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Chair

Mr. Larry Miller

Standing Committee on Agriculture and Agri-Food

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• (1530)

[English]

The Chair (Mr. Larry Miller (Bruce—Grey—Owen Sound, CPC)): I call the meeting to order.

Going by the agenda, today's meeting is split into two one-hour segments.

Before we get to the witnesses we have a budget. To carry out our study that was approved yesterday and recommended by the subcommittee, this budget is something we have to do to have our witnesses here. The amount is for \$78,100 to conduct the study for our review on Growing Forward 2.

I would entertain a motion to adopt this.

Okay, it's been moved by Mr. Allen and seconded by Mr. Payne.

Is there discussion?

(Motion agreed to)

The Chair: Thank you very much.

I'd like to welcome our witnesses.

From Pulse Canada, we have Mr. Gordon Bacon. Thanks for being here, Gordon.

By videoconference from Guelph, as an individual, we have Dr. Rene Van Acker, professor and associate dean at the University of Guelph. Welcome, Dr. Van Acker.

Can you hear us?

Dr. Rene Van Acker (Professor and Associate Dean, External Relations, University of Guelph, As an Individual): Yes, I can hear you.

The Chair: We'll give you 10 minutes or less for your presentation.

We'll start with you, Mr. Bacon.

Mr. Gordon Bacon (Chief Executive Officer, Pulse Canada): Thank you, Mr. Chairman.

And good afternoon to all the committee members.

Many of you will be familiar with Pulse Canada. We are a national industry association that represents pulse growers in Ontario, Saskatchewan, Alberta, and Manitoba, as well as the Canadian Special Crops Association, the association that represents processors, exporters, and service providers for the pea, lentil, bean, and chickpea industry. We also work informally with a wide range of

Canadian agricultural groups and our counterparts in the United States, Australia, and other pulse producing and importing nations.

Our job at Pulse Canada, as the national association, is to look for ways to make our industry more profitable. To be profitable, we have to build demand. To build demand, we have to offer value. And to capture value, we have to control costs. So I probably could summarize everything I want to say and suggest a focus for government and government-private sector initiatives with four words, that we need to focus on improving value and improving efficiency.

Our job is to make continual progress towards improving the value of Canadian agricultural products and the efficiency with which we can bring them to market. To create value, we have to innovate, and innovation in agriculture is driven by investments from both the public and private sectors. We could have a lengthy discussion about the investments that are needed to drive value. This is an important topic, and one where we have to ask ourselves whether we can clearly show whether we are being innovative.

Investments in science and innovation, in areas that add value, such as focusing on health, nutrition, and environmental sustainability, are already making a difference in Canadian agriculture, and these investments, the kind that add value to Canadian agricultural products, have to continue.

But today I want to focus my comments on your interest in public policy issues that will help improve efficiency and, in the process, build a more competitive agricultural sector.

Canada, as you know, is the world's largest producer and exporter of peas and lentils, and is a major player in global bean markets. As any team in first place knows, we can't afford to be complacent.

Interest in food security, on a global basis, and rising food prices have resulted in governments in Asia and the Middle East making strategic investments, and these investments are designed to increase food production in Eastern Europe and Africa. I believe these investments are going to present some real challenges for the Canadian export economy in the relatively short to intermediate future.

And if any of us need to be reminded about how quickly the world changes, we can just look at a couple of examples, China and Russia being two of my favourite examples. We don't have to go back very many years and look at what China was doing in terms of being an exporter of some agricultural products, and now, with soybeans, is importing 50 million to 60 million tonnes. Russia, which for many years was a major market for Canadian wheat, is now a competitor of ours on international markets.

So recognizing how quickly markets change and the lead time that we all need in order to make our own changes emphasizes the importance of creating a dynamic and innovative agricultural sector. My view is that the industry needs investments in innovation more than it needs investments in stabilization. Just to emphasize that point, with current investments in agriculture by government, I think something over 90% of them are to safety net and stabilization programs.

Competition around price defines a commodity market. As a commodity exporter, we have to look for ways to lower costs to improve our efficiency. This is a challenge, but it is also the reality of exporting commodities in an open market. Investments in innovation have to focus on making the industry more cost-efficient to compete in the commodity markets, and we have to actively look for ways of differentiating ourselves in the markets so that low prices are not the only offering of Canadian agriculture.

A competitive export sector is built around market access, and I want to speak briefly to the key market access needs. These include addressing challenges and opportunities related to tariff barriers, non-tariff barriers, and transportation.

First, on the topic of tariff barriers, bluntly stated, Canadian agriculture can't compete against a tariff barrier. And with multilateral trade discussion on life-support for more than two years, Pulse Canada has been an active supporter, and a long-time supporter, of bilateral trade deals. For an export economy, eliminating tariff barriers is an essential element of public policy that needs to continue to have strong support. Perhaps I can use one example just to illustrate the importance of this.

● (1535)

It was about six years ago that the U.S. concluded agreements on a bilateral trade basis with Morocco. At the beginning of 2012, the U.S. will enjoy a 30% tariff advantage over Canadian peas, and a 2.8% advantage over lentils. Thankfully, we have at least started discussions with Morocco, because even at these levels of 2.8%, we are going to have a difficult time being competitive in the Moroccan market. The harsh reality is that Canadian peas may end up in Morocco, but they won't be known as Canadian peas because they will have had to come in from another country to avoid the disadvantage we will have from a tariff perspective.

Tariff parity and access to import quotas to match those of our competitors have to remain at the top of the list of priorities in public policy. Investments in negotiating trade deals are good investments for agriculture.

Equally as disruptive to trade are the non-tariff barriers. These include zero tolerance policies, plant quarantine restrictions, differences in maximum residue limits for pesticides, and restrictions

on mycotoxins and heavy metals. The issue with non-tariff barriers is that different governments in different parts of the world take different approaches to establishing them. This creates enormous problems for trade.

Globally, harmonized approaches are very important. And with this in mind, there's an overwhelming need to press forward with OECD and global joint reviews for pesticide registrations, and for Canada to play a leadership role at Codex Alimentarius, the global food safety regulatory agency established by the World Health Organization and the FAO.

At a recent meeting of the global heads of pesticide regulatory agencies, Pulse Canada talked about a one-world-approach to registration of pesticides. The reason we did this is that there is a problem with both old chemistry and new crop protection chemistry, in that the maximum residue limits for these products are different in different countries around the world. While Canada's PMRA has shown leadership in initiating processes for global sharing of pesticide registration reviews, we have a very strong concern that PMRA does not have the resources to continue participating and providing the leadership that will be needed.

Of additional concern is the fact that Codex does not have tolerances for many Canadian products. Just as an example, 13 of 17 pesticides used on lentils do not have a Codex standard in place.

Canada is well positioned to provide the leadership needed at these international forums, but leadership is going to need an investment to ensure that our regulatory agencies continue to push for change at the international level.

Plant quarantine issues are also of great importance. While recognizing the need to take action to restrict invasive species from being introduced, there are a lot of examples where approaches to dealing with quarantine concerns are applied inconsistently and without consideration of how the rules are going to impact trade. The access of Canadian canary seed to the Mexican market is a very good example of where a process has broken down and where the approaches that are in place in Mexico are not based on science.

From a public policy perspective, our suggestion is that Canada has to play a strong leadership role in working to eliminate the problems that create non-tariff barriers to trade. A continued focus on the one-world-approach to global pesticide policy; being a champion of the need for science and risk-based approaches to the sources of non-tariff trade barriers such as GMOs, soil or weed seeds; and bringing Codex into the 21st century and ensuring that it provides up-to-date information are areas that are going to take increased investment by government. But these will also help to ensure some competitiveness.

Finally, the element I want to talk about is transportation and its importance in an export economy. I will just tell you a story about an experience that we recently had in Colombia, where we signed a free trade agreement that eliminated some tariff barriers. But we were reminded by a Colombian importer that even with a 15% tariff advantage, Canada was going to be challenged, because we were not seen as a reliable supplier of product. That importer faced a 50-day delay in getting a vessel into Vancouver.

The outcome that we have to strive to achieve in transportation is meeting commitments to customers and moving product in a cost-efficient way and, frankly, we aren't there yet. Vessel demurrage this past winter in Vancouver was reported as being five times higher than average, and three times higher than in the previous year. A Port Metro Vancouver official reported that he had never seen it so bad in Vancouver, a view that was shared by that Colombian importer.

When one of the solutions proposed is to install more anchors off the port of Vancouver, it suggests that we aren't focusing on addressing the problems that impact our global reputation and our costs.

• (1540)

We have to improve the efficiency of the handling and logistics systems. We can start by moving quickly to implement all of the components of the announcement made by the government on March 18.

Putting in place a system to measure performance will tell us whether we are making real progress. We can't be satisfied with record vessel demurrage and container ships that regularly overbook by 40% to ensure that they sail full when leaving Canada. These costs come out of farmers' pockets and clearly undermine our competitive position.

Pulse Canada has been a strong supporter of legislation to give shippers the rights to service-level agreements and to define the types of service that need to be negotiated so that there is more predictability in our logistics system.

In summary, we recognize that government expenditures have to be aligned with revenues. It would be irresponsible on my part to suggest that we just need to spend more money. We are suggesting that as government looks to Growing Forward 2 and to the policy framework that is needed to support these private-public sector initiatives, there needs to be an alignment between what industry needs and what roles the government is going to play.

What is particularly important at a time when the government is looking at a strategic and operating review is to consider that even more investment in some areas is warranted in the need-to-have

areas. As well, government should focus more on innovation that moves agriculture out of being in the global commodity business.

Mr. Chairman, my time is up. I'll wrap up my comments with that.

The Chair: Thank you very much. We'll get back to you during questions.

Mr. Van Acker, you have 10 minutes or less.

