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Chair

Mr. Pat Finnigan

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● (0945)

[*English*]

The Vice-Chair (Mr. Bev Shipley (Lambton—Kent—Middlesex, CPC)): Welcome, everyone. I would like to start the meeting. I want to say that it's a privilege to be acting as chair today while the chair is travelling with a committee.

As you know, we're studying genetically modified animals for human consumption. Before we get to our witnesses, I want to welcome Mr. Morrissey and Mr. Bratina.

Welcome to our committee as those who are intervening for others. I look forward to your interventions today as we move forward.

We have one hour and our only witnesses today are from the Canadian Cattlemen's Association. Usually we have 10 minutes for each organization that comes before. I know you have a bit of a presentation here, so since there are two of you, rather than 10 minutes each, I'll be lenient and we'll just say 15, if that works. Then we will start with our rounds of questions from the members.

We'll start with Bryan Thiessen, a director of the Canadian Cattlemen's Association and chair of the Beef Cattle Research Council.

With him is Andrea Brocklebank, who is the executive director.

Welcome to both of you.

Brian, I believe you're going to start.

Mr. Bryan Thiessen (Director, Chair, Beef Cattle Research Council, Canadian Cattlemen's Association): Hello and thank you for the invitation to speak to you today. My name is Bryan Thiessen. My father, brother, and I operate a feeding and cattle operation in Saskatchewan and in Alberta. Raising a calf from birth to a 1,450-pound weight takes a lot time, forage, feed, and careful management of animal health and welfare. Transforming that finished animal into safe, nutritious, high-quality beef for consumers is also very technically complex. Getting all this done as economically and efficiently as possible requires constant innovation. Research has been critical to maintaining the growth, economic competitiveness, and sustainability of our multi-generational family farm.

I am a director with the Canadian Cattlemen's Association and also the chair of the Beef Cattle Research Council. I am joined today by BCRC's executive director, Andrea Brocklebank. The BCRC funds research and innovation activities that will contribute to the competitiveness and sustainability of Canada's beef industry. We administer the beef science cluster and focus our research investment in six key areas. These are food safety, beef quality, animal health and welfare, feed grains and feed efficiency, forage and grassland productivity, and environmental sustainability.

Now I'm going to ask Andrea to elaborate on how genomic technology plays a significant role in each of these areas.

● (0950)

Ms. Andrea Brocklebank (Executive Director, Beef Cattle Research Council, Canadian Cattlemen's Association): Thank you.

GMO technology has seen very limited practical applications in beef cattle for reasons I can explain later if you wish. That may change. Recent developments have allowed genetic surgery to remove the horn gene from dairy cattle. To this point, genetically modified cattle have been developed to produce antibodies to help treat rheumatoid arthritis and organ rejection in human medicine rather than for beef production.

Beef from GMO cattle is not likely to be on the store shelves soon, but peer-reviewed research has already demonstrated that beef from GMO cattle has no measurable differences in nutritional value or adverse health implications compared to non-GMO beef. Beef cattle have been fed GMO feed for many years. A retrospective study of data from over 100 billion head of livestock found no adverse effects of GMO feed on animal health. No residues of GMO feed have been found in the meat or milk either.

Biotechnology does present significant opportunities to Canada's beef industry. In food safety recalls, biotechnology allows the Public Health Agency and the Canadian Food Inspection Agency to quickly and precisely identify the specific bacteria responsible for food-borne disease outbreaks. Comparing the DNA fingerprint of samples collected from human patients to samples collected from processing plants and other environments allows source attribution to occur more quickly, or in other words, where and when did the initial contamination occur, and how should the recall be focused?

Agriculture Canada researchers, in collaboration with the Public Health Agency and other Canadian researchers, are using similar methods to track whether anti-microbial-resistant bacteria and genes are moving between farms and human environments through food or water.

For beef quality, Canadian researchers have identified some of the genes responsible for beef tenderness. As many of you as consumers know, tenderness is one of the primary attributes of priority for beef consumers. Advances such as this will allow Canada's beef industry to build on our internationally enviable reputation as a supplier of safe, high-quality beef.

Biotechnology is also being used to develop tools that can rapidly, accurately, and cost effectively diagnose disease in beef cattle to improve animal health and welfare. Calf diarrhea is a very costly cause of illness and death for newborn calves. Bovine respiratory disease is the costliest animal health issue in Canadian feedlots. One current beef cluster project is developing diagnostic panels for both of these diseases. Better biotechnology-based diagnostics lead to better animal health and welfare outcomes for animals, but they can also help veterinarians and cattle producers to design more appropriate preventive vaccination programs and help to ensure more targeted anti-microbial use. Biotechnology also allows for the more rapid development of effective vaccines to prevent diseases. These can reduce animal disease, anti-microbial use, and anti-microbial resistance.

Genomic technologies also allow new feed grains and forage varieties to be developed more rapidly. This is important for our industy, as 80% of the lifetime of a Canadian beef animal is spent on a forage-based diet. In the feedlot sector, feed costs are the largest single variable cost associated with finishing cattle, aside from the purchase of a feeder animal. Any improvement in feed production that enhances productivity through biotechnology can have a very large impact on our industry.

Corn yields are two to three times higher than barley yields. That's partly due to the extensive use of biotechnology in corn breeding. Biotech corn has been grown extensively in central Canada and the U.S. for many years. Both Monsanto and DuPont Pioneer have recently made significant investments in corn breeding in western Canada.

