories' jobs.

On meals, we pitched to do 150 factories across Canada in all the sectors—baking, protein, primary agriculture, vegetables and what-not—and there would be enough savings to give two meals to every homeless person in Canada for 20 years. That's the projected savings based on scaling that we did conservatively, assuming we get half as much savings as we did for the first 50. The federal government would get \$25 of taxes for every dollar it spent on that program. The participating industries would get \$19 of additional revenue for every dollar they spent on implementing those things, based on what we've already done at the first 50.

I'd really encourage you: Don't delay. We're doing it in the States also. We just did a protein company in Kansas where we cut the total food loss by 30%. That's great. It makes them more efficient. Why can't we invest in this in Canada?

Mr. Tim Louis: That's what we're studying now. It sounds practical and affordable.

I believe that is my time, Mr. Chair. Thank you.

The Chair: It's pretty close.

Thank you, Mr. Louis and Mr. Taylor.

We'll go now to Monsieur Perron.

[*Translation*]

You may go ahead. You have six minutes.

Mr. Yves Perron (Berthier—Maskinongé, BQ): Thank you, Mr. Chair.

To start, I'd like to thank the witnesses for sharing their expertise today. We are very appreciative.

Mr. Taylor, you gave the example of the arena in London, Ontario. I was thrilled to hear about it. You said it was important to focus, not on the cost, but on the value being created.

Can you elaborate on that idea, taking into account government policies that could be introduced?

[*English*]

Mr. Bruce Taylor: Sure. Thank you.

We just actually responded to a challenge from this committee. They put it out to get 24 things. Unfortunately, we got a letter on Tuesday, saying that we weren't selected amongst the 25, so I'll take a really good look at those criteria to see what we're going to do.

As far as cost, that program would have been \$2 million, and it would have saved 25 times that on taxes to the government. The government itself would have saved \$17 million a year for those facilities, and we had partners across the country....

I apologize, Yves; I forgot the original question.

[Translation]

Mr. Yves Perron: In your opening statement, you said it was important to focus less on the cost of measures and more on their return over the long run. That is what we are hoping to do. The idea is to invest in the long term and help farmers better protect the environment—not through punitive measures, but through incentive or payment programs.

Do you have any concrete recommendations for us? What can the government do to help farmers?

[English]

Mr. Bruce Taylor: Yes. You have one on the table right now. If you invested \$2 million, you would help 150 food and beverage manufacturers across Canada save enough for two meals for every homeless person in Canada for 20 years, avoid 49,000 tonnes of embedded carbon per year and save \$17 million dollars for those producers. Over the 20 years, that would be 460 million meals. You'd get \$25 for every dollar invested, so the federal government itself would get \$50 million of taxes if the tax rate were 15%.

That's the existing proposal on the table right now, and it's ready to roll out. The partners on that project are Maple Leaf, Eden Valley, Wellington Brewery, Bimbo, Labatt, Agropur, Bonduelle, Nature Fresh, Humber College, Holland Marsh Growers' Association, Alberta Food Processors, Food and Beverage Canada, Sustainable Waterloo Region and whatnot, right? It's ready to go.

• (1600)

[Translation]

Mr. Yves Perron: Sorry to cut you off, Mr. Taylor, but I have a limited amount of time.

You also mentioned methane gas generated in landfills. Your food loss prevention program would also have the benefit of reducing methane gas emissions. Is that correct?

[English]

Mr. Bruce Taylor: That's correct. It actually avoids the problem in the first place.

The food that goes to the landfill turns into methane, but the food doesn't have to go to the landfill in the first place. It should be eaten as food. If you eat that food, you get back everything invested in the supply chain up to that point—the grocery store, the distribution, the manufacturer and the agricultural step.

Food is meant to be food; it's not meant to be a resource to turn into something else.

[Translation]

Mr. Yves Perron: Thank you. That's fascinating.

Ms. Laing, you made two recommendations.

First, you said protocols should be stackable and accessible. You recommended that, as new government programs are created, farmers be able to access multiple programs at a time. That was how I understood it.

Second, you think policies should be incentive-based as opposed to punitive. I wholeheartedly agree. I think incentives will lead to much better results than punitive measures.

Ms. Laing, when you talk about stackable protocols, are you referring to nitrogen and carbon dioxide, for instance?

[English]

Ms. Candace Laing: Yes, that's stacking the protocols. If I may, I will just for a minute come back to the 4Rs and provide an example, because we're a company involved in implementing the 4Rs. Our experience with growers is that when you take one thing to them that is manual and another process, and they're working against the clock on their one-shot-a-year income, it is really hard to overcome some of those challenges.

There are two reasons, I think, to stack the protocols. There's the one I spoke about, but this other one is that really making it easy for growers and integrating it into their full crop system and crop plan is really important, so the approach to getting environmental outcomes is carbon first, but on top of carbon we can stack water and biodiversity.

The gain there is that it makes sense for the grower, but the economics then are stacked as well, and from our company's point of view when we're on the ground with growers, boots to boots with them, why wouldn't we bring all the tools and the suite of options available for carbon outcomes on the farm? Those include bringing regenerative and soil health practices to sequester carbon, and nitrogen-management practices, along with technology and products—biostimulants—that together can generate the best impact for carbon outcomes, and more broadly, other environmental outcomes as well.

[Translation]

Mr. Yves Perron: Thank you.

In your presentation, you talked about how important it was to measure greenhouse gas emission reductions. To do that, farmers need to be able to transfer the data via automated or IT systems.

Deploying a system like that on a large scale would be complicated. Do you think it could be done for the many small farms that are out there?

[English]

The Chair: Go ahead, Ms. Laing, with a quick answer if you can.

Ms. Candace Laing: What we have been working on through our pilots—and I caught part of the question—is actually to build out new digital tools that help match up with the requirements in the protocols, so it's less manual and really easy on growers, as is the other component, whether that's soil sampling, baselining, etc., to all sizes of growers.

In our pilots we have all sizes of growers engaged and involved.

Thank you, Mr. Chair.

• (1605)

The Chair: Thank you, Ms. Laing.

[Translation]

Thank you, Mr. Perron.

[English]

Now we have Mr. MacGregor for six minutes.

Go ahead, Mr. MacGregor.

Mr. Alistair MacGregor (Cowichan—Malahat—Langford, NDP): Thank you, Mr. Chair, and thank you to both of our witnesses for guiding us on this journey with this new study.

Mr. Taylor, I'll start with you. I am very interested in the subject of food waste, and it's been really intriguing to listen to the success you've had with production facilities in reducing their waste.

I have a small organization in my riding called the Cowichan Green Community, and they've partnered with local supermarkets to take their food that has gone past the date but is still quite viable. With a grant from our provincial government, they are repurposing that food and selling it. They're really just tackling this as much as they can and then, when they get to a point where the food is no longer fit for human consumption, they have partnerships with local farms so that it can be used as animal feed. That way, a very small percentage, if any at all, is left over for the landfill.

They are getting close to having it commercially viable. It has taken some government assistance to scale up their operation, but if we wanted to replicate that model to other small communities across Canada, do you have any suggestions about what we could include in our report for the federal government?

Mr. Bruce Taylor: Yes. We're working with one in Guelph right now, called Our Food Future, I think.

Basically we're working with half a dozen small manufacturers in that town, like a dairy, a brewery, a canning plant and a cidery. The circular economy means, instead of just making stuff and having it end up in landfill later on, it forms a circle, but most people don't think about the size of that circle. You want that circle size as small as possible.

If its beer, keep it as beer; if there's grain left over we'll manage that, but let's first maximize the yield. That's where there's this food loss prevention, and that's where the highest value is, but then with the residuals, how do you make this ecosystem for that? That's a demonstration one right now that the federal government is helping out with, and it's a model of the circular economy, which is a buzzword that's growing. Regenerative is another one, but food loss is a really big one right now. There's a lot of liability.

We talk about feeding the 10 billion people. If you're wasting a third of the food, there's your food right there. Let's not burn down the Amazon; let's just make better use of food we're already growing.

Mr. Alistair MacGregor: I've spoken to some local farmers, too, who are trying to set up a system for any excess manure or rotting food. They're going to put it in tanks and try to capture the methane, because of course, unburned methane is a horrible greenhouse gas vis-à-vis carbon dioxide. They're trying to find a partnership whereby they can pump into Fortis B.C.'s gas line so that we're using “carbon-neutral” fuel versus a fossil fuel.