I believe we may have seen you at the university at some hearings we had back there a year ago.

Dr. Rene Van Acker: That's right, yes. It's good to see you.

The Chair: And it's good to see you.

You have 10 minutes here, please.

Dr. Rene Van Acker: I thank the committee for the opportunity to present. My comments will be about the future for the agriculture and food sector in Canada, and the various opportunities and challenges it faces.

The context for the future of agriculture is important. Many things have changed over the past decade, and this change is accelerating. I want to provide some of the context by highlighting fundamental issues and ideas that underpin considerations for a progressive strategy for the agriculture and food sector in Canada.

Demands on this sector are growing rapidly. Traditional demands, as we all know, have been for a safe and reliable raw commodity, safe high-quality food, and some level of land or soil stewardship. There are many new demands, including clean water, high-quality and safe niche products, clean energy platforms, a connection to the land, health and wellness products, a healthy environment, cultural diversity, landscape stewardship, vibrant rural communities, economic potential, food security, and food sovereignty.

There are some key points to note about this situation. First, the demands on the agriculture and food and rural sector in Canada are accumulating. They do not trade off. Perhaps the greatest challenge facing the Canadian agriculture and food sector is that for any set of these demands, they will not be required to do this or that, but this and that. Second, these demands increasingly are not only about what is farmed but also about how it is farmed. Third, these demands point to a heightened interest in agriculture on the part of consumers and urban people. Finally, such an accumulation of demands cannot normally be met through a narrowly focused agricultural strategy, nor can they be met by a simplified and non-diversified farming system on the whole. They require a strategy to create what might be called multi-functional, diversified, and integrated agricultural systems.

We understand well that agriculture is affected by the environment and that agriculture can in turn affect the environment, but increasingly, even among agriculturalists, there is a realization by society that agriculture is the environment. The vast majority of Canadians, and in fact the vast majority of people in the world, live in watersheds and landscapes that are farmed, and so agriculture is in many ways our most relevant environment. The water we drink, the air we breathe, the food we eat, and the beauty and biological diversity of our surroundings are determined by the way in which our environment is farmed. This creates a tremendous feeling of ownership by urban people towards the agriculture around them, which presents a tremendous opportunity for urban-rural and urbanite-farmer relationships. There is also a tremendous opportunity for agriculture to take environmental leadership in terms of national policy and actions. Canada and North America's food culture is evolving rapidly and the desire to have a connection to food provenance and knowledge of food characteristics is much stronger now among the world's citizens than it has ever been. In this regard, the food market is rapidly diversifying and expanding both domestically and internationally, thus creating great opportunities but also challenges.

This context for Canada's agriculture and food sector is very different from what it was even 20 years ago. The needs and the market have changed fundamentally, and the sector is working to catch up. There are a lot of things that need to be done. For example, the current standard farming model can be characterized as having relatively simple production systems and relatively few cash engines on the farm, being reliant on commodity prices and being capital intensive, having high-risk biologically fragile systems, being reliant on purchased inputs, and having a management focus that is primarily financial. Farms must be large in order to compete. Although this model is well suited to an important and major sector of the market, that being transportable commodities, and it serves some societal needs and expectations well, it is not robust and flexible enough to meet so many of the new needs and new markets. It is also a biologically simple model and therefore one that is inherently susceptible to pest and disease attack, and not well suited to adaptation or to a changing climate.

In systems designed to serve a much broader range of needs, the markets are diversified and integrated, and they may include moderately complex to complex diversified production systems; multiple cash engines on the farm; niche sales and/or engagement in the value chain; reduced capital needs; moderated risks; biologically

robust systems; flexibility and reliance on purchased inputs; a management focus that is financial, biological, and social; and farms that can be viable whether they are big or small.

• (1545)

It is easy to be an academic, especially when you are one like me, and to throw stones at the current state. I understand that there are real and practical reasons why it is difficult to make change happen, including changes in farming systems.

When I was teaching a third-year course in agronomy and weed management at the University of Manitoba, I used to ask the students what the barriers were to diversified and integrated farming systems. They showed great insight, and some of their answers included the following: a lack of infrastructure such as livestock facilities and processing facilities; market uncertainty due to fear of unfamiliar and new markets; lack of experience or training in managing livestock; lack of knowledge and experience with innovative endeavours at the farm, family, community, and institutional levels; no opportunities to gain experience or knowledge; lack of expertise in institutions, and institutions supporting a narrow range of primarily mainstream systems; and farm programs that do not necessarily support innovation or integrative systems.

So what does all of this mean to Agriculture and Agri-Food Canada and the science and innovation strategy in *Growing Forward 2*? I hope that the following observations can provide some practical context and rationale for the challenges we need to tackle and the opportunities we can pursue. One example is the continued diversification and integration required in farming systems in order to lead an increasingly multifunctional societal demand.

I also hope that these comments can provide some rationale for an expanded role in economic development for the agriculture and food sector to meet rapidly expanding and accumulating domestic and international societal and market needs. I also hope that these comments highlight areas where Agriculture and Agri-Food Canada is well justified in being the national leader, including progressive policies and initiatives on both the environment and food.

In relation to this, we at the University of Guelph and the Ontario Agricultural College are developing initiatives to move in these many directions. For example, we've partnered with Loblaw Companies Limited, Canada's largest food retailer, which has provided funding for us to create North America's first chair in sustainable food production. We've partnered with the Egg Farmers of Canada, which has provided funding for Canada's first chair in poultry welfare.

The Dairy Farmers of Ontario and the Ontario dairy network have been long-time partners helping to support chairs in food safety and dairy food innovation respectively. We've been fortunate to garner support for Canada research chairs in food and health.

The Canada research chairs program and the NSERC industrial research chair programs are places where there could be more direction for establishing chairs relevant to the science and innovation needs of the agriculture and food sector. We have the Ontario premier's chair in biomaterials development using agricultural feedstocks, and the soon to be expanding Bioproducts Discovery & Development Centre.

In addition, going back to the "this and that" idea I mentioned earlier, we still maintain a broader range of programs in plant and animal breeding and genetics, soils science, agronomy, greenhouse production, food processing, agricultural economics, consumer trends analysis, post-harvest storage, animal nutrition, herd management, pest management, etc.

The Ontario Ministry of Agriculture, Food and Rural Affairs has also been a long-time partner and, through the University of Guelph-OMAFRA agreement, has led research on an increasing diversity of topics, reflecting the expanding role of the agriculture, food, and rural sector.

We also have long-standing research collaborations with Agriculture and Agri-Food Canada scientists, and are very pleased to have recently established two co-locations of AAFC scientists at the University of Guelph, who include Dr. Ali Navabi, a bean breeder in the department of plant agriculture; and Dr. Stefanie Torrey, who studies the links between farm animal behaviour, nutrition, production, and welfare within the department of animal and poultry science.

These co-locations have led to synergies in research. One example is Ali Navabi and Peter Pauls' recent \$3.7 million Ontario research fund grant to sequence the bean genome—a first in the world—and to provide extra capacity to accelerate the training of highly qualified personnel for the sector. They help to build very deep and strategic connections between our university and Agriculture and Agri-Food Canada. In fact, it was a co-located Agriculture and Agri-Food Canada scientist, Gary Johnston, who bred the now famous Yukon Gold potato at the University of Guelph.

We are also pleased to see Agriculture and Agri-Food Canada establishing new programs that do show leadership, such as the agricultural greenhouse gas program.

• (1550)

We, and I suspect OMAFRA as well, are very interested in building further collaborations through co-locations and combined research initiatives through the growing forward program.

At the Ontario Agricultural College, we have a long history—over 137 years—of leadership in teaching, research, and service to help build the agriculture and food sector provincially, nationally, and internationally. Initially this meant building a college that was strictly focused on agriculture. After 137 years, our fundamental mandate has not changed, but the college has changed considerably to meet the broader and accumulating needs within that mandate. Where once we were just focused on agriculture, we now identify ourselves in four core areas: food, agriculture, rural communities, and the environment. I think our experience resembles Agriculture and Agri-Food Canada's experience. Perhaps the science and innovation strategy in Growing Forward 2 can acknowledge this evolution and publicly claim an expanded role to provide national leadership on working to meet the rapidly accumulating, diverse and critical needs of society and the market.

Thank you.

• (1555)

The Chair: Thank you very much, Mr. Van Acker.

We'll now move into questioning of the witnesses. Just to remind the members, the committee has decided to go with five-minute rounds, including the question and the answer. As long as nobody abuses this too badly, I will be flexible.

Mr. Allen, would you start, please, for five minutes.

Mr. Malcolm Allen (Welland, NDP): Thank you, Mr. Chair, and thank you to both of you for being with us today.

Dr. Van Acker, you talked about collaboration with Guelph and Agriculture Canada, as well as provincially. My understanding is that there is some collaboration going on at Vineland Research Station as well.

Those are all wonderful things. The question always is: How do we deliver those collaborative events and those collaborative efforts to the farm gate, so that these actually become something that is utilized? I was wondering if you could speak to how we see that information being transferred back to farmers, and what kind of model you might see as being useful for us to look at. Obviously there would be more than one, I would think, but I'll allow you to explain that for us.

Dr. Rene Van Acker: Thank you.

There has been a tradition in the agricultural schools across the country of faculty and staff being engaged in what we used to call extension. There was a formal mandate in OAC for that. That formal mandate really falls under the provincial ministry now, but despite that, most of the faculty remain dedicated to that sort of role. One thing that has also happened at this university is that some of the OMAFRA extension staff are also co-located within some of our departments. That creates a camaraderie and a knowledge transfer right there, sometimes in the coffee room, for example. It also creates partnerships, where there are combined efforts in terms of extension.