Biotechnology is beginning to find its way into barley breeding. Accurately identifying cultivars that carry favourable genes for quality and disease-resistant traits has facilitated more expedient variety approval. In essence, we are seeing that new varieties are able to reach the market 20% to 40% faster when biotechnology is used to support the breeding process. This is important, as lagging barley yields relative to corn yields have placed the western Canadian feedlot sector at increasing risk of being at a cost disadvantage to the U.S. As we know, if we are at a cost disadvantage to the U.S., we'll see more feeder cattle moved across the border to the U.S. where they will be fed and slaughtered instead of being fed and slaughtered in Canada.

Agriculture Canada's researchers in Alberta and Quebec, through the science cluster, are collaborating to identify genes responsible for improved cold tolerance and winter hardiness in alfalfa and also working on other forage varieties. Once these genes are identified, traditional or biotech breeding methods can be used to move these traits into commercially popular, high-yielding alfalfa lines.

Either approach would work, but the biotech approach is faster, so Canadian forage and cattle producers would benefit sooner.

● (0955)

Lastly, with regard to environmental sustainability, a recent peer-reviewed scientific paper that came out of a beef science cluster project reported that the environmental footprint of Canada's beef industry is shrinking. Compared to 30 years ago, each kilogram of beef we produce today requires 29% fewer breeding stock, 27% fewer slaughter cattle, and 24% less land, and it produces 15% less greenhouse gas.

You might ask how we do that. Better yielding forages and feed mean more cattle can be raised on the same land base. Improved animal nutrition and health means a greater proportion of cows are having a calf every year, and more calves are weaned and stay healthy through the feeding process.

Improved feed efficiency means that cattle are eating less and growing faster. That means fewer days that they're producing manure, drinking water, and generating greenhouse gases.

Improving efficiency through innovation has already proven to have very tangible environmental benefits. With the relatively recent advances in genomics technology, we have every confidence that our environmental footprint will continue to shrink and our production efficiencies will continue to improve.

In terms of informing the public about biotechnology, a small vocal minority of people will oppose any technology, even those with a demonstrable public benefit. This is true for GMOs, vaccination, and many other technologies, but reasonable people will accept the informed expert opinion of impartial scientists.

Canada has excellent scientists in federal, provincial, and university-based institutions. Some of them are also excellent communicators. The general public gets confused when currently it has to choose between the opinion of a technology advocate and the opinion of industry. We feel that encouraging and allowing public scientists to more openly communicate with the media and the public on these issues can help.

Challenges remain. For Canadian companies, researchers, agricultural producers, and society to pursue, accept, and benefit from biotechnology, we need to ensure that new technologies receive regulatory approval in a timely manner in Canada. We're a small market, so consequently companies look at us differently than they do the U.S. If they see delays in our approval processes at all compared to those in the U.S., those are a distraction. Basically, they will look to other markets at that point.

We also need to ensure that new trade agreements are science-based. Timely approvals for new products and market access for agricultural products that are produced using technology are key to ensuring that the Canadian beef industry remains globally competitive relative to our international competitors.

With that, I thank you for your time. We'd be happy to answer any questions.

The Vice-Chair (Mr. Bev Shipley): I want to thank both of you for your presentations.

Now I'd like to turn it over to our members.

Mr. Anderson, go ahead for six minutes, please.

Mr. David Anderson (Cypress Hills—Grasslands, CPC): Thank you, Mr. Chair.

I want to thank you for being here, and I thank our other guests with us today. This is an important subject.

A minister has tasked the committee with this study. He sent the committee a letter. It's interesting that in his instructions to the Liberal members to bring the motion forward, he said we should be trying to adequately address the full range of potential issues around the approval of products involving genetically modified animals, beyond those of health and safety.

I guess I'm thankful. If we're going to have a discussion, hopefully we're not going to rehash a lot of those old debates about those two issues. I thank you for your presentation and for doing a good job on that.

You mentioned that we need an approval process that takes place in a timely manner. I'm wondering if you can tell us a little about the Canadian approval process, how it compares with those in the countries around us, and what we can do as a committee to recommend changes that might work more effectively for the beef industry.

Ms. Andrea Brocklebank: I think the big thing with the Canadian approval process is that we need to ensure there is sound science for the safety and quality of our products. As an industry, we have an incentive to have that as well, because the long-term sustainability is based on our success.

At the same time, we are a small market compared to many other global markets that companies are looking to invest in. The biggest thing we see there is that if our process is overly onerous or duplicative compared to others, there will be limited incentive to come into a market that is relatively small compared to others.

One of the big things we see is the value of continuing to align our processes and recognizing work already done, especially with our counterpart in the U.S. We have very similar production environments in many areas relative to beef production. Therefore, we need to look at the science being done there, and identify where there are differences that require analysis but do not require additional science above and beyond what is necessary. Then, we must ensure that there are adequate resources within our infrastructure for that timely approval process so there are no backlogs.

I'll give you one example of a technology and what we are seeing. We are seeing new forage lines coming in that allow for extended grazing, so instead of producers having to go out and feed cattle year-round, they can put cattle on extended grazing. This has huge implications for western Canadian farmers who are short of labour and looking for alternative strategies. It results in mixed pastures.

One of the grasses is sainfoin, which helps reduce bloat risk, but you have to have an inoculant for it to grow successfully. Currently those inoculants are not approved in Canada. The seed that is developed in Canada is actually going down to the U.S. to be inoculated, and then producers are bringing it up to Canada. I look at that and say that's not necessarily the most productive for our seed companies. It is also not the most productive for our researchers, who are frankly frustrated by the process.