Are you aware of any other successful projects across Canada, or anything we can be doing in that regard?

Mr. Bruce Taylor: Yes. There's a whole ecosystem of that right now. It's a whole ecosystem of how we can take organic waste and manage it.

What we're advocating is how we can take organic waste and prevent it. That's the missing thing from most programs right now. It's where all the social value is, and economic and environmental value. It's very overlooked.

Mr. Alistair MacGregor: Thank you for that.

Ms. Laing, maybe I'll turn to you. You were mentioning the emissions that result from your production of nitrogen fertilizers.

Could you go into a little more detail about the reduction targets you have in the next decade or two? Ultimately, is it just really about trying to electrify your power source? Can you provide a bit more detail?

Ms. Candace Laing: Yes, absolutely. When we look at reductions for nitrogen, we look at it from what happens between now and 2030, and then almost from 2030 to 2050. The reason is that there are some technological considerations. If we're going to scale green ammonia, the point at which we'll have enough access to renewable energy is likely more than 15 years out.

In addition to that, as I said, as regards technology, through the International Fertilizer Association we've just put into public consultation a nitrogen technology road map that outlines the time period between now and 2050. It's really interesting, but it's to how far we can get in absolute emissions by 2050 as a sector.

At Nutrien we are committed to setting science-based targets and are engaged in a process with peers and partners, the science-based target initiative, to build out the portion of our carbon budget that makes sense for our company and sector.

While we do that work and develop a sectoral approach, we have set this 30% intensity target by 2030. Between now and 2030, we're focused on abatement—any more abatement we can possibly invest in. As well, we have some carbon capture.

We have some capacity for production of blue ammonia where we have sites co-located with carbon trunk lines. For sites that aren't co-located, we have to look at longer-term options, to get into other options for blue and low-carbon fertilizer.

• (1610)

Mr. Alistair MacGregor: I have one quick question, which will be my final one here.

You mentioned the plots of land in a couple of provinces and the research you're doing with that. Would you like to see the federal government devote a few more research dollars to soil science, really trying to get an accurate map of Canada's soils or sequestration potential, and so on? Is there more that we can recommend to the federal government in that area?

Ms. Candace Laing: Absolutely. I really highly encourage us to be paying attention to what New Zealand and the Netherlands are doing in monitoring methodologies. Our commitment to you is that we are trying really hard to get the data out of the farm level that I think can feed back into really important research in agriculture.

The Chair: Thank you, Ms. Laing, and thank you, Mr. MacGregor.

We'll go to our second round now, with Mr. Steinley, for five minutes.

Go ahead, Mr. Steinley.

Mr. Warren Steinley (Regina—Lewvan, CPC): Thank you very much, Mr. Chair.

Ms. Laing and Mr. Taylor, thank you very much for your presentations.

Most of my questions will be for Ms. Laing because it's nice to have another farm kid from Saskatchewan on this committee at this time, to bring some Saskatchewan common sense to the standing committee in Ottawa for a bit.

I'd like you to go back and talk a little more about the 4Rs, because maybe not everyone has a big grasp on, first of all, how much this can do to help our environmental practices on the farm. There is a lot of availability out there to share data such as you're talking about. That's how we got to rotational grazing, crop rotation and other good environmental standard practices that we use now.

Could you walk us through the 4Rs and how much that can help us going forward into the future?

Ms. Candace Laing: Yes, absolutely.

The 4R nutrient stewardship is really this suite of best management practices: right source, right rate, right time, right place. They really help us reduce nitrous oxide emissions among other things, such as water quality, etc. The role they have to play and how they're linked with NERP protocol is really important.

One of the things we're exploring in our carbon program is engaging growers at all different stages of implementing the practices, from advanced growers to growers who are looking at the basics. The 4Rs are really outlined in that way. There's a basic, an intermediate and an advanced level. We work with all of those growers to see how we can continue to advance on practices.

As I mentioned before, there are some costs when you get into the intermediate and advanced practices. Growers might not have everything they need to calculate variable rates, which is a very good practice, but maybe they don't have all the equipment, etc.

We really help by working through those barriers, making the plan, and then combining that with soil organic carbon protocol work and other products to get the full carbon asset out of the farm operation.

Mr. Warren Steinley: The business of farming has changed a fair bit from when our fathers used to farm out in Rush Lake.

Another thing I want to talk about is how you have.... Could you highlight some of the detailed work you've done with Nutrien, with your carbon program and plan, and how you have done some incentivizing to make sure farmers are already doing work on their carbon footprint?

I know you mentioned the carrot, not the stick. I'm a very big believer in that.

How have you guys incentivized farmers to even watch and increase their environmental practices on farm now, before there is any government intervention?

Ms. Candace Laing: We've invested in.... As I mentioned, we're paying growers directly for participation, and for their practices right now, because this is what they need to be ready for. This is what our customers need to be ready to participate in. We anticipate the onset of the carbon market. We need them to be ready, and we've got a lot of work to do.

Let me mention that nobody has figured out all the challenges, but that's what we're putting our shoulder into through our pilots. We are very open, both with government, other partners, value chain players and supply chain partners, in pooling our knowledge and figuring some of this out.

Even where we are doing insetting—collaborating with a food company where we can work together, intervene, help the growers scale practices, and then make a claim against our own emissions footprint—the rules aren't set for that. We have to work with those standards bodies and work through on how we're allowed to even do the carbon accounting around those pieces.

We are all in on this because we really believe it is the lever to which we'll scale sustainable ag practices more broadly.

• (1615)

Mr. Warren Steinley: I have a few quick questions.

First, another innovation in Saskatchewan is carbon capture. Are you looking to add that to some of your facilities to lower your carbon footprint into the future by utilizing carbon capture?

Ms. Candace Laing: Yes, we're doing that where we can. Obviously, our sites in North America are co-located with trunk lines. That's the easiest option for us, and we're sequestering many tonnes with that already.

Looking beyond that, at a couple of different opportunities beyond those nitrogen sites, I don't have any more to offer on that.

Mr. Warren Steinley: Lastly, there's going to be a big irrigation project coming to Saskatchewan, obviously, to help ensure we have better and higher yields.

Are you working with the Government of Saskatchewan, and is irrigation another part of the puzzle—something we can do more efficiently and more environmentally friendly?

Ms. Candace Laing: Yes. Water for ag is next up, given that we use 70% of the world's fresh water. Again, those water outcomes, we believe, will be stacked on top of a carbon outcome.

The Chair: Thank you, Ms. Laing, and thank you, Mr. Steinley.

We'll move to Mr. Blois, for five minutes.

Mr. Kody Blois (Kings—Hants, Lib.): Thank you, Mr. Chair, and thank you to our witnesses.

I'll start with Ms. Laing. You highlighted the opportunities that exist on the offset, but you talked about verification and said that it was going to be a challenge for us—I say for us, but certainly for farmers and the industry—to be able to illustrate the good work that is happening.

Can you speak a bit about the digital tools, and elaborate on that for us?

Ms. Candace Laing: Certainly.

Where we're using existing protocols—for us right now, that's the NERP and the conservation cropping protocol—I think when those protocols were originally developed, it wasn't with digitization in mind. Right now, we're looking at how we are rebuilding our platforms to really make this less of a burden on the grower and integrate it into their system.

Sorry, I forget the second part of your question.

Mr. Kody Blois: It was about what it might look like for farmers. Is it applications in terms of being able to perhaps track the type of nitrogen or potash used, for example? Is that the idea?

Ms. Candace Laing: It's the verification, yes. That's what I wanted to share with you, too. Even though we're just doing a pilot, we actually have a mock verifier engaged with us, so we can build out the credible pathway as if we were generating a true carbon asset or credit at the end of this growing season.

We are building the ability to provide evidence of practices into the digital platform. All the evidence that links to the protocols is then built into the digital platforms, as well as linking with some of the other aspects, which are the soil samples.

Mr. Kody Blois: I want to get to the offsets, because you talked about stacking. How are those conversations going with ECCC? I get where you're coming from. You're saying that each practice is going to lead to carbon offset, so we don't want to restrict farmers to perhaps just going after one. We want to pursue multiple and make sure we support those efforts.