One example that we're involved in is something called FarmSmart, an annual conference here in Guelph in January, which is a collaboration between the university and OMAFRA. Another one is the Southwest Agricultural Conference at our Ridgetown Campus. The SWAC conference attracts something like 2,500 farmers and farm industry personnel over two days, and it's a collaboration, I would say, between provincial, federal, and university researchers and industry personnel, for them to share information and technology and what's new and is happening. I think many of these traditional means, as some might consider them to be, are still highly effective and create a community of knowledge that we are still very happy to participate in.

One other innovation that I've noticed at Vineland is that they have what I would call a technology officer. His name escapes me at the moment. I apologize. His role at the Vineland Research and Innovation Centre is to scout technologies around the world that may not necessarily require research but might require regional or local development work. He brings those to the attention of Vineland and others, and that's a way of accelerating technology that may be researched elsewhere and can be developed here or adapted here. That's just an example of another model.

I hope that answers some of your question.

Mr. Malcolm Allen: There's no doubt that it helps.

If I'm hearing you correctly, you believe that the collaboration between what we're doing in what one might call academia versus what's happening with what we might call traditional research, whether it be in the Ontario sense or the Agriculture Canada sense, is that if we continue the linkages, good things will continue to come from that. I think you've articulated that.

I'm wondering if that's something we should be enhancing. Is it a place where we ought to be looking at continuing or strengthening the model, or is the model working adequately at this point in time?

• (1600)

Dr. Rene Van Acker: If we're specifically talking about translating the knowledge and technology to farmers, and if you asked producer groups, I suspect they would like to see more of that. I don't have the data in front of me, but I suspect that's what they would say.

Certainly, I know many of my colleagues within the Ontario Agricultural College would also like to do more. If there were a way of facilitating that, I think you would have lots of participants.

Having said that, I think there is a lot going on already. I don't know if you would necessarily have to have a tremendous program to accelerate that; I think a lot of it can happen already. It would

obviously have to be in collaboration with, and maybe key leadership from, the province, because that mandate, as far as I can tell, rests with the province through what used to be called the extension service.

The Chair: Thank you.

We'll now move to Mr. Zimmer, for five minutes.

Mr. Bob Zimmer (Prince George—Peace River, CPC): Thank you. I have a question for Gordon.

Thank you for coming. Could you comment on the collaboration or cooperation you've already had with our government and how the pulse industry has been helped by our priority on research and innovation.

Mr. Gordon Bacon: Well, we were a big player in Growing Forward 1, and before that in the agriculture policy framework, and I think we have tried to undertake some very innovative projects. One of the compliments that should go to government is that it is making some big investments in what the agriculture industry might consider high-risk ventures.

Going back to the start of our focus on health and nutrition, we felt this was an area where there was some opportunity, but it's not a market demand today. I think environmental sustainability or the carbon footprint is another emerging area, and we were able to tap into AgriFlex funding to start a program there, which goes far beyond just pulses. It's looking at a cropping systems approach and how Canadian agriculture stacks up.

I think a key point in considering Growing Forward 2 is that we're not starting from a bad spot, as we have some very good programs under way. When AgriFlexibility is not available, being that is an economic stimulus funded program, I think we want to look at taking some of the very best from AgriFlexibility and making sure it's rolled into Growing Forward 2.

The key part is that it was giving industry, such as Pulse Canada, a great deal of flexibility to identify problems and come up with projects that would address those problems. At times some of the Growing Forward 1 programs tended to be quite siloed, whereas AgriFlexibility gave industry a lot more flexibility to tackle complex problems.

I understand we have to find the balance between flexibility and precise measurements of progress, but I would look to what we're doing. AgriFlexibility was a very good program and, hopefully, we can capture some of those elements.

Mr. Bob Zimmer: To reaffirm your comments, you said it was definitely a good thing, that we've done a lot of good things, and Growing Forward 2 is going to be a carry-on of that. We're not starting from scratch is what you're saying.

Mr. Gordon Bacon: Right. I think we need to look at what's worked well. Where did government get value from the investments in Growing Forward 1, and where did you see underperformance? Let's make sure we're building on the good things and trying to tighten up the things that didn't give us the performance we needed.

I think we're all going to be asked to do more with less resources, so we have to target what we're doing. And that's really based on the vision that is set for where an industry wants to go and making sure that programming is aligned with that vision.

Mr. Bob Zimmer: Thank you.

The Chair: You still have two minutes left, if somebody wants to use up the time.

Mr. Randy Hoback (Prince Albert, CPC): Okay. I'll take that.

Mr. Bacon, I actually had the pleasure of being with you in Colombia. You talked about a pulse importer in Colombia and about some of the issues with shipping. Could you maybe just highlight that a little bit more? I know he was very vocal to me about some of the issues he had with Vancouver and the problems he had with loading ships there.

• (1605)

Mr. Gordon Bacon: Yes. A tremendous opportunity provided by the Canada-Colombia trade agreement for Canadians is that we have a 15% tariff advantage over another major supplier, the United States.

The comment made at the meeting was that the 15% tariff advantage was tempered somewhat by the fact that Canada does not have a reliable transportation system. He was citing his particular experience of having a vessel waiting in Vancouver for 50 days. Anyone in the food business knows that you simply can't have that kind of unexpected delay. If you're to have that delay regularly, you're going to have to take it into account when you make your purchasing decision. I think he was emphasizing that same thing to shippers. And the Coalition of Rail Shippers has emphasized that we have to reduce the variability in our logistics system so that we're giving customers the assurance, when we make a sale, that we're going to deliver it on time.

The challenge we face is that this lack of consistency ultimately ends up costing us in invisible things like vessel demurrage; but also, a lot of things that are less visible, such as risk premiums, also get factored in. We've been told by a steamship line that it is overbooking by 40% just to make sure that its vessel sails full. As an aside, he added a comment: "And believe me, you're paying for that".

So I think the experience in Colombia says that this is the measure of performance that we need to be driving at: Do we meet customers' needs on a regular basis, and do we do so in a cost-effective way? My conclusion and the conclusion of the Coalition of Rail Shippers would be that we can still make some progress. We have a good system, but we need to make sure that it performs at a high level consistently, quarter after quarter.

The Chair: Thank you.

Now we'll move to Mr. Eyking for five minutes.

Hon. Mark Eyking (Sydney—Victoria, Lib.): Thank you, Chair.

It's good to be back at this committee again, and it's good to see you, Mr. Bacon.

My question is about the transportation. I know this government seems to want to talk about trade deals and getting rid of marketing boards, and how that is going to make money for farmers, but if you don't have the proper transportation links, you're not going to be able to get your product there on time, which you alluded to.

We've heard before at this committee from different farmers about the availability of rail cars and sidings for loading. Of course, you're alluding also to port efficiencies. I don't know if you use the Churchill port, but it's definitely a problem, and this problem is not just with the pulse crops. This government has had five or six years to straighten out a lot of those problems, and apparently we're still in the same situation.

You also alluded to the March 18 announcement. Finally an announcement has been made. What do you see happening if we don't get these things straightened out? Are we going to lose customers? Are we going to get less for our crops? Will certain farmers not produce in certain areas? If action is not taken, what's going to happen? How do you see it evolving?

I know you seem quite optimistic that this government is going to straighten out the transportation problems, but what's your realistic view on that and how it's going to evolve? If it doesn't evolve, how is it going to hurt the pocketbooks of farmers?

Mr. Gordon Bacon: Any of the things that limit our market access—and I talked about tariff barriers, non-tariff barriers, and transportation being the three key areas—ultimately detract from farmers' returns. If you have a 2.5% tariff disadvantage getting into Morocco and you want to sell there, you're going to have to take 2.5% less to overcome the tariff disadvantage. I think we are talking about a comprehensive approach to identifying all of these factors undermining our competitiveness and the return that farmers get.

So what is the impact if you can't export lentils? You grow something else. I think you will see farmers shifting into growing crops for which there are fewer problems and greater certainty. Farmers, ultimately, are taking a lower price. It's about trying to wring out efficiency and improve the efficiency so that—

Hon. Mark Eyking: You could have a good crop and a good market out there, but if the transportation links are inadequate they will cause farmers to shift to another crop with less money.

Mr. Gordon Bacon: They may make that planting decision, but as the Colombian buyer pointed out, he has to consider the reliability of supply when he needs product. If your shelves are empty, you need product on a predictable basis. The key is really to identify the problems in the entire system, from the farm gate all the way through to the time the boat leaves Canadian waters. Where can we start tightening up some of the variability?

So it's not about pointing fingers at any one player or about pointing fingers at the railway alone; it's about asking ourselves, as one of the steamship lines put it, how we can squeeze the bell curve to eliminate some of the extreme variability on either end? When we can start putting more predictability into the system, we're going to start reducing some of the cost.

• (1610)

Hon. Mark Eyking: Given that we can produce the product and we have the market, how are our competitors dealing with the Australians and the Americans? Do they have better transportation links, and are they getting the product in there on time, with just-in-time arrival? Does that give them the upper edge? Will we have to start using U.S. transportation links to get there? Is that an option? If we fail to have our own proper transportation links here, will farmers have to start shipping through the U.S. to get it out through the airports?

Mr. Gordon Bacon: On the first question about our position relative to Australia or the U.S., I don't think any exporting country would say they have the perfect transportation system. But one thing I do want to point out is the proximity to market. We have some of the longest shipping distances. If someone is importing pulses into India, the number of days to get cargo from Australia to India is far shorter than from Canada to India. We want to look at the whole period, from the time an order is placed until it arrives in port. That's where some of our competitors.... If we look at peas out of the Black Sea, you have a lot shorter shipping time to India than we do. We're geographically where we are in the world, and our markets are where they are, which is one of the challenges.

The U.S. also has transportation challenges. When it makes economic sense, I think Canadian companies ship through U.S. ports. There have been discussions on this. In fact, at transportation seminars we regularly have people coming up from U.S. rail lines and ports. But they also have a very large tonnage of product that's exported out of U.S. ports.