Timely approvals are important, whether they are related to that or to animal health drugs, as is ensuring that our private companies that are looking to invest at this point are not subjected to an overly onerous system.

● (1000)

Mr. David Anderson: I think this is a concern for any of us who would be producers, because we've seen the same problem in other areas of PMRA, with the pesticide and herbicide approvals over the years, and now we are hearing about seed issues as well. Do you have any suggestions about how we might improve that process?

This issue of recognizing work already done is something that just keeps coming up again and again. Do you have any suggestions for us on how we might recommend some changes in our approach to that?

Ms. Andrea Brocklebank: I don't spend as much time on the regulatory side, to be honest. I am more on the research side. What we've heard is that adequately resourcing within CFIA to make sure these don't get backlogged is a big one. We also need to make sure we have a truly risk-based approach that identifies the risks and focuses on the outcomes at this point in time, and that we truly recognize what work has been done—especially in the U.S., which has an equivalent production system to ours—and accept that work instead of requiring additional work. That is where the companies really see the challenges with this.

I think those recommendations have been made in the past, but I would encourage that they be truly implemented within the system moving forward. That comes across in terms of animal health products, as well as in terms of forages, feeds, and all of these various areas.

Mr. David Anderson: This will be another question on the regulatory approval process, although you said you are not the expert on that. Our animals are governed by the Canadian Environmental Protection Act and the Food and Drugs Act, so Environment and Climate Change Canada and Health Canada end up being the two key departments that deal with this. How do you see the cattle industry's role fitting in with them and working together with them? Those of us in agriculture sometimes see what we think are agricultural issues given to Health Canada or Environment Canada. I am just wondering how we can make suggestions that would help the cattle industry work with these two departments.

Ms. Andrea Brocklebank: That's a great question. First of all, I think we have tried to take a different approach than previously, especially on the research side. We are starting projects, right now, for which we have collaborations between industry—at the feedlot level in particular—and Ag Canada, the Public Health Agency, and sometimes even Environment Canada. One example would be on antimicrobial resistance. All of those stakeholders have questions about this, and the sooner everybody is involved, the more comfortable people are when research outcomes come out of projects, and then they accept the science. I think it ensures collaboration across those departments. That is one thing that has fundamentally changed in how we are funding research now through the science clusters. We haven't been able to do that and encourage that collaboration. I would strongly suggest that this needs to continue moving forward.

We have seen approvals tied up. They might even be approved within a certain section of CFIA but then also be classified. In one example, something was approved under the feed section but was then classified as a novel feed through another area.

We need to ensure that these departments are talking and using the same science, and not requiring different science by industry to answer basically the same questions.

The Vice-Chair (Mr. Bev Shipley): Thank you very much, Mr. Anderson.

I'd like to now go to Mr. Longfield, for six minutes, please.

Mr. Lloyd Longfield (Guelph, Lib.): Thanks, Mr. Chair, and welcome aboard. It's good to see you at the helm of the ship.

Thank you for the presentations. It's a very detailed topic that you've summarized very well. I'm going to be going down the scientific questions around GMO and what constitutes GMO versus just genomics in general.

Could you maybe clarify? I know a very small number of very vocal people look at GMOs as all bad. Where do you see the line between GMO and genetics?

● (1005)

Ms. Andrea Brocklebank: I asked our science director that actual question and he replied with a one-page email, so it's not easy, and I think that's the discussion.

I'll say it this way. There have been questions about “Franken-meat”. When we look at animals, we don't see a huge potential for GMO use within cattle. The primary reason for that is the environment we work in. If you select a trait for feed efficiency, it can have negative impacts on reproductive efficiency. This is complex. Most of those things we manage through management strategies. We're not in a pork or poultry environment where it's a barn and you can really isolate. We're on pastures and even in feedlots. When we look at GMOs, often there is that perception, that it's this ultra-product for which you're bringing in genes.

This is about advancing traditional breeding. Traditional breeding was the selection of traits, but it was slower. In many cases what we're doing with GMOs or genetic modifications is not inserting traits from other plants or animals but selecting traits and then accelerating them.

I think the one dividing point is when you're inserting traits from other.... I know salmon, right now, has a trait that's being inserted from an eel. That's probably the biggest divide we see—whether it's a selection within a species or outside.

Mr. Lloyd Longfield: Great. Thanks.

In your presentation you mentioned gene editing to produce polled animals, animals that don't produce horns, so that you don't have to dehorn the animal, which is actually better for the animal and means lower costs for the producer. Is that an example of Canadian technology?

Ms. Andrea Brocklebank: I am not actually certain where that was developed, but we've done a lot around tenderness and other areas, with regard to genetics, and we do continue to move forward. I'm not sure where the dairy example is from, but those things are huge in terms of reducing animal welfare concerns and even in terms of injury for our producers when they're trying to dehorn an animal. There are huge, positive impacts.

Mr. Lloyd Longfield: In my riding of Guelph, just north of us, we have Semex. The University of Guelph has been doing a lot of research in bovine genetics. You mentioned CFIA and the classification of food products versus other products. I understand that there have been cutbacks at CFIA in recent years. There are issues at the border.