How are those conversations going at this stage?

Ms. Candace Laing: We've been engaged in many conversations. We talked to ECCC this week and last week. If I had an ask and could be so bold, we need to think like a farmer in this, and not be piecemeal in our approach.

While we might have some desire to have protocols be separate, we really need to push through and also think of how that brings the biggest environmental impact and carbon outcome out of the farming operation. Why wouldn't we go for that? It's a bit harder and a bit more work to pull it together, but that's definitely what we need.

Mr. Kody Blois: We won't have time to get into the details, but if you have any thoughts to share on that for our report—on that side of trying to think like a farmer, if I can keep it at that level—I think this committee's certainly receptive.

Quickly, there's been a lot of conversation around a price on pollution and some of the inherent challenges at the producer level, but also the opportunities. It seems, from your perspective here today... I applaud the work that Nutrien is doing to prepare farmers to take advantage of the opportunities there are around the price on pollution.

Is it fair that, while there are some difficulties and technicalities that we have to work out, this does really present an opportunity if the policies are struck in the right way?

• (1620)

Ms. Candace Laing: One hundred per cent. Agriculture can be a climate leader. I think we owe it to our sector, with the role that sector plays in our economy in Canada, to help make this happen.

In everything we've looked at from our work with growers, carbon finance is going to be a key to unlocking and getting us faster to what we're all after, which is scaling sustainable agriculture and getting those carbon outcomes. If our breadbasket can be a carbon sink—coming back to being a farm kid from Saskatchewan—and if the world looks at Canadian agriculture as a climate solutions provider, not a culprit.... We just need to do the hard work to get there.

Mr. Kody Blois: Yes, there are great opportunities and I think you hit on those.

Mr. Taylor, I have about 45 seconds left. What I heard from you, and I'll try to summarize, is that we have to, as a government, not only invest in the types of mechanisms we're talking about with Ms. Laing, but also consult and try to reduce actual food waste. That alone will help drive a lot of the emissions that might be necessary that could be tied to agri-food businesses and processing.

Mr. Bruce Taylor: That's correct, yes.

It's kind of shocking. Let's say we did a lobster factory in Nova Scotia. We just sat our people at the end of the line. Kody, you're going to do the claws and Tim will do tails. We just sat there and took out the meat that was left. It was over \$300,000 per year of lobster. Can we justify hiring an employee for that?

If you save that, how much herring do you save to catch that lobster in the first place? You save it all the way up the chain as soon as you save it, no matter where you save it. Even if you save it in your house, you save it all the way back to the fertilizer step.

The Chair: Thank you, Mr. Taylor and Mr. Blois.

[Translation]

Mr. Perron, we now go to you for two and a half minutes.

Mr. Yves Perron: Thank you, Mr. Chair.

Mr. Taylor, in 30 seconds, could you tell us a bit more about food waste?

How could farms integrate that principle without hurting profitability or margins? It sounds like it could actually help them.

[English]

Mr. Bruce Taylor: We've averaged \$230,000 per year of savings to the bottom line for 50 factories in a row. We do water; we do energy; we do toxics; we do whatever. Food is the most lucrative of anything because they have invested everything to get it right to that point. If it falls off the line five feet before the package, but you were able to keep it on the line, basically, boom. You have a market for it and everything.

It's the most lucrative investment that any of these facilities can make. This ranges from multinationals to small ones. We aver-

age \$230,000 per factory of additional profit, with under a one-year payback. The only difference is they don't know about it.

When we went to Campbell, they had 200 ideas in their suggestion box, literally. When we did our studies, we said, yes, you have 200, but these seven are what's really going to make a difference for you, which came out to more than \$1.6 million, or whatever it was. It's that kind of strategic thinking that needs to be layered on.

[Translation]

Mr. Yves Perron: What can the government do to help the farming sector put that into action? What measures need to be taken? What approach should the federal government adopt?

[English]

Mr. Bruce Taylor: First of all, throw out waste diversion percentage, because waste diversion looks worse when you save food. At Campbell Soup, we avoided 1,000 tonnes a year of food waste. Their waste diversion number went down because they used to be diverting it, but it's still better to have it as food than as diverted waste.

We have the wrong metrics at the federal level, but also there are no programs in effect. Nobody's even talking about food waste prevention. We're all talking about organic waste management and how we destroy this food more efficiently, rather than how we keep it as food.

There are no programs; there is no support for anybody on how to go about doing it.

[Translation]

Mr. Yves Perron: We could start by providing financial support to those who take the initiative.

[English]

Mr. Bruce Taylor: That's correct. Yes, I would say a co-funded program, say like the one that's on the table for us right now. We would have gone into 150 facilities starting next month, but our application was just declined. We would have started next month, going to 150 factories and helping them reduce food waste. That could be co-funded so they also have skin in the game.

Do this opportunity assessment of what can be done and the business case for each thing you would change, so that when they get the report, they have the ideas and the business case for each of them. They are ready to go. Many of them are implemented before you even leave the factory.

• (1625)

The Chair: Thank you, Mr. Taylor.

[*Translation*]

Thank you, Mr. Perron.

[*English*]

Now we have Mr. MacGregor for two and a half minutes.

You're up, Mr. MacGregor.

Mr. Alistair MacGregor: Thank you, Mr. Chair.

Mr. Taylor, I will continue with you. I know from discussions with several farmers in my riding that their electricity bills can be eye-wateringly huge.

Here in British Columbia, we're very lucky because, of course, more than 90% of our power is generated by hydroelectricity, but I'm looking outside at a beautiful, sunny day. All of this energy is raining down from this big glowing orb in the sky. Look at the price of solar panels, and how they have gone down and down. They are becoming more efficient. I know you talked about helping a grape grower. I look at all of that empty space on barn roofs that could be covered in solar panels.

For jurisdictions where they are relying on fossil fuels for electricity generation, is this something that is becoming increasingly viable for farmers to participate in? I know we have a variable climate. Our winters are not the greatest, but our summers are pretty amazing for power generation.

Is this something that we should also be pursuing? Should we be helping our farmers to get solar panels on their roofs and on their property?

Mr. Bruce Taylor: On the roofs I think I would agree with. Over the fields, you're losing agricultural output, so you would want to be careful with that.

Again, say for Southbrook, it was a seven-year payback for the panels, but it was a four-month payback to not use energy. You can cut a ribbon around a solar panel, but you can't see not using energy, so it doesn't have the same cachet or whatever.

That's where the biggest benefit for the farmer is, to reduce that demand. Then, all the electricity you're buying is turning into heat eventually. Are you paying to get rid of that heat from your cooling tower, or can you reuse that heat with a whole-systems approach? Don't improve one part of it; look at the whole system and improve that, and then look at renewables for what's left over. Don't start with renewables.

Mr. Alistair MacGregor: I know this is under provincial jurisdiction, but has it been a better model for them to feed back into the grid to get a credit, or do you see something better, like a battery storage for them to draw on when the sun isn't shining?

Mr. Bruce Taylor: I would say Southbrook is at net metering. He is doing it for policy reasons. Before that, there was a lucrative thing that brought down the cost of the solar. It really doesn't depend on how you do it, but I would really love to see something....

What about a program where you put panels in South Sudan or Uganda? There's twice as much daylight. You're going to have all these life impacts. Does it have to be on a roof?

The Chair: Thank you, Mr. Taylor.

Before we wrap up, I might slip in a question to Ms. Laing.

You mentioned in your opening statement that you're working to lower GHG in fertilizer. Are you talking about the product itself having lower GHG, or will it be the manufacturing of that product?

In other words, could I pick up a bag on the shelf from a certain brand that would be lower GHG? I'm sure there's slow-release fertilizer and all kinds, but could you tell us where you're working the hardest? Is it before, in the manufacturing, or is it in the usage?

Ms. Candace Laing: There are definitely two pieces there that you have picked up on. One is the innovation in products. That would be slow-release inhibitors, etc. I'll come back to that in a minute.

When I'm referencing low-carbon or carbon-free fertilizers, it's in the production context. We have a continuum. We start with carbon capture. That is step one. From there we could look at different production processes, but that will involve a rebuild of assets. It would begin with autothermal reforming, and we could then get into methane pyrolysis as another low-carbon method and explore that. Ultimately, we are on a road map to green ammonia, which would give us access to renewables.