I think our focus needs to be on how to make the Canadian system work well. We have a good system, but it's just underperforming.

The Chair: Thank you very much, Mr. Eyking. You're time's up.

Mr. Lobb, you have five minutes.

Mr. Ben Lobb (Huron—Bruce, CPC): Thanks, Mr. Chair.

My first question is for Mr. Bacon.

As a member from southwestern Ontario, I will point out that the white bean industry is a pretty significant component of the acreage in southwestern Ontario, with probably 60% of all the production in Canada coming from that area. With corn, soybeans, and wheat, a lot of corporate dollars are invested in research and innovation on their different strains and seeds, and so forth.

But can you tell the committee the importance of the dollars invested in science and innovation on crops such as white beans or coloured beans that the corporate world just doesn't make that investment in, and why it's important for the future of those sectors?

Mr. Gordon Bacon: Beans are a good example. We do have some private investment. Thompsons has a breeding program, and a number of other private companies do. But what we look for is that

private-public partnership that will extract the highest value. Dr. Van Acker talked about some mapping. So I think there is a role we can look at and say, "How do we extract maximum value out of research dollars?"

Innovation is going to be the key. We have to address production problems. When we talk about efficiency, what is holding us back? I won't try to compete with the agronomist as a witness, but do we need to focus on improving nitrogen fixation in beans? Do we need to focus on better disease resistance? Then we need to look at where partnership between the private and public sectors will best make that happen.

A diversified cropping system will provide some of the stability that farmers are looking for. It's also good from a production perspective, because you're spreading risk and opportunity across a lot of crops.

• (1615)

Mr. Ben Lobb: We talked a lot about seeds and sprays—herbicides, pesticides, and whatever else in the science goes into the perfect plant and the perfect seed. Do any of your projects that you put forward or would consider look at the machinery that puts it into the ground and harvests it from the ground? I mean, have you done projects? Do you work with corporations on the machinery side? How does that work? How do you see moving into the future?

Mr. Gordon Bacon: That question might be better addressed to the provincial groups, the Ontario Coloured Bean Growers Association and the Ontario Bean Producers' Marketing Board.

At Pulse Canada, we focus more on the market demand side rather than some of the production-specific areas. Frankly, I'm not able to answer that question for you.

Mr. Ben Lobb: Fair enough.

My next question is for Mr. Van Acker. I was at an announcement not too long ago with one of your colleagues, Peter Pauls. I am just wondering if you could talk about some of the relationships and the advantages to industry and also to consumers. When we look at the industry, when we're talking about partnering with universities, with Agriculture and Agri-Food Canada, and with industry, whether a commodity group or whatever, could you just explain to the committee how the Growing Forward suite of programs, through science and innovation, has helped to push the bar along with that collaborative approach?

Dr. Rene Van Acker: Collaboration definitely has many benefits, not the least being the efficiency of the effort. When we have collaboration, we use facilities and also experts to their utmost. And we also have a chance to bring in the very cutting edge when we do that. So any programs that facilitate that sort of collaboration end up being the best programs, in fact.

We also have a long history with that, and I think agricultural scientists have a long history of working collaboratively with industry. Part of it is that those who are involved in agriculture tend to be fairly practical and pragmatic, and want to see an end use to the work they do. So they have a lot in common with their colleagues in industry.

What's also true for us is that we focus very heavily on the training of graduate students, highly qualified personnel, most of whom end up working in the industry. And so we know these people quite well. They're colleagues of ours.

We welcome the science and innovation strategy tools that may help these sorts of collaborations. Again, I stress the success that we've had with the co-locations, for example. We're very happy also with other federal programs that may not be led by Agriculture and Agri-Food Canada but are important, such as science programs like collaborative research and development, and CRD programs through NSERC, as well as the NSERC industrial research chairs program.

I have to say we were a little disappointed recently when we found out that our application to use the Hensall District Co-Operative's contributions towards an NSERC industrial research chair for Peter Pauls was denied. We were a little surprised about that. Nonetheless, Peter is working hard at making sure we match that money through a CRD program.

Those are just a few comments, all in agreement with the things you were saying.

The Chair: Thank you very much.

Mr. Atamanenko, you have five minutes.

Mr. Alex Atamanenko (British Columbia Southern Interior, NDP): Thank you both for being here.

My main question is directed to you, Gordon.

Greg and I met a couple of weeks ago and he outlined some of the concerns you folks had in regard to the service review. There has been something like a seven-month delay. There were recommendations but there hasn't been any movement on them. I'm wondering if you could explain some of the concerns, because I think all of us here share them.

It's obvious that the ultimate cost for this lack of consistency in the transportation system is borne by farmers. We've had railways appearing before this committee ever since I've been here. We question them and we get answers, and yet there doesn't seem to be much change. This delay in movement concerns all commodity groups, I suspect, not just agricultural groups. There's obviously a will here. I'm sure there's a will in Parliament to fix this, in all parties.

What should be done? To be blunt, does government have to get tougher with the railways? Do we have to hold their feet to the fire

and say this is not acceptable, meaning all of the things you mentioned in your talk? It seems that we keep going on and on.

Maybe I'll stop there and let you comment.

● (1620)

Mr. Gordon Bacon: I think that government should expect the whole system to work better. Government spent tens of billions of dollars in infrastructure improvement, and we should expect the entire supply chain to work better. I don't want to point fingers at the railway. We have people in our industry who order double the number of rail cars they hope to get, because they might get half of them. Now is that a railway problem or a shipper problem?

What we have to do—and we would be in agreement with the railways on this—is to look at the entire supply chain, from the time the product enters the boat back to the point where it leaves the farm, and we have to make the system function better. You referred to the rail freight service review. I think one of the most interesting things in that report was some of the innovative measurements of system performance. Those numbers are now three years old. To make informed decisions, we need to get away from story-telling. I might come in and give you a heartbreaking story about how bad service is, then someone else will come in and say how good it is. Instead of that, we need to start focusing on the measurements that are going to tell us how well the system is performing.

Vessel demurrage is a very interesting thing. You can cite a lot of good numbers about performance, but if you're incurring huge vessel demurrage costs, something in the system isn't working. An analysis of key performance indicators will tell you where you need to start putting a little bit of heat.

We were firm supporters of the announcement made by government on March 18. We feel it had all the essential elements. What we said then and what we continue to say now is that we need to get on with it. Let's start implementing the recommendations. We have met with Transport Canada. We understand that they have been working to find a facilitator. They had a couple of people they were hoping would take the job but didn't. But even without the appointment of a facilitator, we think that this committee and others, as well as relevant departments, could be looking at some key performance measurements. They could start by making sure that all committees have up-to-date information.

So expect more—but expect more of the entire system. To know exactly where the improvements need to be made, I think we need to be starting with current information. The railways rightly say that their performance has improved, but that's not the measurement that really matters. What we need to understand is that the entire system is working well together.

Mr. Alex Atamanenko: Have you had feedback on why there has been this delay, despite the will to move forward?

Mr. Gordon Bacon: If you're going to have a facilitator, you have to find a qualified person who can take the job, but I don't think that we need to wait. All things don't hinge on starting with a facilitator. There are other actions that we would all benefit from. What we need now is performance measurement, a discussion about what we need to focus on, and up-to-date information.

The Chair: Thank you, Alex.

We will now go to Mr. Payne for five minutes.

• (1625)

Mr. LaVar Payne (Medicine Hat, CPC): Thank you, Mr. Chair.

I would like to thank the witnesses for coming today. It's important to get your perspective on Growing Forward.

I'm from the Medicine Hat riding in the southeast corner of Alberta. We have a huge agricultural area, with both dry-land farming and irrigation. Our crops include peas, lentils, beets, potatoes, canola, wheat, barley, etc. It's a very well-diversified area. There are certain issues—and you have talked about them—but I don't really want to get into the transportation side of things at this time.

My first question will be to Dr. Van Acker.

You have done some research on the coexistence of GM and GM-free crops. I'm wondering if you can explain some of the results of your studies, and how farmers on both sides of the issue can work together here in Canada.

Dr. Rene Van Acker: We've done a lot of work. In fact, next week I will be at a conference in Vancouver on coexistence of genetically modified and non-genetically modified crops in the agricultural supply chains. I'm currently working on a report with the USDA on this issue as well in regard to a variety of crops.

There are a number of things to note. One thing very important thing that we learned is whether or not we are talking about traits that are regulated or traits that are deregulated. If we're talking about traits that are deregulated, it is really an issue of coexistence and cooperation. With deregulation you have unconfined environmental releases. So there are no requirements per se for maintaining any sort of segregation or not.

With traits that are regulated, there is a current regulatory requirement that those traits do not appear anywhere—although there are discussions about whether there would be some international standards for low-level presence, LLP, for example. But my feeling is that there's still quite a long way to go on that. There isn't necessarily a great track record in international agreement on these issues.

On what farmers do, there are examples in the marketplace of people maintaining segregation as long as a threshold is set. That is key. If somebody sets a threshold, you have something to work towards. In an ideal situation, it's the person who wants to maintain something free of GM and there's a premium, they can roll the cost of the maintenance into the premium they have in the GM-free product. If there's no premium, there's really no point in doing it, as you're going to lose money doing it.

We have also learned that when you start getting below 1% of that threshold, things become expensive and challenging. In Ontario, for example, the non-GM soybean market is typically working somewhere between 1% and 5%, depending on who's buying. Again, the cost for that is rolled into the buyer who wants the non-GM label. These are all practical considerations. It can be a very practical thing and we have lots of experience with it.

I know that the International Seed Federation and CSGA have been looking at this situation in terms of seed purity standards. There isn't a necessity per se of maintaining a seed's purity in regard to traits that have achieved deregulation. It's not necessarily fair to seed growers or companies to be penalized for the presence of those traits, if those traits were not required to be kept segregated in the first place. That goes back to my first point on whether it's a requirement to segregate it or not.