Could you maybe expand a bit on CFIA, and the role of Canadian scientists who work for the government and on how we could maybe work better with industry? You mentioned their ability to speak, and yes, absolutely, we have to get our scientists speaking and putting the issues on the table. Could you expand on that a bit?

Ms. Andrea Brocklebank: In terms of the scientists, first of all, a lot of our research is with Ag Canada scientists—primarily, they're the leads—in collaboration with other scientists, whether through CFIA or the Public Health Agency, so my greatest familiarity is with those scientists. We have some phenomenal scientists across this country, some world-renowned scientists. I think there are two big things in terms of engaging them.

First of all, you want to ensure that they are good communicators and that they're comfortable. This is an area in which some researchers aren't, but we need to enable them and ensure that they have the skills to do this, because they are viewed as being independent, and that's fundamentally important.

Second, when it comes to regulation, industry does advocate for certain things, and we recognize the importance of having scientists who are independent from us when going to look at regulation for government. I think that's important.

In terms of resourcing, I think, again, it's important to ensure that during the approval processes, which are somewhat separate from the science going on, there's acceptance of the scientific processes under way. There also has to be acceptance of the science, whether it's generated in Canada or in other areas, and recognition that this work is highly credible, especially since in many cases it has been peer-reviewed, and that it needs to be accepted.

In terms of the actual resourcing, we have seen backlogs in the past, some of which, I think, have happened because there's not necessarily an outcome-based approach to these types of things, and that means we're overwhelmed with back-and-forth requests and those types of things.

Mr. Lloyd Longfield: Thank you.

I want to try to capture the role that Canada has played in the past. You mentioned that the United States is seen as a leader, when, traditionally, Canada is the leader in this area.

The University of Guelph just received $77 million to position Canada as the food leader in the world. Our scientists and our producers, many of whom are in the room—and I welcome all the people from Saskatchewan who are with us—are here because they have concerns and they want to make sure Canada gets this right.

We are a leader in the world. Can you comment on what we need to do, as a government, to try to get ourselves to be seen as a leader?

● (1010)

Ms. Andrea Brocklebank: I think the biggest things are around funding and capacity. About 30% to 40% of Agriculture Canada researchers are set to retire in the next three years. You don't just hand over those programs. You need to ensure there is a transition and training. These things represent lifetime careers, and that is of concern to our industry. We need to ensure there are people in those seats before the other people retire, in order to ensure continuity, because we have that reputation.

I also think programming for things like the science clusters is fundamentally important, but we can't have year-long gaps in funding; we need to ensure continuous funding. We've built huge programs that are doing phenomenal things for our industry and for public confidence, and the biggest detriment to them is having gaps in terms of funding, which means that post-docs leave, students leave, and those types of things.

The Vice-Chair (Mr. Bev Shipley): I'll now turn it over to Madam Brosseau.

Ms. Ruth Ellen Brosseau (Berthier—Maskinongé, NDP): I'd like to thank the witnesses for their presentations this morning on this study of genetically modified animals for human consumption.

I think you've been fairly clear that no cattle destined for human consumption is genetically modified. There is no swine, no sheep, and no poultry; it's just salmon for the moment.

In your presentation, Madam Brocklebank, you said that when cattle eat genetically modified feed and they're tested later on, there are no traces of GMOs. Is that the same thing for other animals?

Ms. Andrea Brocklebank: The studies that were done actually involved a billion livestock, including pork, poultry, and lambs. Everything was done as a cumulative study, and in essence, all of that meat retained the same nutritional value, retained the same qualities, and contained no traces of residues of feed.

Ms. Ruth Ellen Brosseau: Things change pretty fast in agriculture with research, development, and innovation. Do you think in five or 10 or 20 years there will be a need for genetically modified beef cattle or for sheep or chicken? Do you see a future for genetically modified mammals for human consumption?

Ms. Andrea Brocklebank: I think the big thing to go back to is that it's complex. Selecting for one trait relative to feed efficiency, which Bryan would like in a feedlot, may have implications on reproductive failure, and we operate in very different environments.

I see the value of genetic modification and selection for certain traits to speed up current breeding processes, but the industry itself has an incentive to be very careful in this area. If we select for something in eastern Canada, that can have dramatic consequences in a western Canadian production environment, which is a very different environment.

Ultimately, we recognize that our production system isn't going to change substantially. The Canadian beef industry has the advantage that our cattle spend the majority of their time on grasslands, and that's something pork and poultry can't do, so there's benefit there; but that environment means we're not going to see huge potential for genetically modified meat. It's more about how we use genetics to enhance our system.

Ms. Ruth Ellen Brosseau: Is cloning an animal genetic modification? I know we don't do that, but it's been done.

Ms. Andrea Brocklebank: It has typically not worked very well.

Ms. Ruth Ellen Brosseau: I think some of the questions that were asked by my colleague David about sound science and ways to improve the regulatory approval processes, to eliminate red tape, to not redo the work, and to recognize work that's already been done are really important. I think it's also important to see what CFIA is doing. I think you mentioned the importance of making sure that CFIA is adequately resourced. I think it would be important to do an audit to make sure enough funding and enough people are in place to ensure that the job is being done adequately.

I don't know if you have anything to add.

● (1015)

Ms. Andrea Brocklebank: We operate in a North American environment, and Bryan can speak to this from a feedlot perspective. If he can't be cost-competitive with his U.S. counterparts, cattle will move south of the border, whether that's to be fed down there, or slaughtered down there.