What's exciting is that whether you're in production or process, if we are using the carrot and not the stick, we are going to facilitate an agenda of innovation around decarbonizing agriculture. I think that's an important part of the picture, as are productivity, reductions and sequestering carbon in our soil.

The Chair: Thank you very much, Ms. Laing, for that. It was on my mind, and I wanted to get it clear.

With that, I'll thank the panel for a very interesting discussion. We could go on and on, I'm sure.

Mr. Taylor, from Enviro-Stewards, it's really great to have your statement on what you're doing. Also Ms. Laing, from Nutrien, thank you so much.

With that, we'll suspend for a few minutes to change the panel. We'll be right back.

Thank you.

• (1625) _____ (Pause) _____

• (1635)

The Chair: I call the meeting back to order.

I would like to welcome our second panel.

[*Translation*]

From Danone, we have Jean-Marc Bertrand, director of procurement, raw and packs, and Isabelle Rayle-Doiron, general secretary and general counsel.

Also with us is Jean-François Lévêque, co-owner of Jardins de l'écoumène.

Welcome. You will each have seven and a half minutes for your presentation.

We will start with the Danone representatives.

[*English*]

Ms. Isabelle Rayle-Doiron (General Secretary and General Counsel, Danone Inc.): Thank you, Mr. Chair and committee members, for the invitation to appear before this committee.

As stated, my name is Isabelle Rayle-Doiron. I'm the general secretary and general counsel of Danone Canada. I'm here with my colleague Jean-Marc Bertrand, our procurement director.

Danone Canada is a business unit of Danone, a leading global food and beverage company providing essential dairy and plant-based products, water and specialized nutrition products.

[*Translation*]

Established in Canada in 1930 by the Delisle yogourt company, Danone is now one of the largest manufacturers of dairy and plant-based products in the country. We are proud to have offices in Boucherville, Quebec, and Mississauga, Ontario. Our mission is to provide healthy foods to as many people as possible.

[*English*]

We are Canada's largest consumer-facing B corporation, a certification that reflects our commitment to meeting the highest standards of social and environmental performance. We at Danone are committed to doing our part in the fight against climate change by implementing carbon-positive solutions and aiming to achieve carbon neutrality by 2050, from the farm level to the end of life of our packaging. Agriculture is at the heart of what we do. Danone supports the ability of farmers, as lead actors, to transition to environmentally friendly practices.

I will turn it over to my colleague Jean-Marc, director of procurement and lead of our regenerative agriculture initiatives in Canada. Jean-Marc will speak to our current efforts and share our views on ways the Government of Canada can help partner with industry to reduce the environmental impact of agriculture.

Mr. Jean-Marc Bertrand (Director, Procurement, Raw and Packs, Danone Inc.): Thank you, Isabelle.

Danone is no stranger to regenerative agriculture practices worldwide. We have defined our vision on regenerative agriculture

around three principles: first, protecting soil, water and biodiversity; second, empowering a new generation of farmers; and third, respecting animal welfare. We have been inspired by the impressive work done by our Danone colleagues in other geographies, in partnership with their local farmers.

In the United States, Danone partnered with farmers to launch a soil health initiative. It includes an initial investment of \$6 million for piloting soil health management of 100,000 acres by 2022. The goal is to restore the soil's ability to capture carbon and reduce overall GHG emissions across farm operations, such as in manure management and barn efficiencies. This study also serves to quantify and validate the return on investment resulting from the soil health initiative and transition to regenerative agricultural practices.

In Canada, there are limited opportunities to partner with farmers to promote regenerative agriculture practices in a way that drives returns for each partner. That being said, Danone Canada has put in place small-scale but promising regenerative agriculture projects.

• (1640)

[*Translation*]

Since 2019, Danone Canada has proudly partnered with the cooperative Nutrinor, based in Quebec's Lac Saint-Jean region. Together, we are exploring ways to improve soil health, animal welfare and producer independence.

[*English*]

As another example, a Danone brand, Silk, a leader in the plant-based product category, announced last year a partnership with the New Acre Project led by Alus Canada.

Silk's involvement will help support the management and restoration of 90 acres of farmland in seven communities in Alberta, Ontario and Quebec over the next seven years. New Acre Project will provide annual progress reports on key performance indicators such as overall biodiversity gain, water quality improvement, and soil organic carbon accumulated in the restored marginal lands.

These projects are an example that show Danone Canada's commitment to partnering with farmers and helping them improve their farming practices.

We believe the government has an important role to play on the following four topics.

First is tools and measurements. To promote regenerative agriculture practices in the country we need to start by measuring the environmental impact of current practices and create a clear baseline. Data collection will also be key to develop tools to measure the outcomes and provide positive impacts of using regenerative practices.

Second is education and technical assistance. To be successful, farmers will also require education, training and technical support to better align their own practices with principles of regenerative agriculture. The government can help support a multitude of farmers by partnering with companies like ours to engage more farms.

Third is financial incentives. To enable a wide-scale transition to regenerative agriculture, strong financial incentives are essential. Incentivizing farmers willing to transition to regenerative agriculture practices could be done by optimizing current programs focusing on the most impactful practices.

Lastly is coordination. We also believe in implementing a coordinated approach between government and all stakeholders, including food processors, to allow the private sector to collaborate and contribute to the effort of promoting regenerative agriculture practices in Canada.

In conclusion, we believe that accelerating the transition of more farms to regenerative agriculture practices will definitely help address several global challenges, from climate change to water scarcity and restoring biodiversity, while driving sustainable, inclusive economic growth.

At Danone we believe that the health of the people and the health of the planet are profoundly interconnected.

[*Translation*]

Thank you for giving us this opportunity to appear before the committee.

[*English*]

We would be pleased to answer any questions you may have, in French or in English.

[*Translation*]

The Chair: Thank you, Mr. Bertrand and Ms. Rayle-Doiron.

We will now hear from Jean-François Lévêque, co-owner of Jardins de l'écoumène.

Please go ahead, Mr. Lévêque.

Mr. Jean-François Lévêque (Part Owner, Jardins de l'écoumène): Thank you, Mr. Chair.

I'd like to thank the committee members, especially my member of Parliament, Yves Perron.

I am very glad that the committee invited me to participate in its study of best practices in agriculture. This is a special opportunity.

Jardins de l'écoumène has been in operation for some 20 years, in the same place we started, the Lanaudière region. We produce mainly seeds, organic heirloom varieties.

In the beginning, when we started the business, we were seen as an outlier. Many people wondered why we would want to get into organic farming and offer heirloom varieties. At the time, the fertilizer world was in full swing; the focus was on technology-based practices involving genetically modified organisms, or GMOs, and hybrids, which were highly sought after by the industry and many gardeners.

Today, the trend is different. Our business is booming. Over the past 20 years, we have watched our sales grow from a few thousand dollars to \$2.5 million. We supply organic products to a gardener customer base. We are very proud of what we have accomplished in recent years.

Since the beginning, our company's focus has been twofold: a financial focus—which made it possible to grow the business—and an environmental focus. For us, the environment and ecology really means science, ecological science. As a result, we understand ecosystems, biotopes, niches and ecosystem services, which we work with to produce foodstuffs, or seeds, while always keeping ecosystem health in mind. We work with nature in order to understand how it works and learn practices that respect soil, water and biodiversity health. That is what we do.

When I heard about the committee's study, I smiled a bit. I figured you were expecting me to talk about practices to foster better conditions, both for human health and for soil and biodiversity health. Then, I instinctively thought that there was something about your study I was missing. Are any of the people here today looking for solutions? You already have the solution.

I say that because Canada established a national standard for organic farming. Our practices are based on it. You probably know a bit about how organic standard certification works.

In Quebec, an agency called Québec Vrai is responsible for certification. It's all done in advance in accordance with ISO standards, which require us to apply practices that keep soil and ecosystems healthy. We cannot use pesticides, chemicals or GMOs. Our production has to have the least possible environmental impact.

● (1645)

Today, I'm going to put myself in the shoes of a politician. I want to tell you what I would do if I were you, to ensure Canada had more environmentally responsible practices.