If we go into a world where we are going to semi-deregulate some traits, we would want to think long and hard about what those traits would be, why we needed to segregate them, and what crops and systems we would work with so we would have a very realistic perspective on the costs and capabilities of that segregation. There, I think, farmers have a lot of experience and could provide excellent advice in that regard. I think the first thing they would ask is, "What's the threshold?"

I'll stop there. I'll go on and on, if you let me.

• (1630)

Mr. LaVar Payne: Is my time up?

The Chair: Yes.

We're going to move into our next hour, but there's one comment you made in the text of your presentation, Mr. Bacon. You said:

The industry needs investment in innovation more than it needs stabilization.

I guess you could take that a number of ways, but I'm going to presume that you don't think that governments shouldn't be worried at all about stabilization. Are you suggesting—not to put words in your mouth—that we need a little more on the innovation side? Do you want to comment on that?

Mr. Gordon Bacon: The point I wanted to make was that the marketplace we're serving—and I think Dr. Van Acker talked about this as well—has changed remarkably and will continue to change. We can't imagine where we'll be in 10 years. I think the mix between investments and innovation, and investments and stabilization has to be a key part of the discussion that we have in Growing Forward 2.

I won't make a judgment about what the mix should be. There are a lot of people who would say that perhaps we're spending a little more than we should on stabilization and we're under-investing in innovation. I think that's the key message I would leave. It's going to be a key part of the discussion in Growing Forward 2, when it comes down to how much money is available for programming that will fund research programs and innovation and science. With a limited amount of dollars, it's either going to come from money in stabilization, or this committee will have to be very effective in getting the government to increase the amount of money going into agriculture. Perhaps we need both.

My last comment is that agriculture is a solution provider in health care and environmental sustainability. We can be a lot of things. We probably need an integrated strategy, where we're looking at health and agriculture and the environment and agriculture and are making a bigger investment. But if we're going to have to make choices, we do have to look at what we're stabilizing to when in fact the market changes every day.

The Chair: Thank you very much.

Thank you, Mr. Bacon, and Mr. Van Acker, for joining us.

We'll recess for a few minutes. I invite the next slate of witnesses to come to the table.

• (1630) _____ (Pause) _____

• (1635)

The Chair: I call the meeting back to order.

I'd like to thank Mr. Keller, Ms. Boyd, and Mr. Broderick for joining us here today.

We'll start with Mr. Keller, president and chief executive officer of Genome Prairie, for 10 minutes or less, please.

Dr. Wilfred Keller (President and Chief Executive Officer, Genome Prairie): Thank you very much for the opportunity to present.

Genome Prairie is an organization that's been around for about 11 years. We have responsibility for Manitoba and Saskatchewan and are one of six regional centres spread across the country. We work very closely with the national organization, Genome Canada, to support new initiatives, and to build and develop genomic sciences. We believe these are transformational in their socio-economic impact on Canadians.

We work in our region to build teams of researchers to develop important projects that have an end point in terms of generating knowledge and translating this into socio-economic benefits. A number of our projects are in the agrifood area.

To provide just a little background, the agricultural system—I will call it the agrifood system—is critically important to the Canadian

economy. It employs about 2 million Canadians, equivalent to 1 in 8 jobs. This industry is worth well over \$100 billion annually, and there is potential for growth as we look to bioproducts, and environmentally sustainable and renewable products, which can be used to build parts for automobiles, for example. So this is a growth industry.

Canada is the fourth largest exporter of agrifood products, so it's a big business. The federal science and technology strategy represents or speaks to four pillars. We feel that the agrifood system should be a fifth pillar and be recognized as a critical component of the Canadian economy, because there will be many significant opportunities going forward.

For example, we will have close to 1 billion affluent people in Asia. These good people are going to be a very important market for top-notch Canadian products, and we need a key business plan to meet the market demands of these affluent citizens. So the timing is excellent when we are looking at Growing Forward 2, developing a strong federal position, and building a long-term R and D and commercialization strategy in the agrifood area.

With that in mind, I would like to address the committee with five recommendations. First, we believe that the agriculture and agrifood system needs to be integrated and elevated into a revised national science and technology strategy. Growing Forward 2 will be in a position—or in our minds, could be in a position—to identify and support key national initiatives to build Canadian competitiveness so that we can be a long-term leader in the production of a range of agricultural products. These could range from dairy to livestock to an array of crops.

For example, we could envision the development of a national plant innovation centre in Saskatchewan, in Saskatoon, in particular, building on institutional capacity that's already there—for example, the Canadian Light Source—so that we would have a very advanced set of tools to evaluate plants coming out of the research lab and to be able to pick those winners that can go forward to commercialization.

With Growing Forward 2, we think there might also be a commitment to actual bricks and mortar and to develop some of these institutions that would enhance the capacity of our clusters.

Second, we believe that Growing Forward 2 should recognize the value and the opportunities around non-food industrial bioproducts, be they lubricants, automobile replacement parts, polymers and so forth, which provide a whole new set of business opportunities to our skilled producers, and develop a base for innovative new companies. For example, there is the development and use of oilseed for jet aviation fuel—currently a very hot and interesting area that Canada could play a lead role in. And with the release of the federal R and D panel report yesterday, there will be an opportunity as those recommendations are put into place for many more companies to be in that space and to start developing and utilizing agricultural products.

Third, as has been mentioned already by other speakers, there is a very rapid pace of change in agriculture. The restructuring of the Canadian Wheat Board is an example of an initiative that we believe will allow an opportunity for increased diversification and new product development. This will require intensive research and the creation of private–public partnerships. We think there are going to be opportunities, in light of the markets that I mentioned previously, for Canada to respond to global demands and to build on new developments and to build new product types, in particular. For example, the Canadian International Grains Institute, or CIGI, in Winnipeg—a very interesting place to visit—does end-product analysis. They bake virtually every type of bread available on the planet. They're capable of making every type of pasta and noodle. Think of the feedback loop they could provide if that group were enhanced.

• (1640)

We recommend an enhancement in the capacity of organizations like that so that they can provide end-point use that researchers can then use to address future market needs. Canada should be first through the starting gate on that.

Fourthly, we certainly see regulatory streamlining as a requirement if agricultural products are to be competitive. We certainly hope that Growing Forward 2 will be in a position to address some of the bottlenecks that we see. Plant pathologists, people who do research on plant diseases and try to develop disease-resistant crops, are really very seriously handicapped by the fact they now have to do a lot of paperwork to receive approval for testing plants. For organisms that have been found in the soil for decades, they're now forced into the situation where these organisms or microbes are cultivated at a laboratory. As soon as that happens, it's viewed as a manufacturing process and a whole bunch of paperwork has to be done—in the range of about 150 hours' work—to get approval for something that had been done for a long time without any issues. That doesn't make sense to the research community, and we would ask that Growing Forward 2 programming take a look at bottlenecks like that, and that we actually think about rescinding guidelines like that, which do not make sense in terms of commercialization.

Finally, we would suggest and argue for a third-party delivery of Growing Forward 2 programs. By third party, we mean those regional economic development agencies and other agencies like those that are working on a not-for-profit basis. They might play an excellent role in working with Agriculture Canada to deliver programs to a regional base where these agencies and organizations have a strong familiarity with the priorities, the research players, and

the delivery mechanisms in the private sector. This would be a way of improving the efficiency of the system while encouraging more regional development.

Thank you.

The Chair: Thank you very much.

We'll now move to Ms. Boyd and Mr. Broderick.

You have 10 minutes between you.

Thank you.

Ms. Mary Boyd (Representative, P.E.I. Health Coalition): Thank you, Mr. Chair.

In the P.E.I. Health Coalition, we understand the relationship between food and health. We believe that the first strategic outcome of the Growing Forward agricultural policy framework should be to make the provision of healthy food for the country's population the top priority.

A competitive and innovative sector, “from idea to invention to consumer, growing new opportunities that support innovation and competitiveness”, is exactly why a large percentage of Canada's food is genetically engineered against the will of the people of Canada, the majority of whom reject genetically engineered foods and want compulsory labelling.

GE food was imposed on society without our knowledge and we are caught with it. Canada's population is large enough to support a food system determined much more by healthy considerations than by GE profit and competition. How will this program also support organic farming?

We believe that priority number two should be the starting point, “A sector that contributes to society's priorities: Enabling the sector to contribute to the priorities of increasingly health conscious and environmentally aware Canadians”. This can be achieved through a strong supply management system rather than an open-market system. There is no place for competition in a domestic food system that puts health and farmer well-being first.

While we support a dynamic, modern agricultural industry that reflects both Canada's national achievements and the local character of the provinces and territories, we question who determines what such a sector will look like. Will it reflect the current industrial model of agriculture that is under corporate control, to the detriment of the community, or will it reflect a locally owned green agriculture that greatly reduces our carbon footprint? Will it concentrate on growing healthy food, or will it focus on non-food items such as biofuels, which are taking over large portions of agricultural land in Africa and here in Canada?

In other words, we need to be clear and transparent about what kind of agricultural future we are building locally and how we intervene globally. Is innovation based on profit or health? Why is there the strong emphasis on competition?

The first and overarching principle of the Saint Andrews Statement emphasizes a “profitable agriculture, agri-food and agri-products sector”. We believe there is too much emphasis on the market and trade agreements. We hear many farmers complain that they are efficient and it is the system that is inefficient.

We also note that farmer income, especially on small and medium size farms, the most important producers for our future, is not keeping pace with the increasing cost of food.