This is a huge concern for our industry. We have excess feeding capacity right now, and we have excess slaughter capacity right now, so to see the closure of a plant due to these types of issues, when we're just not getting products approved, or can't maintain competitiveness, that's a huge concern for our industry. It's really a combination: we need market access; we need timely product approvals; we need labour, and all of these things together.

Also, research does play a huge role in that product development to maintain our competitiveness.

The Vice-Chair (Mr. Bev Shipley): We'll now go to Madam Lockhart for six minutes.

Mrs. Alaina Lockhart (Fundy Royal, Lib.): Thank you for being here today. I think you bring us some good information.

Being from Atlantic Canada, I often hear from constituents and from farmers that they are trying to work out that balance between food costs and safe products.

I was encouraged to hear you say that having public discussion on record like this is good, because I think we really do need to open those lines of communication and talk and connect consumers with their food sources so they understand what they're having.

When I had the opportunity in the spring to meet with some of the cattlemen from Atlantic Canada, I was very impressed by the efficiencies they brought to my attention. I was wondering if you could elaborate a little bit on the efficiencies that are currently in place and on how those are translating to food costs in Atlantic Canada or Canada as a whole?

Mr. Bryan Thiessen: I'll use the example of corn production in the States. That is a wonderful innovation. The yields have increased significantly over the past 20 years.

In western Canada, our cereal grains haven't had that same kind of increase, primarily because Canada is a small market. Barley is a very small market on the world stage, so companies do not invest in those types of products the same way they will with corn, which is used nationally. By producing greater amounts of corn, they have reduced their cost of feed going into the animal, which has then put Canada at a competitive disadvantage against the American market. We are trading a commodity across the border, and it is a commodity, so the price that is set is a North American price that we have to compete against.

One of the things that producers are running into is that they are not going to be competitive, in terms of costs, in the long run the way they're going, compared to the situation in the American market. From a consumer point of view, I would say that the utilization of those technologies has resulted in a lower price of beef being maintained, which we wouldn't have seen if we hadn't used them. Obviously, if we had been able to produce corn and use less land to feed the same animals, we'd be bringing our overall cost of production down.

Ms. Andrea Brocklebank: In terms of actual measurements, we spend a lot of time trying to demonstrate the value of our investments, not only to Ag Canada, who funds the science clusters, but also to our producers, who provide check-off. The biggest thing we've been able to see, through innovations in animal health and those types of things, is an increase in calf survivability. We've also seen a rise in crop yields and extended grazing, so producers are able to graze sometimes into January and February, which was unheard of when I was younger. We've seen all of these things, yet the average daily gain in feedlots continues to decline. All of these things are done through very incremental long-term improvements. They're not silver bullets. It's a matter of continued inventive research, whether that's on the farm or working with researchers. I think that's the biggest thing. We're not focused on just one silver bullet. It's all across the chain. I think we see that even with some of the food-safety innovations. We have to better trace these things and isolate these issues very quickly and expediently so that we don't have public confidence issues, which is a big concern for our industry.

Mrs. Alaina Lockhart: As we know, food costs for any commodity are generated through supply and demand. What are the projections for demand and supply for the industry?

● (1020)

Ms. Andrea Brocklebank: That's a tough one.

In our industry we export, in some cases, as much as 50% of our production, and we want to do that. A beef carcass has 300 parts, and we in Canada don't eat all of them. The value we get is from exporting those. Everybody here wants grind and loins. If we can export the rest, we're doing well.

Our demand situation is totally dependent on market access at this point. If we can grow that through markets like the EU and other markets, such as Japan or Asia, it's huge for us in terms of the long-term sustainability of our plants, our feedlots, and our cow-calf producers.

In terms of class of production, it's variable. If you have a drought, your feed costs skyrocket. We know our industry is currently facing challenges in terms of those types of things, but at the same time, I think generally producers are very innovative and resilient. We need to support them and make sure they're not heavily impacted by higher labour costs, higher input costs, and those types of things. That's what we need to do. We need to give them the right environment so they can handle those droughts, those ebbs and flows that they do handle.

Mrs. Alaina Lockhart: Great.

From that perspective, I have a quick comment, I guess, more than anything. When we're talking about exporting and the expectations of these countries that we want to export to, I think that's part of the reason we want to look at the regulation around this as well.

Thank you.

The Vice-Chair (Mr. Bev Shipley): Thank you very much, Ms. Lockhart.

I'll move now to Mr. Drouin for six minutes.

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

I want to thank you for coming today. I really appreciate your spending some time with the committee to inform us and educate us. This is actually our first meeting on GMOs. I share your views in terms of proper education. I think there is a lack of scientific and evidence-based education in Canada. The minority is loud, but we have to ensure that we give the right information. I know that Canada recently fully restored beef exports to Mexico, and we've reopened exports to Taiwan, and I know we've recently expanded beef access for China.

You talked about competitiveness and genetically modified feed. How important is that? Market access is important, but at the same time you have to remain competitive. Can you talk a bit about genetically modified feed and how that plays into your competitiveness?

Ms. Andrea Brocklebank: It's a delicate balance. We need market access. Absolutely we need to continue to grow that, but we need it to be based on science. To fundamentally alter production practices and to not have access to those technologies can severely hamper our industry. I go back to the fact that we're a North American industry. If we negotiate something that means we can't use genetically modified corn in feed for our animals, those animals will move south of the border. If the U.S. has a more favourable trade agreement, they'll go to that country, just not under a Canadian label.