I was interested in what you had already. For the benefit of the committee members and analysts, I want to point out that information is available from the Canada Organic Trade Association. I'm not sure whether the committee will be hearing from association representatives, but it has done a great job of describing all the practices that have been standardized and those that are prohibited [Editor's Note: *Technical difficulty—Editor*]

For instance, we use practices such as crop rotation and companion planting. We also use compost and beneficial insects for pest control. We work with living soil. We have research and development partnerships with organizations such as Bio-Terre. Currently, we are involved in a three-year project to characterize soil microbiology. In organic farming, we have to make sure the soil food chain provides plants with the proper support.

A moment ago, I named a few products that were prohibited. Synthetic fertilizers, toxic pesticides, GMOs and sewage sludge are all prohibited, as is any product that prevents an ecosystem from functioning effectively.

If the committee members are interested, they can find more information on the Canada Organic Trade Association's website.

Another issue I'd like to bring to your attention is one that makes no sense to me. In order to obtain organic certification, we have to shell out \$3,600 a year. That's ridiculous. I can't understand how small and medium-sized businesses can be made to pay a fee to show that they are taking care of the environment and following best practices. We make sure all of our practices comply with the appropriate standards. Every year, someone conducts verifications to make sure of it. It just makes no sense.

• (1650)

The Chair: Thank you, Mr. Lévêque.

Unfortunately, you're out of time. You may have a chance to provide more information during the question and answer portion.

[English]

Just before we move on, I'd like to welcome our colleagues Mr. Sheehan and Mr. Saini. They've been very well behaved in the first hour, and I'm sure they'll be here. Thanks for being here.

We'll go to our question round. The first round is Ms. Rood for six minutes.

Go ahead, Ms. Rood.

Ms. Lianne Rood (Lambton—Kent—Middlesex, CPC): Thank you, Mr. Chair, and thank you to the witnesses for appearing here today.

I have just a quick question for Mr. Lévêque.

I'm just wondering if you could tell us approximately the size of the farm you're a part of. You had some interesting things to say, but I'm not sure of the scale of the size of your operation.

[Translation]

Mr. Jean-François Lévêque: We have three hectares. The bulk of our production is seeds. We supply mostly gardeners.

[English]

Ms. Lianne Rood: Thank you so much.

I'm just going to switch gears over here. I have a couple of questions for Mr. Bertrand.

You were talking about regenerative agriculture, and I appreciate what you guys have been doing. I've had the pleasure of having a meeting with you folks before, to hear some of those good things.

Could you comment on whether you're just a food processor? Can you explain to us if you have growers under your umbrella, or how that works when you're working with producers as a processor as well?

Mr. Jean-Marc Bertrand: That's a great question.

We are not farmers, for sure. We are marketing products that meet our consumer demand, so we are processing everything that the farmers grow.

However, close to 60% of our total carbon footprint comes from agriculture. Because we have the goal to reduce 50% of our carbon footprint by 2030, and 60% of it comes from agriculture, guess what? We're getting close to these guys. We're trying to understand the reality and give them all the tools they need, and we work with them closely.

In the end, though, they are farming and we are not.

Ms. Lianne Rood: That's great. Then I'm sure you can appreciate that most farmers operate their business with very narrow profit margins, and frequently things that farmers are asked to do to fit policy-makers' understanding of what is environmentally responsible just lead to more costs. In most instances, those costs can't be passed on or down the value chain, so they further narrow farmers' profit margins.

How does your understanding of regenerative agriculture affect farmers' profit margins? What are the financial incentives? Apart from government funding, are there financial incentives available?

I'll leave it at that.

Mr. Jean-Marc Bertrand: Yes, and this is key. If we want to continue marketing our great products, we need to make sure these farmers are still going to be around in the next year or in the next generations. That's absolutely essential, and it is key in our definition.

If you recall, the second bullet in our definition is the empowerment of farmers, but it's also to make sure they continue to make a living.

Right now, with the 100,000 acres we ran as a pilot, mostly in the U.S. and some in Canada, basically we helped them by paying for all the studies, to make sure we understood the baseline. We also made sure to run those models long enough to see the payback.

There is a payback. That's the great thing about this. However, to kick-start or to initiate these projects, there is a spend that needs to be taken care of. In the end, after three to four years, depending on the soil and the types of things you grow, for sure, the goal is to get a payback on these projects and a return on investment.

• (1655)

Ms. Lianne Rood: Thank you.

I'd like to turn to your work around bringing marginal lands under cultivation.

Have you found that the cost of bringing marginal lands into cultivation is outweighed by the yields and the value of what can be grown on regenerated lands?

Mr. Jean-Marc Bertrand: On the marginal lands, with Alus Canada, we used mostly buffer zones, the two or three to five metres close to the waterways. These could not be used to grow a cash crop. Really, that was the intention, but it still needs to be taken care of and it still has the potential to capture carbon.

It is too early right now to see the results in all the data, but we know that directionally it's going to act as growing regular cultures.

Ms. Lianne Rood: That's great.

Turning to some cattle-grazing practices, because you deal with a lot of dairy, some cattle-grazing practices include frequent rotational grazing and can regenerate grasslands and carbon capture in the soil.

Have you looked at the benefits to soil and grasslands from innovative cattle-grazing practices?

Mr. Jean-Marc Bertrand: For sure, this practice will benefit from regenerative agricultural practices. Whether it's cattle or it's dairy cows, it all revolves around the same principle, like crop rotation. Obviously, in a pasture you don't till. There's no tillage required. Basically, the manure management is direct. However, some of these principles are also applicable.

Ms. Lianne Rood: Thank you so much.

The Chair: Thank you, Ms. Rood.

[*Translation*]

Thank you, Mr. Bertrand.

Mr. Drouin, you may go ahead. You have six minutes.

Mr. Francis Drouin (Glengarry—Prescott—Russell, Lib.): Thank you, Mr. Chair.

Thank you to the witnesses for being here today.

My question is for Mr. Lévêque.

Just before the chair interrupted you, you were talking about having to pay for your certification. Is that correct?

Mr. Jean-François Lévêque: Yes, that's correct.

We have to fork out \$3,600 a year for certification. What it does is prove that our products are organic, and compliant with Canadian standards relating to ecosystem and soil health and the non-use of fertilizers and chemical pesticides.

Mr. Francis Drouin: Does Québec Vrai provide the certification, or is it tied to the new federal standard?

Mr. Jean-François Lévêque: Québec Vrai complies with Canadian standards. British Columbia and Quebec already have their own certification systems, but when the federal standard was introduced, it covered all of Canada. Through Québec Vrai, our certifying body, we are certainly compliant with the Canadian standard.

Mr. Francis Drouin: Do you export your products or sell them locally?

Mr. Jean-François Lévêque: Right now, we sell throughout Canada. We have an online store, as well as retailers in New Brunswick. We occasionally export products, mainly to Europe.

• (1700)

Mr. Francis Drouin: Basically, you're an organic farmer. Have you had any problems accessing the equipment you need for organic farming in Canada? I know you have about seven acres.

Mr. Jean-François Lévêque: Actually, the equipment we need for the size of our farm is rather hard to get. We operate in a world of large-scale farming that uses big equipment. We rely a lot on countries in Europe and even Asia. We bring in the equipment from there because those countries view farming differently. Unfortunately, we have to import the equipment we need.

I should point out that small, human-scale farms—so those with two to seven hectares—are a growing phenomenon in Quebec. We are seeing more and more semi-automated equipment. Some of the work is still done manually, but we also have mechanical processes. At this scale, we can carefully follow the rules for preserving ecosystems.

Mr. Francis Drouin: I see. Thank you.

My next questions are for Mr. Bertrand.

First, it's nice to see you again. We've met before and had an opportunity to discuss regenerative agriculture.

Similar to Ms. Rood, I would like to talk about how you work with the farming community. At Danone, do you have your own farmer certification system, or do you deal exclusively with certain suppliers whose products are in line with your company's mission?

Mr. Jean-Marc Bertrand: Generally, Danone's model throughout the world is based on contractual arrangements directly with farmers. We make every effort to be as transparent as possible, opening the books to really understand input costs and build them into our pricing.

Earlier I said that farmers have to be able to keep farming. We want to make sure farms remain viable to prevent a disruption in the supply chain. That is the number one principle; it is imperative. That is how we operate.