We notice that health is given the least emphasis of the aims outlined in Growing Forward 2. On the contrary, the plan needs to emphasize human health, soil health, protection of agricultural land, the health of the atmosphere, and assistance to increase organic farming. As for competitiveness of domestic markets, we believe that if we are to have competitively priced inputs farmers must be assisted in developing more of these on the farm, and they need to be green products.

We also submit that there are ethical questions surrounding the production and adoption of new products, processes, technologies, and business models developed domestically and abroad. There needs to be careful public scrutiny of these.

Trade agreements such as the Canada-U.S. Free trade Agreement, and NAFTA, and now the proposed CETA, are not good models of trade. When Canada negotiates bilateral agreements, it needs to keep in mind that the ideal is fair trade, not trade for the advantage of the strongest and the corporations.

We strongly support a sustainable agricultural system based on holistic sustainability.

There is little mention in the paper of global warming nor an admission that agriculture is the biggest contributor to the problem, nor is there much mention of human health, of developing green agriculture, cutting down on waste, a greater role for consumers and farmers, and food as a human right.

•(1645)

In such a model, trade would not be at the top of the agenda, and we would not force our agenda and profit-making desires on the poorer countries of the world, making them vulnerable to dumping while placing barriers on their desire to trade.

However, Canada must be self sufficient in food and depend less on imports. A new food system could be a key driver of solutions to climate change. Since 1990, the area planted with soy, sugar cane, oil palm, maize, and rapeseed grew by 38%, while staple foods like rice and wheat declined.

There is a compelling case that the current global food system, propelled by an increasingly powerful transnational food industry, is responsible for around half of all human-produced greenhouse gas emissions. These range anywhere from a low of 44% to a high of 57%, according to GRAIN, an organization that was awarded the Alternative Nobel Prize this year.

Thank you.

The Chair: You have about three and a half minutes left.

Mr. Leo Broderick (Representative, P.E.I. Health Coalition): Good. Thank you very much.

In P.E.I. we are very concerned about the escalation of genetically engineered crops on the island. First of all, when the former premier of Prince Edward Island, the Honourable Pat Binns, called for hearings to determine whether P.E.I. should be a GMO-free province, a record number of islanders presented well-researched and documented briefs in opposition to GMOs. They raised ethical questions about environmental health and economic risks, including corporate control.

Unfortunately, last-minute political and corporate influence turned the tables against P.E.I. We are sorry to report that in spite of the great efforts of many islanders, the percentage of GE crops has increased, against the wishes of the people and regardless of the fact there are many unproven risks.

Now many islanders are shocked to learn that a GE Atlantic salmon has been developed and is awaiting approval by the United States Food and Drug Administration. A small U.S. company, AquaBounty, intends to produce all of its GE salmon eggs on P.E.I. and to ship them to Panama to be grown, processed, and sold table-ready to customers in the United States.

•(1650)

The Chair: Mr. Broderick, that may be something you may want to make the fisheries committee aware of.

Mr. Leo Broderick: Well, I think it's important that it be mentioned at this committee too, because we're into farming, that is, the farming of salmon.

It looks as if the FDA will approve the proposal. We believe there has not been enough study done on this project and that there's a role for the Canadian government to have some say in this, particularly since these salmon are being grown on Prince Edward Island.

There is no guarantee that the fish won't escape and destroy wild salmon. We also know that as soon as this is approved—and the Canadian government will be involved in the final approval—there will be many other genetically engineered animals ready to come onto market, including the one in Canada called the enviropig, which is supposed to be more environmentally friendly because it will be less polluting, or the poo that it gives out will be.

The Chair: Mr. Broderick, I want to give you the best use of your time. This is the agriculture committee; you are talking about aquaculture. The GMO study, or biotech, are things that we have done, but this is about Growing Forward 2, and I would advise you to stick to that.

That would be most valuable to the committee.

Mr. Leo Broderick: To conclude, we have many genetically engineered crops on P.E.I. and in the rest of Canada, and we are now ready to move into food that has been genetically engineered, that is, animals that have been genetically engineered. All of these processes, both the crops and the aquaculture, will have a negative impact on the environment and people's health.

When she was asked six years ago about environmentally damaging aspects of GE crops, Allison Snow, a well-known person who has done research on genetically engineered crops, stated that the development of super-weeds might be just a matter of time. She has been proven correct. Today many people are raising questions about GE salmon. Surely, experience tells us to hold off.

Certainly the sorry state of the wild Atlantic salmon stock tells us that we need to choose the precautionary principle. We believe that the Government of Canada needs to strengthen its regulations to protect the health and good name of its citizens. Both Environment Canada and Health Canada ought to fully disclose all communications they have from AquaBounty on this subject, as well as any other pending discussions.

Thank you very much.

The Chair: Thank you.

We'll now move to questioning, a five-minute round. Up first will be Ms. Raynault.

[*Translation*]

Ms. Francine Raynault (Joliette, NDP): Thank you, Mr. Chair.

I would like to thank the witnesses for accepting the committee's invitation.

I wanted to ask questions about the Atlantic salmon. May I?

[*English*]

The Chair: It's your five minutes, Madame Raynault. You can use it however you want.

[*Translation*]

Ms. Francine Raynault: Thank you very much.

I would like to know what role Environment Canada plays and what the public health risks are if we eat this type of fish. Have studies been done? I am going to ask all my questions. What are the environmental risks?

What is the reason behind genetically engineered salmon? What are the benefits? Why should people eat it? Is it going to be less expensive? Should we worry about people's health and the environment?

•(1655)

[*English*]

Mr. Leo Broderick: Those are wonderful questions.

First, there is a role for Environment Canada. Once there is an application for the sale of eggs to the United States, there must be an environmental assessment. But it's secret, and we will not know on Prince Edward Island when that assessment takes place. Everything is secretive. That's the problem with this particular process with genetically engineered salmon and eggs being developed on Prince

Edward Island. Everything has been conducted in secret. We do not get the results of Environment Canada's assessment. We're not sure yet if the application has gone in. The only assessment that has been done has been AquaBounty's own scientific research and evidence presented to the FDA. There has been no peer assessment. There has been nothing else done that would replicate that.

What we do know is that much of the research AquaBounty has submitted to the FDA is flawed. It cannot guarantee full sterility of all of its salmon. It only did a study on six, but they say that if there is an escape, there's a 5% potential that the salmon could contaminate the wild salmon stocks in the Atlantic.

To some extent, we really came here to raise this as an issue for the government. If approved by the United States FDA, it will be the first genetically engineered animal for the dinner plate, and we know that there will be many requests that will come immediately following. The environmental risks are huge, as are the health risks, especially with respect to the allergens. It is believed that for anyone predisposed to being allergic to fish, this particular fish will intensify that greatly. It's a growth hormone that has been taken from two other fish, and it will make the AquaBounty salmon grow twice as fast for the first two years. It consumes much more food, and it has to be fed wild fish taken from the ocean. So there are huge environmental and health issues.

We're here to talk to you about the role that, we believe, elected officials like you have in dealing with this question in the House of Commons. It's critical.

Ms. Mary Boyd: There are organizations of doctors and environmental doctors who are really questioning all the unknowns of all genetically engineered food, and that includes fish. For instance, that growth hormone that is used in salmon, the IGF-1 hormone, could cause cancers. There's a possibility of that.

Many doctors have talked about the inflammation of people's digestive systems, now that we have been eating genetically engineered food—not of our own will but often unknowingly.

They've talked about the increase in allergies. Also, with these salmon, they will probably need to use even more antibiotics than with the farmed salmon on land, because they're going to eat up to five times more food. They're very aggressive. Therefore, they'll probably need more antibiotics. We will be ingesting all of those. What will that do to us, to our immunity to antibiotics in the future? There are many questions like that. I imagine babies and children starting to eat this food now. What is it going to be like when they're our age?

These questions make us realize that as consumers we're becoming guinea pigs. We did have a precautionary principle in this country where you didn't put anything on the market until it was tested as safe.

These things have never been proven safe. They're on the market, so what do we do? Will they wait until we all get sick and then try to treat us? Maybe we'll survive, maybe we won't, if this keeps escalating.

There are serious questions about it.

The Chair: Thank you very much. Your time has expired.

Mr. Lobb, you have five minutes.

Mr. Ben Lobb: Thanks, Mr. Chair.

My first question is for Mr. Keller. You stated in your presentation that Genome Prairie has been around for 11 years, which would encompass the entire time the Growing Forward suite of programs has been out there. You no doubt have participated in them in some form or another.

I was wondering if you could comment on some of the good points and some of the poorer points of Growing Forward, from your experiences.

• (1700)

Dr. Wilfred Keller: Thank you.

I think the first Growing Forward policy framework, or Growing Forward 1, did present some interesting new programs, for example, the idea of science clusters around such key crops as canola. I think the first set of attempts was good, in that it pulled together groups of researchers, particularly from universities, Agriculture Canada, and other organizations, to start looking at some common areas.

Going into Growing Forward 2, we would like to see more focus in terms of how we can identify priorities that can keep Canada competitive. This is why we talked about actually creating some national technology centres that will allow Canadian researchers to be competitive with the new sets of tools that are rapidly being developed. As well, being able to focus on specific traits will make Canada more competitive in the emerging markets that we see in other countries.

I think there has been a reasonable start, but there is a need for improvement and focus going forward.

Mr. Ben Lobb: Through Growing Forward, and your program specifically, a lot will go through the science and innovation portion of it. Can you give us a little more of the “how”, as in how you'd like to see this unfold through Growing Forward 2?

A lot of what we've seen has gone through a number of different things, whether it's universities or clusters or whatever it may be. You said you'd like to see more of that or to build upon that. Can you explain to us how you'd like to see that going ahead?

Dr. Wilfred Keller: Let me list a couple of things.

As we start building this capacity, we want to see an effort on commercialization and development. We want opportunities for ensuring that private sector players, small companies particularly, can take advantage of developments by our looking at opportunities for resourcing or assisting these new innovative entrepreneurial players. That is going to be very critical. We would strongly recommend there be some programming in place for that sector.