I think that's the one thing we're always cognizant of. First of all, we need to ensure that we negotiate things based on sound science. It may take a bit longer, but we hope that it prevails.

That's why it's so important for us to present sound science as we move into discussions with the EU. Demonstrating the animal transport outcomes that we've achieved through research is huge in order to answer some of the animal welfare questions they have around travel distance times. Having the science to support those things as you go into a discussion is much better than trying to defend production practices either when you're exporting or when you're near to signing a deal.

Mr. Francis Drouin: I want to congratulate you on your animal care program. It's important. Urban Canada does worry about it, but it's important to inform them that the way we treat animals has evolved and there's a lot of innovation in the sector now.

With respect to horns—the change for farmers but also for the animal—not needing to have their horns cut off anymore is a good thing.

I want to make sure I heard you correctly. In your opening statement, you said that even though beef may consume GMO feed, there is no trace of GMO in the beef. Is that correct?

Ms. Andrea Brocklebank: Yes.

Mr. Francis Drouin: So when my mother tells me you are what you eat, she's wrong.

● (1025)

Ms. Andrea Brocklebank: I think the big thing there is, first of all, that genetically modified feed is safe. We eat it. We eat it as consumers when we're eating these things, when we eat corn, so there are no adverse effects. Of course, to deal with some of the public concerns, we look at whether there are residues and whether we can see any measurable differences in the meat. There are no residues. “Residues” is a negative term because it's often linked to something like antimicrobials. The point is that a billion animals have been looked at and the meat looks the same whether it's coming from feed that is non-GMO or GMO. l think our industry is really well positioned to look at that. In western Canada, we feed barley, which is not genetically modified, and we feed corn in other areas. The beef is the same.

Mr. Francis Drouin: How can Canada ensure that we inform our international partners? I'm afraid that certain countries will block us based on “Facebook science” or “Google science”.

How do you think Canada can improve that education process on an international basis?

Ms. Andrea Brocklebank: I think it involves a combination of things.

I think it's having the sound science to present to our negotiators to ensure they're very aware of it and to present to those countries. We've also found that it's even a matter of having our beef producers being active within those countries and getting to know their industry and their systems to provide some of those reassurances, because, frankly, sometimes it also helps to have that come from producers themselves.

The producers—many of them behind me—feed the same products to their kids. I feed it to mine. I think there is some value in that advocacy effort around these types of discussions of putting a face on people. This isn't about factory farms; this is about family farms. They're large farms in many cases, but these people produce a safe high-quality product.

I think it's a combination. You have to have the science and the marketing, but there's this advocacy piece that I think our industry is increasingly understanding, whether it's domestic or internationally. We need to put a face to our product and make sure that people are comfortable with it.

The Vice-Chair (Mr. Bev Shipley): Thank you very much.

You have about 10 seconds, but I know that doesn't work.

We're now going to move into our second round, and I'll go to Mr. Gourd, for six minutes, please.

[*Translation*]

Mr. Jacques Gourde (Lévis—Lotbinière, CPC): Thank you, Mr. Chair.

I have a great deal of respect for beef producers out west. In my previous life, before becoming an MP, I was a beef producer. I saw the developments and all the efforts made by associations out west. The issue of genetics was often provided as an example. Many of my producer friends purchased cows from western Canada to improve their herds. Biotechnology in the feeding domain has resulted in feed being more digestible today.

About 20 years ago, or 20 to 25 years ago, when an animal gained 2 to 2.2 pounds a day, that was a good result. I still have many friends who own feedlots in Quebec. Today, they speak of four pounds a day. I don't think we've focused enough on the advancement of biotechnology, the quality of the animal, the quality of the meat and the time saved. There's no doubt that the North American beef industry is very competitive. Without these advances, I think Canada would have major problems.

Three weeks ago, I heard some bad news. A French-language show, *RDI économie*, reported that interest groups were exerting pressure and wanted a $0.45 per kilo tax imposed on Canadian beef because people find there's too much beef in Canada. They want less beef because they consider that, on an environmental level, we produce too much beef. I was shocked by this news. *RDI économie* raised the issue with Marcel Groleau, president of the Union des producteurs agricoles du Québec. He was also shocked by the statement. This type of tax would have a bombshell effect on the Canadian industry.

Do you hear these types of statements out west? *RDI économie* is a Radio-Canada show. Where there's smoke, there's fire. If the media is already starting to talk about it, the reason is that people are exerting pressure. Does that worry you?

[*English*]

Ms. Andrea Brocklebank: We've seen various proposals. I can't speak specifically to that one, but we've heard this before. I think that's why, as an industry, we've invested a lot more heavily to demonstrate how we've been able to reduce our environmental footprint. We've been able to reduce water use, manure production, and all of these things.

The other area, though, that I think is important for us as an industry, and something we've previously not done, is to measure our contributions to the environment. We're often positioned as negatively impacting the environment. Eighty percent of an animal's life is spent on grass and forage. The big thing there is that it is converting grass into protein, which other proteins can't do.

If you're from my area in Alberta, you'll know that we can't grow grain. We grow grass. When we're doing that, we're converting it into a high-quality protein, contributing to biodiversity, carbon sequestration, and all of these things.

This is where we have to change the conversation. There are a lot of people who aren't aware that without cattle production, that land will be tilled up and eventually crops will be grown on it and it won't be to the benefit of anybody on our globe.