Mr. Francis Drouin: One of your recommendations is to collect more data. Does Danone collect data from its suppliers to make sure it is on track to meet its commitment of carbon neutrality by 2050, for example?

Mr. Jean-Marc Bertrand: Yes, absolutely. We work with a consulting firm, which developed agriculture models to measure the real numbers out in the field. That is paramount; it's the first principle of ongoing improvement. Introducing those programs is consistent with the principle of ongoing improvement. In order to improve something, you have to understand it fully. Otherwise, you can't improve it. Having a full understanding of the situation is therefore essential in our approach. Taking measurements and making improvements is key. We make a change, we measure again, and then, we make another change. If it's not successful, we start over, and so on.

Mr. Francis Drouin: Do you see something of a trend emerging in the agricultural market? That question may come off as though you deal with the entire agricultural community. What I'm wondering, though, is whether you see a lot more farmers moving towards organic farming.

The Chair: Please answer quickly, Mr. Bertrand.

Mr. Jean-Marc Bertrand: It's really up to the consumer. We are always looking to stay abreast of consumers' needs. For example, if they are choosing non-GMO or organic products, we make sure we can give them what they want.

I would say, yes, the trend is certainly growing.

The Chair: Thank you, Mr. Bertrand and Mr. Drouin.

We now go to Mr. Perron for six minutes.

Mr. Yves Perron: Thank you, Mr. Chair.

Welcome to the witnesses. It's a pleasure to have you with us.

Mr. Bertrand, you talked about tools to measure impacts, saying that was one of the areas where the government could help. Measuring impacts is the biggest challenge.

In tangible terms, what would that look like? What can the government do to support the measurement process?

• (1705)

Mr. Jean-Marc Bertrand: The tool we most commonly use is the Cool Farm Tool, which is available and already widely used in a number of countries. The reason we use it is to make sure we are

comparing apples with apples when we look at agriculture in different countries.

I wouldn't say it's the most challenging problem, but it's the main one at the beginning of the process.

Mr. Yves Perron: Sorry to interrupt you, but does that include characterizing soil microbiology at all? I would think so.

Mr. Jean-Marc Bertrand: No, not automatically, but it could be required. Within a single province, some areas have better performance than others, so it may be necessary to take things a step further in terms of soil characterization.

Mr. Yves Perron: Thank you.

Good afternoon, Mr. Lévêque. It's nice to see you again.

I wanted you to appear before the committee because I appreciated it when you said we already had the solutions. You were referring to our organic standards. You said that if Canada and Quebec wanted to improve their environmental performance, they should do more to promote organic farming. That's basically your message to us today.

Mr. Jean-François Lévêque: Yes, that's precisely my message to you today.

Three years ago, on the news, I heard about something Denmark had done, and it really stuck with me. Denmark consulted its citizens via a referendum. People were asked how they wanted to eat, plain and simple. Denmark ended up incentivizing hospitals, day cares, early childhood education centres and other institutions to serve organic food, and the public at large to eat organic. I urge you to explore that avenue.

I was really impressed by the fact that a country went to the trouble of consulting its people and proceeded to develop standards and practices in support of the people's preference, organic farming. It's really something.

After a decade, the country achieved amazing things. It is my hope that a government like yours would do the same.

Mr. Yves Perron: Thank you.

One of the issues that seems to be emerging early on in our study is how difficult it is to take the necessary measurements from start to finish. Your farm has been exclusively organic for quite some time, but that isn't the case for all farmers. The purpose of our study is to improve the sector's overall performance, taking into account large-scale farms, mechanized operations, fertilizer use and so forth. The idea is to help those farms gradually reduce their environmental impact.

You talked about a three-year project to characterize soil microbiology. Can you tell us more about that?

Mr. Jean-François Lévêque: Over the past five years, we have introduced into our gardens a product called biochar, a vegetable carbon, whose main function is to sustain life.

Industrial agriculture uses numerous products whose name ends in “cide”, such as pesticides, herbicides, fungicides and miticides. The suffix “cide” comes from the Latin “*cida*”, which means to kill. So all chemical agricultural practices are aimed at killing living organisms in the soil. In organic agriculture, we work in the opposite way. The prefix “bio” comes from Greek, and it means life. So, in organic agriculture, we have understood that, to produce healthy and resilient plants, and healthy cultures and animals—this goes for both plants and animals—we must promote life. Our research project consists in developing techniques and measures to characterize soil life. We are working in partnership. We are two companies participating in this specific project.

The next agricultural revolution will inevitably go through microbiology. We had the era of chemical products and soil physics, but soil microbiology is the next agricultural revolution. We will be able to move away from products ending in “cide” to produce healthful food for human health using the soil.

• (1710)

Mr. Yves Perron: Thank you.

So this could apply to businesses of all sizes. When we talk about measuring environmental performance, we are talking about automating or digitizing data to create a database for comparison.

We are also talking about creating positive financial incentives to encourage green practices. Your point on the cost of \$3,600 shows that there is some cynicism. The committee is taking note of that, you can count on me.

Beyond this, businesses of all sizes must be able to measure their environmental performance and improve it.

Is my time up, Mr. Chair?

The Chair: Yes.

Mr. Yves Perron: So we'll continue later.

The Chair: Thank you, Mr. Perron and Mr. Lévêque.

[*English*]

Now we have Mr. MacGregor for six minutes.

Go ahead, Mr. MacGregor.

Mr. Alistair MacGregor: Thank you so much, Mr. Chair.

Thank you to our witnesses for contributing to our committee's discussion on this topic.

I'll start with Danone.

I am very interested in the subject of regenerative agriculture. I was very curious about a question from my colleague, Ms. Rood, because she was asking you about the cost to farmers of engaging in regenerative agriculture.

Conventional farming has its costs as well. There is a very substantive report that came out from the National Farmers Union that shows that farm debt has doubled over the last 20 years and that 95% of revenues are going towards input costs, so there are costs everywhere you look.

I know regenerative agriculture attempts to bring harmony back to the soil, allowing plants to live in symbiosis with the soil food web that exists under there. Do you have any testimonials from farmers who have made the switch? Have they noticed the benefits of engaging in this practice in terms of yield, overall soil health and satisfaction with how everything is going, but also in economic terms as well?

Mr. Jean-Marc Bertrand: Yes. I'll start with the testimony.

I have many examples from the 34 farms that are part of the 100,000 acres in the United States. Closer to us, I've been able to meet with at least two Quebec growers who are into what we call in French “*les grandes cultures*”. I'm sorry; I am not sure exactly how to translate that, but it's corn, peas and soy.

It took these guys quite a while because they were self-reflecting about all this. In the end, they have 10% to 15% more output, and they have reduced their costs because they no longer use chemical fertilizers. They have not yet arrived at a fully organic product, as Mr. Lévêque just described, but they tend to be closer to this because these practices reduce energy.

You go less often into your fields with your tractor, so you generate less carbon, and you leave the soil to restore itself because the soil has everything it needs to do so. You never leave it bare. By adding cover crops, you capture more carbon, so you don't need the input.

In the end, they're winning on all fronts. They're winning on higher yields and lower costs. However, to characterize it with a real number depends on what you grow and where you are. That's why a testing measurement is required. Whatever we've found works great in Ohio we couldn't apply in Lac Saint-Jean, and what ever works well in Ohio doesn't work in Kansas. Unfortunately I do not have the silver bullet to solve everything today, but we know that the principles work. They just have to be adapted to each region and each type of plant you're growing.

Mr. Alistair MacGregor: I think that's language any farmer would understand—lower input costs, better yield, and better soil health—so any farmer will gravitate positively if you can show that.

I want to turn to Monsieur Lévêque about organic agriculture. I'm trying to find a way where conventional farmers and organic farmers can learn from one another, because we don't want to have the two solitudes. We want to be able to learn from one another.

I think there have often been questions about scalability and so on. I also think the research dollars that are going into organic agriculture lag far behind those that are going into conventional farming.

The University of British Columbia has an organic farming research program. Do you have any thoughts about more investments that might be needed in organic agriculture to, in fact, make the argument a bit better?

• (1715)

[*Translation*]

Mr. Jean-François Lévêque: Could the question be put to me in French please?

The Chair: Could you not hear the interpretation?