The second would be to ensure that we can develop environmentally friendly renewable technologies, which had very little space and resources in Growing Forward 1. These should be given more space and resources in Growing Forward 2. We could cite the example of Ontario where they're doing a lot of work on automobile replacement parts from bioresource material. I think this would be an excellent way of adding more.

Then we would want there to be a very good look at what our market opportunities are and the products that those organizations need. A good example would be the pulse work where biofortification is used to add nutrients to pulses through crop development—not GE methods, but through standard crop breeding—to provide excellent marketing of these products to Asia, where there are deficiencies of a lot of micronutrients.

So we should really build on key strategies that make Canada competitive.

Mr. Ben Lobb: Along the way, we had the AgriFlex program, in which groups like yours, no doubt, would have fully participated.

The other thing, when we're talking about some of these new innovations through biomass or bio-whatever, is venture capital. The capitalization of a lot of these projects is an impediment to anything.

Would you like to see some sort of a program in Growing Forward 2, or help to continue, as you said, to commercialize these ideas?

Dr. Wilfred Keller: We would like to see something in Growing Forward 2, or perhaps in some partnership with whatever happens with the R and D panel report from yesterday, because there's going to be a lot of emphasis on R and D capacity-building in the private sector. That would allow us to get over that valley, wherein knowledge generated by many public laboratories is picked up by entrepreneurial companies that don't then have the resources and financial capacity to take it to the stage where venture capitalists and banks and so forth take over.

So I think it's very important for Growing Forward 2 to be aware of that need, particularly for emerging opportunities in food products and renewable products.

Mr. Ben Lobb: Thanks. You have a lot of good ideas there.

The Chair: Thank you. Your time has expired.

We'll now move to Mr. Eyking for five minutes.

Hon. Mark Eyking: Thank you, Chair.

I thank the guests for coming, especially my neighbours from P.E. I. I'm on the neighbouring island of Cape Breton, where we can see you on a clear day.

I am concerned about the genetically modified fish, but that's not what my question is about. I'm concerned that if they get loose, they're going to come over to our island, because the Atlantic wild salmon is very important to us.

Our committee travelled to P.E.I. and I know a lot of farmers there. I was hoping that the salmon would stay GMO-free, not because I'm against GMOs totally. I'm looking more at the market, and I see P.E.I. as being at a bit of a disadvantage, because of the transportation and input and selling costs, because you're in a bit of a remote area. But being on an island like that, I think you have a great opportunity to control how your food is being produced.

You're sitting right next to a very large market, North America really, and you have a port there in Charlottetown. You could be shipping more organic and GMO-free product, or whatever, to the European market.

We visited your killing plant, and it does quite a job there. With all the concerns, especially in the U.S., there is not only a move towards organic food but also towards a market for beef that does not have hormones in it. There's an interest now in grass-fed beef. I see all these opportunities that P.E.I. could have with those big markets, but also from looking at more of a niche market.

I don't know whether or not they'll ever switch over or whether organic potatoes would be the answer, but I definitely see the opportunity with grass-fed beef. Grass grows very well. You don't have to irrigate in P.E.I. and I see that plant there. In the future you'll see on the market shelves of Loblaws and Walmart this grass-fed beef, because people will go for it.

So how do you make that happen? I guess you people would say that you failed in that first round of trying to be GMO-free. Does it have to be provincially led by your own government? Can the federal government get involved a bit, or should we have programs that are going to enhance...? And there I just look at the grass-fed beef, because on our farm we have grass-fed beef and we ship it to your plant, but we just don't get the money for it. We get less money than they get for a steer that's produced out west.

How can we get around that? How should the federal government be encouraging and helping the farmers? Is it on the marketing side? Is it on the production side? Is it classification? Should there be more people going on trade missions?

I see great potential in P.E.I. that way, because your isolation could give you an advantage. Could you comment on that? How can the federal government help you more?

• (1705)

Mr. Leo Broderick: I'll take a couple of minutes, and then Mary will speak.

We share exactly your sentiment and you know, P.E.I. actually was GMO-free for one day. The legislative committee met six years ago. They had made the decision based on what the people of Prince Edward Island... And I must say there were presentations to the legislative committee from all over the world. It was the largest legislative hearing in the history of the province. It hasn't been matched since. It demonstrated clearly that people were thinking the way you were thinking, that this has a huge potential impact on the environment, for health, and for markets, for all foods in Prince Edward Island including beef. Monsanto came in overnight, met with two of the leading members of the government, and by the next afternoon the decision was taken that Prince Edward Island would not be a GMO-free province.

We're keeping up the pressure, but local elected politicians, with the exception of one or two, do not share our view for the province. It's foolhardy. They're now developing soybeans, and coexistence in soybeans is an impossibility, but the market is Asia. They're sending out the GMO-free ones. There's a huge market. In the wintertime, the others are being fed to your wonderful beef and other animals that will be contaminated.

So I think the federal government, particularly Agriculture Canada, must listen to many natural and organic farmers in this country. And Prince Edward Island is precisely the place to begin a huge new experiment in growing food that's safe, free from pesticides, and free from chemical fertilizers, so that we can have beef and other products that are free of genetically modified organisms.

• (1710)

Hon. Mark Eyking: But it has to be market-driven.

Mr. Leo Broderick: It will be market-driven, because people will want that kind of food. It's not just for those who can afford it; we're looking for a policy on food sovereignty for the province that will give everyone equal access to good, safe food, regardless of the money in his or her pocket. We're in a huge position to do that on Prince Edward Island, as well as to meet the demands of the market.

Mary, go ahead.

The Chair: No, your time has expired, Mr. Eyking. But you can come back to it.

Mr. Zimmer.

Mr. Bob Zimmer: I want to follow up on my colleague Ben Lobb's question to you earlier. You mentioned car parts and different things like that as a good story, and I wanted you to expand on that and to explain what you meant.

Dr. Wilfred Keller: For automobile replacement parts, headrests, and those sorts of things, fibres from crops such as flax and hemp make excellent biocomposites that are durable, light, and environmentally friendly. Ontario has a partnership with the National Research Council and the automobile manufacturing groups to look at how we can develop and use more of these.

The Ontario Agri-Food Technologies Incorporated group is strongly promoting the use of these natural-fibre products in making everything from storage boxes to automobile parts.

The use of vegetable oils to make polyurethane foams for headrests, dashboards, and so forth is another big area. There's a large company in Ontario that's looking at using these natural products.

Of course, polymers and coating agents produced from oils, either from linseed or rapeseed, have long been used as bio-renewable resources, and there's growing interest in revisiting these resources and expanding their use.

Flax or linseed oil is used in many places for driveway coatings. In paints, there's a special flax-derived product that prevents graffiti artists from spraying on walls.

So there is a wide range of interesting, environmental products and many provinces are actively involved. Certainly, Manitoba and Ontario are actively involved in this area.

Mr. Bob Zimmer: I have a question for Mary Boyd and Leo Broderick.

I want to know a little more about your association, the P.E.I. Health Coalition, and if you're affiliated with any bigger associations in Canada.

Ms. Mary Boyd: As the P.E.I. Health Coalition, we're a coalition of many groups, including community, union, and health organizations. For instance, we are part of the Canadian Health Coalition.

Mr. Bob Zimmer: Are you also affiliated with a union in Canada?

Ms. Mary Boyd: At the local level we are, with the Public Service Alliance of Canada, and CUPE, the provincial union of workers, the federation of labour, and the nurses' union.

Mr. Bob Zimmer: We did some quick research and I noticed an affiliation with the Canadian Autoworkers Union. You failed to mention that.

Ms. Mary Boyd: We don't have a direct affiliation with them in P.E.I., because it is a small group on the island, but maybe we'll look into having more of an affiliation with them.

Mr. Bob Zimmer: Actually, I just Googled it and what came up was the Canadian Autoworkers Union web page with your names on it. So I guess you are affiliated with them and you just didn't know it.

Ms. Mary Boyd: Oh. It would be on the same wavelength.

Mr. Leo Broderick: We're affiliated with them.

I'm with the Council of Canadians.

Mr. Bob Zimmer: Wilfred, you mentioned there are a lot of good ideas coming on stream. Are there any examples of ideas that are already being used in the industry, in car parts, for instance? Is there something that's being used today?

Dr. Wilfred Keller: With replacement parts and in the area of fuels, there are companies that are manufacturing and selling oilseed products as asphalt-removing agents. There's a company called Milligan Bio-Tech in Saskatchewan that uses low-grade frozen canola seed to make these products. They have penetrating or rust-removing oil. That's one example where this is already actively in play.

• (1715)

Mr. Bob Zimmer: I think those are good stories that we like to hear about for expanding those markets for agriculture. Thank you.

Dr. Wilfred Keller: I might add that science and its development are very important. It goes back to the Green Revolution when people felt India would need to be abandoned and that hundreds of

millions of people were going to starve. But in fact, science did a major positive thing for society by developing new higher yielding crops. We need to consider that the GM crops there are tested and safe. We should be careful to remember that there are only three genetically modified crops in Canada and that they are safe. They have been grown for close to 20 years in many cases.

One of the best studies is what the canola producers themselves did in Western Canada by looking at the value of this technology. It resulted in saving a lot of fuel. The better crop rotation resulted in greatly reduced erosion. Capacity yields and income for farmers increased. The farmers in Western Canada were never forced to grow a GM canola; they selected it very quickly because it provided a benefit for them.

We need to be very careful when we make statements about these things being unsafe. They are safe. We need to make every effort for coexistence. I agree that we certainly want to put the best tools in place and that organic and conventional and other crops can coexist. We have a wonderful pulse industry that has no GM products at all. I'm not sure that making a jurisdiction GM-free is logical, because then you'd have to eliminate insulin and cheese, as they are GM products.