The other thing is that I think we're trying to put this into perspective. Canada's contribution to global greenhouse gases, I believe, is 2%. The cattle industry's contribution to Canada's greenhouse gas production is 2%. Papers have come out on methane-producing, burping cows and how horrible they are. It's 2% of 2% globally. When we put that into perspective against the benefits we contribute to wildlife, habitat, and all of these things, we need to better measure that so we can demonstrate that moving forward.

I'll be honest: that's something the industry hasn't necessarily done. There was a lot of focus on investing in productivity improvements and all of these things but not on demonstrating the benefit that they're leading to reduced environmental impacts for our industry, reduced water use, and those types of things.

● (1030)

[*Translation*]

Mr. Jacques Gourde: The Canadian beef brand is recognized worldwide. People often use photos of Canadian herds when speaking of Canada here and abroad.

What is your association's vision for the future and what are the most significant challenges it will encounter in the next 5, 10 or 20 years with the new biotechnologies and genomics? In the future, what challenges will Canadian beef producers face in the global market?

[*English*]

Ms. Andrea Brocklebank: I think relative to genetic modification, it's ensuring that product approvals are timely and science-based and that they don't impede the use of those technologies.

Any time we develop a new technology, if industry can't use it to achieve those outcomes, we've lost, especially if other countries that are also exporting can use those technologies. That's an important differentiation. If technologies or animal health products are approved in one market and not another, that's a challenge for us.

I think that in terms of this, that's the biggest challenge we have, but we also have to keep ahead in developing those innovations to continue to help our industry as we move forward. We operate on costs at this point.

Mr. Bryan Thiessen: I'd like to just add quickly that I believe our population base in the world is growing. We're going to have to utilize technologies to feed the population going forward. I think educating the consumer to see the benefits of these technologies rather than to fear them is something we will need to do going forward.

The Vice-Chair (Mr. Bev Shipley): We'll wrap up with that.

Mr. Breton, go ahead for six minutes, please.

[*Translation*]

Mr. Pierre Breton (Shefford, Lib.): Thank you, Mr. Chair.

Thank you to the witnesses for their enlightening presentations. Thank you as well for being here today.

I must admit that you're influencing me more and more with regard to the use of GMOs in beef. Still—and I want your opinion—some studies, such as the Quality of Life study conducted by Entransfood, state some harmful effects of GMOs on our food. They refer to the risks of toxicity, antibiotic resistance, allergenic effects, and the impact on our ecosystem and environment.

Ms. Brocklebank, I want to hear your view on these points raised in various studies.

[*English*]

Ms. Andrea Brocklebank: I'm not familiar with the study you specifically spoke of, the quality of life study. However, I think in terms of the negative impacts of GMO, we've invested in a lot of science as an industry along with government and universities, and we're seeing improved animal health outcomes.

Our industry has done a lot of work around antimicrobial resistance, and we don't see it increasing in many aspects. We're monitoring it closely in those risk categories for cattle where we do see concern.

The fact that we've been feeding GMO-based feed for a very long time and we're not seeing negative consequences, I think, demonstrates how industry is doing. We do absolutely need ongoing monitoring, especially when you look at gene insertion across species. That's something you have to be very rigorous about in terms of your product approvals. Industry agrees with that, in the sense that we also need the long-term sustainability in the industry.

Many of the producers behind me produce not only cattle but also grains. There are concerns in terms of alterations that could affect the biosystem, but I think generally, as it was explained to me by one of our scientists, you don't see DNA just floating in the air and pollinating across species. That's why these things don't happen in nature, where you just see improved alfalfa varieties because they have cross-pollinated with another species. These things take a long time.

We do need the rigorous approval processes, but at this point in time, we're not seeing those negative impacts. In terms of human health, the research we've done has shown no negative impact on human health connected to the consumption of genetically modified food.

We look at that, but obviously our industry is not focused primarily on that, because our product itself is not necessarily being directly genetically modified. Monitoring and surveillance are fundamentally important, but we also need to make sure we're looking at the outcomes and truly believing in them.

● (1035)

[*Translation*]

Mr. Pierre Breton: Thank you for your enlightening answer.

I will share the rest of my allotted time with Mr. Longfield.

[*English*]

Mr. Lloyd Longfield: Thank you.

I had a question I wanted to ask but I ran out of time.

In Guelph, I was driving by an A&W last weekend, and I saw a big sign that said “no GMO”. I always shake my head. Does that mean it's better to have antibiotics and drugs and chemicals in your meat than to have GMOs? That distinction between genetics and GMO is something that.... I'm wondering about the push-back we as an industry or as a country could do regarding the importance of responding to climate change by increasing grain production and forage production through genetics, and regarding the really negative effects of having chemicals in your food. Is there a no-chemical equivalent of no GMO?

Ms. Andrea Brocklebank: I think the one interesting point, and I'll let Bryan speak a bit on this, is that when you look at genetically modified corn or some of the other products, in many cases you have to use far less pesticide and herbicide on that crop. You're actually improving the end product and what's going on because, based on the breeding, they are more disease-resistant.

I'll be honest: unfortunately marketing is marketing. It's not fact-based, and it's having a huge negative impact on industries like ours. We need to move forward in working with those end-users more proactively, as we have with McDonald's and others, who are coming to the table and asking how we can do this together. It's not fact-based at this point. I will say that in terms of genetic modification, there are positive outcomes in some cases like that, where it's actually resulting in lower pesticide and herbicide use.