Mr. Jean-François Lévêque: No, I am not hearing the interpretation.

The Chair: Can you check why Mr. Lévêque is not hearing the interpretation?

The Clerk: Mr. Lévêque, you should be able to select French interpretation on your screen.

Mr. Jean-François Lévêque: Great. I just turned it on. I'm sorry.
[*English*]

Mr. Alistair MacGregor: I can rephrase the question, Mr. Chair.

The Chair: Okay. We'll adjust your time, Mr. MacGregor.

Mr. Alistair MacGregor: Monsieur Lévêque, I'm trying to find a way for organic farmers and conventional farmers to have a dialogue and learn from one another. Often, questions in organic agriculture have been about its scalability, but if you look at the research dollars that go into organic agriculture, they lag far behind the research dollars that go into conventional farming. That's a very well-established fact.

There is some very promising research going on. The University of British Columbia has an organic agriculture research program looking at how pest management and natural fertilizer strategies are done.

In your opinion, do we need more efforts in that regard to really scale up organic agriculture? Do you have any thoughts to contribute on that subject for our committee's study?

[*Translation*]

The Chair: You have time for a brief answer, Mr. Lévêque.

Mr. Jean-François Lévêque: Okay, Mr. Chair.

I think one way to support organic agriculture is through tax measures. It would actually be relatively simple to penalize users of chemical products because any farm using pesticides must be registered. I think that applying the user pay principle would be one of the first things to do.

In Quebec, organic agriculture is also underfunded, which creates a very substantial lag. We talked about Denmark earlier, but Switzerland is also investing heavily in organic agriculture.

The Chair: Thank you, Mr. Lévêque.

We will now begin the second round. Mr. Lehoux, go ahead for five minutes.

Mr. Richard Lehoux (Beauce, CPC): Thank you, Mr. Chair.

I thank the witnesses for joining us this afternoon.

My first question is for Mr. Bertrand.

Danone is a business that operates in Canada, but also outside the country. As you have probably noted, Canada has trade agreements with various countries that often include provisions on agriculture. However, we often have little or no control over products that enter Canada.

Different rules apply when we export our products. How can we move forward on the environmental issue while having certain rules that apply internationally?

Mr. Jean-Marc Bertrand: That's a very interesting point of view. Standards for quantifying or qualifying regenerative agriculture don't really exist.

Danone worked with non-government organizations in Europe to develop standards. It used a third party to establish credibility and develop standards.

I was saying that, to improve soil health, we must go to the fields less often, put on covers, and so on. So standards must be followed. Not just any farmer can say they are capturing carbon in the soil. They must follow established procedures—

• (1720)

Mr. Richard Lehoux: Mr. Bertrand, I wanted to know what control measures could be worked into the international agreements we are signing. There are currently a number of market opportunities. How can we ensure that the products arriving here respect the way we farm in Canada?

Mr. Jean-Marc Bertrand: True certification must be created, like for organic food, except that we could say it is free today.

More seriously, certification would be needed to ensure that food entering the country meets certain requirements.

Mr. Richard Lehoux: Thank you, Mr. Bertrand.

Something should perhaps be done in terms of reciprocity of standards for food entering the country. We can impose standards in the country, but perhaps those standards should be met for the many products arriving from outside Canada.

Mr. Jean-Marc Bertrand: Yes.

For the time being, when it comes to the environmental footprint, products coming from Europe are fairly similar to what we have in Canada. So it is pretty similar, but this footprint can be twice as large in other countries.

Mr. Richard Lehoux: In any case, this should perhaps be taken into account for imports.

You also talked about the life cycle of your packaging—from its production to the end of its life. What often worries me is the amount of packaging used for our products. Where does Danone stand on this?

Mr. Jean-Marc Bertrand: The packaging issue is absolutely crucial, and this is not the first time we are working on it. The work is ongoing, and our objective is for 100% of our products to be recyclable, reusable or compostable by 2025. That is absolutely crucial.

We are still trying to get as close to circularity as possible by eliminating packaging and by innovating to use more reusable products. That is absolutely crucial.

Mr. Richard Lehoux: Thank you.

In closing, I would like to put a question to Mr. Lévêque.

In the same vein, international agreements are often signed for products. How do you view this? Organic agriculture is indeed an option, and I am among those who subscribe to that method, but how can we have better control over the food entering the country?

Mr. Jean-François Lévêque: In terms of international trade, Europe asked, through various economic farming groups, that Canada adopt the organic certification standard, which encourages trade based on a single standard.

So the Canadian standard is recognized by Europe and by the United States. This standard actually applies to all countries that want to export organic products. It helps get what is wanted—a guarantee.

Mr. Richard Lehoux: Thank you very much.

The Chair: Thank you, Mr. Lévêque and Mr. Lehoux.

Mr. Blois, you now have the floor for five minutes.

[English]

Mr. Kody Blois: Thank you, Mr. Chair, and thank you to our witnesses.

I'll start with Danone. What excites me about the opportunities regarding climate change and reducing emissions is the fact that it is not just government but the private sector taking the lead. I'll give a tip of the cap to you guys at Danone for your work in this regard. It really speaks volumes to the opportunities that exist.

We've had the chance, Mr. Bertrand, to talk outside of this committee, and I know you have business holdings outside of Canada. In the United States, for example, you might sit down with a certain farm that has the output and economies of scale to help you get to your side. You're talking about milk and yogourt and other dairy products, and in supply-managed sectors we have a lot of smaller family farms. How do you work in that environment, in the supply-managed sector, to get some of the outcomes on the regenerative side that are important to you?

• (1725)

Mr. Jean-Marc Bertrand: That's an interesting question.

The principles themselves apply whether you're in a supply-management system or an open system. It's the same science behind the whole thing. However, with supply management, we do not have

the direct contractual connection with farmers, so it's difficult to help them directly to cover the first couple of years of these projects—to pay for cover crops, let's say, for the first two or three years—because I will never see any return on the investment of that money. That creates a bit of difficulty.

However, if we could, for a potential project, partner with the government and the farmers' association, we'd be willing to entertain that and test our tools, for sure.

Mr. Kody Blois: You mentioned your Silk products and some of the ones that are more plant-based. I assume there isn't necessarily as much of a challenge there, because you can work directly with the farms in that case. Is my understanding correct?

Mr. Jean-Marc Bertrand: That's right. If it were not for COVID, I would probably be right now in a field of oats in Saskatchewan or Manitoba, for sure.

Mr. Kody Blois: When we start talking about the private sector taking the lead, as someone who would identify as a business liberal, so to speak, on the spectrum, that's something that really excites me.

What are some of the suggestions you might have? I have your four points that you raised for the committee—I don't think you need to reiterate those—but in broad strokes, what are some ways in which government can start incentivizing and driving the private sector to take the lead, and government, obviously, in some level of partnership?

Mr. Jean-Marc Bertrand: I think that if the government makes some monetary investments towards improvement—we put in some money and the farmer puts some money in too—so some sort of... I'm not sure of the name for exactly this type of—

Mr. Jean-Marc Bertrand: —co-operative or consortium or whatever. These are great ways to move the needle for sure. We would maybe want to make sure that everybody gets recognized in this partnership.

Mr. Kody Blois: It's a co-operative or partnership.

[Translation]

Mr. Kody Blois: I have one last question, which I will put in French to Mr. Lévêque.

Thank you for joining us in committee.

Your testimony mostly focused on organic agriculture. Do you think that is the only way to ensure the existence of environmental standards, or are these just practices involving environmental principles?

Mr. Jean-François Lévêque: It is a bit of both. Standards exist, and specifications are clear and specific on what can be done to certify organic food products. So everything is clear, everything is there and everything is in place.

I think this is the most relevant approach. The organic standard has imposed itself not only in Canada, but also in the United States, in Europe and in Asia. We have been working on bringing organic agriculture out of the margins for 40 years. As for organic agriculture standards and respecting the environment, it is scientifically recognized that practices are established both on a small scale and on a large scale. We must not forget that large businesses also engage in organic agriculture.

The Chair: Thank you, Mr. Lévêque and Mr. Blois.

Mr. Kody Blois: Thank you, Mr. Lévêque.

Mr. Chair, can I ask just one short question? Perhaps Mr. Perron can give me some of his time.