Those are just some of my thoughts.

The Chair: Thank you.

We'll move to Mr. Rousseau for five minutes.

[*Translation*]

Mr. Jean Rousseau (Compton—Stanstead, NDP): Thank you very much, Mr. Chair.

My question is for Ms. Boyd and Mr. Broderick.

In a market where genetically engineered crops are becoming more and more common, what place should organic farming have in Growing Forward 2? In other words, what policies should we promote for the safety of organic crops, which are more and more in demand, especially in rural regions? What types of programs should we push for?

[*English*]

Ms. Mary Boyd: We need to put in place support and incentives for farmers to be able to enter agriculture and do organic farming. This is very important.

Where I live on Prince Edward Island, I'm surrounded by organic farms. They're small organic farms, mostly producing soybeans. People around there are gardening organically as well. It's amazing. At this time of the year when the crops are getting closed to being ripe, these farmers don't have to go looking for markets. They are being sought out for their crops. There's a big demand out there for organic crops, and consumers would take organic food any day.

The problem is that it's a struggle for the organic farmers. Their food prices tend to be on the higher side because they don't get enough help to grow it. To change that agricultural paradigm in that way, incentives and support are very important at this point. There is a great interest out there among the public. It's time to take advantage of that and to really supply the consumers with what they want.

Although our friend here has said that GM crops are safe, I beg to differ. They have never been proven safe, and many a good scientist will tell you that. There are a lot of uncertainties, a lot of risks. I don't think we should mislead Canadians into thinking that's not the case.

Mr. Leo Broderick: At both at the federal and provincial levels, we need a huge financial investment in a transition away from industrial agriculture—we have heavy industrial agriculture in the province and other parts of the country—to more natural organic agriculture.

I would say that what we have now in this country are agricultural positions that are unsustainable in the future, particularly in Prince Edward Island, where we depend totally on groundwater. In terms of its groundwater, much of Prince Edward Island is contaminated by chemical fertilizers and nitrates. In fact, there are hundreds and hundreds of people...and 50% of the islanders still receive water from individual wells. Many cannot use or drink their water. In fact, some don't even want to feed it to their animals.

In terms of the sustainability of industrial agriculture in Canada and around the world, there is very little future. Industrial agriculture is highly controlled by corporations. I think elected politicians need to step back and remove themselves from the influence of this huge corporate lobby. That's what we need to do.

In Prince Edward Island, our dream is that we have totally natural organic agriculture. We need policies that will transition farming to that, instead of simply giving lip service and talking occasionally about a few dollars going to it. There isn't sufficient funding for a move to organic farming in this country, in western Canada, Ontario, and the east. Particularly in areas like Prince Edward Island, there is no future for agriculture in the long term if we stick to more chemical fertilizers, more pesticides, more inputs. The lack of fossil fuels may take care of that, but organic agriculture is the future.

• (1720)

The Chair: You still have about a minute.

Mr. Jean Rousseau: I have a quick question for Mr. Keller.

Do you think that both of these types of agriculture, the industrialized and more organic agriculture, could co-exist in Canada?

Dr. Wilfred Keller: I think they can co-exist. We will need to develop research procedures and develop the knowledge and technologies to allow them to co-exist. Professor Van Acker talked about a major conference in Vancouver on co-existence. There will be a very good dialogue on that whole issue.

There are analytical techniques that can be used to identify low level presence. We need to work to have low level presence accepted, because through shipping or transportation, things will always get intermingled, even different organic strains. It is just a fact of life. And so we need to support what is happening with Agriculture Canada and the drive internationally for low level

tolerance and levels of presence of other components that cause no harm, and should allow trade and transportation of these products. That would certainly be one big step toward healthy co-existence.

The Chair: Thank you very much.

We'll now move to Mr. Hoback. You have the last five minutes.

Mr. Randy Hoback: Thank you, Chair.

I want to thank the witnesses for coming out this afternoon.

I must say I'm really shocked at the testimony today, because I'm hearing some very good testimony from Mr. Keller and a lot of hearsay and unproven comments from the other two colleagues.

When I listen to what you are proposing, the only cure you have is for the world population because you're going to starve the rest of the people. If you take this world and go straight to organics and do what you are suggesting, basically you might as well let the Prairies blow into grass. Basically you might as well take all the farmers on the Prairies and let them evaporate, because they won't make a living.

You're talking in anti-trade terms, but if we don't trade we'll never have an economy out west that's actually based on agriculture. You might have your nice farm in P.E.I. that you can look at across the valley, but you will not have a thriving agricultural sector coming out of western Canada. You will not feed the world with your policies, and that is where I am very disappointed here today, because we're looking forward to Growing Forward 2 and what policies we need to put in place. We have been talking with the organic sector to see what we can do to work with them on their concerns about co-existence, but you're not even talking about that. You're talking about the total opposite. You don't even want commercial agriculture to exist.

You think everybody is in the bag of big corporations. I have about 100 neighbours who would take you to task on that. I don't think you've been to a farm in western Canada. I don't think you've been to a farm in Saskatchewan. The way you are talking, you really don't understand how agriculture works.

Then I am confused. How did you get invited to this committee? You talked about agrifood as far as fish and fish eggs go. Again, the fisheries committee might be an appropriate place those points to come forward, but here in the agriculture committee where we are talking about the next generation of agricultural policy, no, it is not the appropriate place. I am really disappointed and frustrated to see that happen here today in the agriculture committee. I'd like to think we vet our witnesses a bit better.

So I am going to go to Mr. Keller, who seems to have the most reasonable approach to where we need to go forward in the next round of agriculture talks.

Mr. Keller, I want to really look at the biotech sector and what we need to do in support of it to see it move forward. What would be the strongest recommendations you would make if you were to prioritize them as one, two, and three?

•(1725)

Dr. Wilfred Keller: Thank you.

I do think that we need to ensure the capacity of agrifood research

Mr. Leo Broderick: [*Inaudible—Editor*]

Mr. Randy Hoback: Mr. Broderick, would you show me some respect? I'm an elected official here. I have every right to say what I say. I have my five minutes to talk.

Mr. Alex Atamanenko: Mr. Chair, a point of order.

Mr. Randy Hoback: He can show me some respect, because I've earned my respect.

Mr. Alex Atamanenko: A point of order.

The Chair: On a point of order, Mr. Atamanenko.

Mr. Alex Atamanenko: I think that respect goes both ways, Randy. There's no need to insult witnesses and show disrespect to them.

Mr. Randy Hoback: A point of order, Chair.

Mr. Alex Atamanenko: When they come here, they have a right to speak and we can ask them questions in a respectful way.

The Chair: Yes, but—

Mr. Randy Hoback: It's my five minutes.

The Chair: Yes. I didn't see what happened there that upset Mr. Hoback, because I was talking to the clerk. But—

Mr. Randy Hoback: Again, I'm looking for a constructive ideas to move forward. They have not brought forward one constructive idea. What they've done is talk about 1930s agriculture. I'm sorry, the 1930s are done and we've moved beyond them.

The Chair: Let's get back to Mr. Keller, if you could answer Mr. Hoback's question, please.

Thank you.

Dr. Wilfred Keller: I will raise three points.

The first is that Agriculture Canada and Canada generally should, as much as it can with Growing Forward 2 and other vehicles, emphasize the significance of the agrifood sector in Canadian society. It's playing a big role and will play a very big role in terms of our market capacity in Asia. So we need to have the most innovative tools in place, particularly the suggestion we made around innovation technology centres to reinforce the existing clusters we have. We cited the plant innovation centre for rapidly analyzing plants. I think that's important.

The second is that we are seeing an era of opportunity, with diversification, with major changes in wheat research at the National Research Council, for example, and with potential changes at the Wheat Board. This, in my mind, is a tremendous opportunity to start looking at new products and traits that we can focus on for emerging markets, because there are many emerging markets that want high-quality Canadian products.

And third, I'd add another level that we need make sure that the pipeline here works. Here I refer to regulatory streamlining, making every effort to work with this department on low-level presence, and to work with the international community to get that through, and to deal with bottlenecks of the type we have, which are unnecessary in terms of the research operations and which constrain our ability to innovate. We have to innovate to be competitive.

Those would be the three I would put forward.

Mr. Randy Hoback: And then, as we move forward and look at the new technologies that are coming forward and at the research that's happening, what can we do to make sure that this research hits the market? What do we need to do to support that research as it moves up through the chain and into the farmers' fields?

Dr. Wilfred Keller: I think it works on two levels, particularly if we're going to talk about crops. By way of example, we definitely need to increase the capacity to take knowledge from the laboratory through to the field. That means we need to improve our capabilities to undertake plant breeding in a modern sense and to develop new varieties. I'm not talking of GM here; I'm talking about our ability to work with genetics, to take it to the field using the tools that are available.

Genomics technologies are now widespread. The sequencing of the genome will be critical and will be common practice for crop improvement. We need to be in that space quickly to be able to deliver that knowledge to firms and into breeding programs, be they public or private.

And I think we really want to see the best level of investment and support we can have for small innovative companies. We have tremendous entrepreneurs in Canada. They need to be given a fair chance to take their products and ideas and to push them forward. So whatever can be done through Growing Forward 2, and through the creation of a new funding entity of the type that's recommended in the R and D panel report, would really put our companies on a fair plateau with what's going on internationally. We could see Canadian branded products all over the world, because we do make excellent food products.

•(1730)

The Chair: Thank you. Your time has expired. And that's the last of it.

I want to thank our witnesses for coming here today.

I'd just like to remind everybody that there is an in camera meeting in this room at 5:45 p.m., so anybody not connected to that should go.

Thanks very much.

See you at the committee on Thursday.

The meeting is adjourned.

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