Mr. Bryan Thiessen: I guess the other side of that is that we have to trust in the science showing that the chemicals have been dissipated out of those plants. As long as users follow the effective dates provided by the chemical companies, which are determined through research, the chemicals will have been removed by the plants. It's probably not the right terminology, but in animals they would be metabolized by that point. We have to trust that research. We have to believe in that science.

Mr. Lloyd Longfield: That science provides better reactions to carbon footprint and climate change, changing crop-growing seasons, and new pests in the market.

The Vice-Chair (Mr. Bev Shipley): Thank you, Mr. Longfield.

Now we're at the end of the second round and into our last one, so Mr. Anderson will likely be the last questioner.

Mr. David Anderson: Thank you, Mr. Chair.

I don't want to take time away from the witnesses, but I do want to read a notice of motion that we'll bring forward at another date.

It states:

> That, pursuant to Standing Order 108(2), the Standing Committee on Agriculture and Agri-food conduct a pre-budget study on concerns around debt in the agriculture sector and the effect of debt on
>
> 1) young farmers and generational transfer of farms,
>
> 2) start-up farms operating for 10 years or less and
>
> 3) the ability to expand farming operations;
>
> that departmental officials be in attendance for at least one meeting; that this study be comprised of no less than four meetings to be held at the committee's earliest convenience in order that the Committee may report its findings and recommendations to the House prior to Parliament being adjourned for Christmas break on December 16, 2016.

We will bring that forward at a later date.

I still have a couple of questions for the witnesses.

We've had a traceability project going on for quite a while in beef, and it has been a great source of frustration to beef producers. I don't know if it could be messed up any worse than it is.

I'm just wondering if you can talk a little bit about traceability and the development of these new technologies, as well as the importance of a good system that doesn't put us at a disadvantage to other producers.

● (1040)

Ms. Andrea Brocklebank: Traceability is even less my file, and I know there are a few individuals behind me itching to talk about this. I think the biggest thing in our focus on traceability is ensuring that our market continues to operate in a competitive manner.

The way cattle are marketed will not change substantially any time in the future, and there's a good reason for that. We're conglomerating small cow/calf production, through auction systems, into feedlots and those types of things, and the industry fundamentally supports moving forward with enhanced traceability, but as the technology allows. The biggest reason here is that if we impose extra costs on our producers to scan animals to ensure they're there, in some cases, if the technology can't operate at the speed of commerce, extra costs that the U.S. system is not seeing will be imposed, and as a result, exports will occur.

It's not just a matter of the technology and procuring it; if you have to run animals through a chute multiple times, especially those who are on grass and moving, there's a huge impact, not only on the animals in terms of stress but also in terms of costs, shrink, and those types of things. Our approach with traceability is to make sure that it can be done at the speed of commerce and to make sure the technology is available prior to trying to implement things that cannot be successfully or credibly done.

Mr. Bryan Thiessen: I'll just add to that very quickly.

I want to point out an example of a regulatory burden, and I wish the gentlemen in the back could speak to this. As an example, we have a CCIA tag that has been proven to be better for use out there and to have a better backing, but one of the problems with these tags is that they fall out of animals quite easily. There's an improvement, a better tag out there, but in order for this tag to be utilized, the company that manufactures it has to take its current tag out of the system for one year to prove that this other tag works better. It is not willing to do that because it could lose market share, which I fully understand. There's a regulatory issue there if we can't just utilize a better product and quickly implement it into our system.

Mr. David Anderson: Okay. So, again, this notion that approval processes need to be undertaken quickly and that they can't make us uncompetitive with other countries is critical to success in the future.

Mr. Bryan Thiessen: They can't disrupt commerce, and some of the issues being pushed right now would significantly impact cattle commerce.

Mr. David Anderson: Can we go back to one thing you mentioned very early on? You talked about some of this GMO impact on organ rejection. Maybe this is closer to your heart and to what you've been doing, but can you talk a bit about that? What is that and how is that working? Do you have any specifics on that?

Ms. Andrea Brocklebank: Basically, genetically modified cattle have been developed to produce antibodies to help treat rheumatoid arthritis, cancer, and organ rejection in human medicine by drawing these antibodies out of the cattle and basically using them to assist. Using these types of things through livestock and then using it in human health is something that has been done for many years, and this is just one example. I think we've tried to portray that genetic modification has huge potential for food safety, human health, and all of these things. The average public person doesn't understand that these technologies are very far-reaching in terms of their potential, and this is just one example.

Mr. David Anderson: Do you have any other examples of where there might be potential in that same area?

Ms. Andrea Brocklebank: I think the biggest thing—and I'll focus more on the animal health side—is to have panels to test for things like bovine respiratory disease, which is the largest single animal-health issue in the feedlots. Previously, the tests were very time-consuming and they could only test for one kind of parasite or bacteria, and those types of things. Now the panels being developed through biotech can test for five or six. That's of huge benefit, because, first of all, because it reduces the amount of testing time but also because it better isolates the cause such that new vaccinations can be developed more quickly. Basically, if we're able to develop vaccinations around this, we're able to reduce antimicrobial use in these areas.

● (1045)

The Vice-Chair (Mr. Bev Shipley): Thank you very much, Mr. Anderson.

I want to thank our witnesses for taking their full time with great presentations and great answers, and my colleagues for having really good questions that are going to help us as we move through this study.

We have the ministry coming on Thursday, so we look forward to that.

Thank you. The meeting is adjourned.