According to you, are organic agriculture practices the same as or different from regenerative agriculture practices?

[*English*]

I'll leave that for another time, Mr. Chair.

[*Translation*]

Mr. Jean-François Lévêque: They are complementary. Regenerative agriculture does not require certification and looks to use sequestered carbon. However, organic agriculture achieves exactly the same outcome when it comes to carbon sequestration.

The Chair: Thank you, Mr. Lévêque and Mr. Blois.

You have the floor for two and a half minutes, Mr. Perron.

Mr. Yves Perron: Thank you, Mr. Chair.

Mr. Lévêque, we will continue in the same vein because this is interesting.

We have talked about organic research being underfunded. Can you tell us whether, to move things forward, it would be appropriate to provide more funding for research in organic agriculture, which could also positively impact traditional agriculture?

• (1730)

Mr. Jean-François Lévêque: There is no doubt that research must be supported, but so must schools.

Over the past seven years, members of the new generation—those 30 years of age and under—have been taking organic agriculture courses. In any case, that is what is happening in Quebec. So funding should continue to be provided to help young people also have access to more innovative methods in organic agriculture.

Mr. Yves Perron: Okay. Thank you, Mr. Lévêque.

I will go back to the question Mr. MacGregor put to you earlier.

How do you see the potential partnership between traditional agriculture and organic agriculture, which comes with all these practices? You will understand that, across Canada, the goal is to improve all the practices and reduce the climate footprint for everyone. How can your sector help by moving forward with the more traditional sector?

Mr. Jean-François Lévêque: One of the ways to do that is through education. Research must continue to be done and access to those technologies must be provided.

For example, in Denmark, a small corridor was invented to enable bees to grab a fungus that is transported directly into a strawberry's flower to help combat fungal diseases. I refer to this as nature's intelligence. Humans can work intelligently with nature, but that requires research and people who are working to develop technologies.

Mr. Yves Perron: You talked about a product you developed, biochar. What obstacles have you come upon, and what could the federal government do to facilitate innovation? The goal is actually to facilitate innovation.

Mr. Jean-François Lévêque: Generally speaking, anything to do with food inspection is complex, including the registration of products. Biochar was part of that, but over time, the Canadian Parliament has facilitated the commercialization of biochar. You did very good work in that respect.

The Chair: Thank you, Mr. Lévêque.

[*English*]

Mr. MacGregor, you have two and a half minutes.

Mr. Alistair MacGregor: Thank you, Mr. Chair.

Mr. Bertrand, I have two questions for you.

First, I'll echo Mr. Blois's comments. It's nice to see the private sector taking the lead with research dollars into this area. I assume this is being driven by consumer demands. We've seen a shift in consumers who just want to see companies engaging in this a bit more.

Can you just briefly answer that?

Mr. Jean-Marc Bertrand: Yes, definitely.

Consumers are demanding more and more products where they can see where it comes from and how it's made. Consumers are more and more educated. As Mr. Lévêque said, those who are 30 and younger easily jump on anything to try to understand where food comes from.

Mr. Alistair MacGregor: That's for sure.

My second question is really also on the research vein. A couple of years ago, I toured an Agriculture and Agri-Food Canada research station in Summerland, in the Okanagan in British Columbia. I spent half a day there and was very impressed with the calibre of federal scientists we have working not only in plant-based agriculture but also with animals.

With respect to regenerative agriculture, we ultimately want to make recommendations to the federal government. Would you like to see Agriculture and Agri-Food Canada increase its budget to study regenerative agriculture and to maybe plot the status of Canada's soils, such as their carbon sequestration potential, etc.? Is this something where the federal government could be of incredible use?

Mr. Jean-Marc Bertrand: It could, for sure.

In my introduction, when I said the coordination effort, that's one of those. I have seen some maps from Agriculture Canada's research people that show where soils are degraded and where soils are in better shape. It's essential that these maps, these learnings and this science information are active in real time. It can help the farmers to make the right decisions.

• (1735)

Mr. Alistair MacGregor: Thank you very much.

I'll leave it there, Mr. Chair.

The Chair: Thank you, Mr. MacGregor.

I'll just make a little statement, because I'm also a certified organic grower, but I have been a conventional grower.

[*Translation*]

I do not want to criticize conventional producers, as I used to be one myself. Moreover, any effort to reduce the carbon footprint is important.

I understand having to pay to gain organic certification. I have worked in organic agriculture and in conventional agriculture, and I think we are all moving toward a better world.

I thank the Danone representatives, Jean-Marc Bertrand, director of procurement, and Isabelle Rayle-Doiron. I also thank Jean-François Lévêque, from Jardins de l'écoumène.

[*English*]

To all our committee members, thanks for being here. Enjoy the rest of the week and we shall see you, not next week, but the following week.

[*Translation*]

Thank you, everyone, and have a good weekend.

(Meeting adjourned)

Published under the authority of the Speaker of
the House of Commons

SPEAKER'S PERMISSION

The proceedings of the House of Commons and its committees are hereby made available to provide greater public access. The parliamentary privilege of the House of Commons to control the publication and broadcast of the proceedings of the House of Commons and its committees is nonetheless reserved. All copyrights therein are also reserved.

Reproduction of the proceedings of the House of Commons and its committees, in whole or in part and in any medium, is hereby permitted provided that the reproduction is accurate and is not presented as official. This permission does not extend to reproduction, distribution or use for commercial purpose of financial gain. Reproduction or use outside this permission or without authorization may be treated as copyright infringement in accordance with the Copyright Act. Authorization may be obtained on written application to the Office of the Speaker of the House of Commons.

Reproduction in accordance with this permission does not constitute publication under the authority of the House of Commons. The absolute privilege that applies to the proceedings of the House of Commons does not extend to these permitted reproductions. Where a reproduction includes briefs to a committee of the House of Commons, authorization for reproduction may be required from the authors in accordance with the Copyright Act.

Nothing in this permission abrogates or derogates from the privileges, powers, immunities and rights of the House of Commons and its committees. For greater certainty, this permission does not affect the prohibition against impeaching or questioning the proceedings of the House of Commons in courts or otherwise. The House of Commons retains the right and privilege to find users in contempt of Parliament if a reproduction or use is not in accordance with this permission.

Also available on the House of Commons website at the following address: <https://www.ourcommons.ca>

Publié en conformité de l'autorité
du Président de la Chambre des communes

PERMISSION DU PRÉSIDENT

Les délibérations de la Chambre des communes et de ses comités sont mises à la disposition du public pour mieux le renseigner. La Chambre conserve néanmoins son privilège parlementaire de contrôler la publication et la diffusion des délibérations et elle possède tous les droits d'auteur sur celles-ci.

Il est permis de reproduire les délibérations de la Chambre et de ses comités, en tout ou en partie, sur n'importe quel support, pourvu que la reproduction soit exacte et qu'elle ne soit pas présentée comme version officielle. Il n'est toutefois pas permis de reproduire, de distribuer ou d'utiliser les délibérations à des fins commerciales visant la réalisation d'un profit financier. Toute reproduction ou utilisation non permise ou non formellement autorisée peut être considérée comme une violation du droit d'auteur aux termes de la Loi sur le droit d'auteur. Une autorisation formelle peut être obtenue sur présentation d'une demande écrite au Bureau du Président de la Chambre des communes.

La reproduction conforme à la présente permission ne constitue pas une publication sous l'autorité de la Chambre. Le privilège absolu qui s'applique aux délibérations de la Chambre ne s'étend pas aux reproductions permises. Lorsqu'une reproduction comprend des mémoires présentés à un comité de la Chambre, il peut être nécessaire d'obtenir de leurs auteurs l'autorisation de les reproduire, conformément à la Loi sur le droit d'auteur.

La présente permission ne porte pas atteinte aux privilèges, pouvoirs, immunités et droits de la Chambre et de ses comités. Il est entendu que cette permission ne touche pas l'interdiction de contester ou de mettre en cause les délibérations de la Chambre devant les tribunaux ou autrement. La Chambre conserve le droit et le privilège de déclarer l'utilisateur coupable d'outrage au Parlement lorsque la reproduction ou l'utilisation n'est pas conforme à la présente permission.

Aussi disponible sur le site Web de la Chambre des communes à l'adresse suivante :
<https://www.noscommunes.ca>