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Chair

Mr. Larry Miller

Standing Committee on Agriculture and Agri-Food

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● (1530)

[*English*]

The Vice-Chair (Mr. Frank Valeriote (Guelph, Lib.)): I am going to call the meeting to order.

I want to welcome everyone, particularly our witnesses: Claude Miville, from the Canadian Swine Research and Development Cluster; JoAnne Buth, president of the Canola Council of Canada; Jim Brandle, chief executive officer of Vineland Research and Innovation Centre; and Sylvain Charlebois, associate dean at the University of Guelph.

Thank you for taking the time out of your busy schedules to join us today.

We are commencing today a study of Growing Forward 2. Our comments are intended to be within the confines, essentially, of that, although not completely restricted to that. We thought it important to continue with our study of the biotechnology industry, and for those reasons you've been invited to speak to us today.

You will each be given 10 minutes to speak. Following four presentations, we will begin questioning. We will have five-minute rounds and we'll be here for the full two hours, if we're all up to that.

I will start, if I might, with Mr. Miville from the Canadian Swine Research and Development Cluster.

Mr. Claude Miville (Chair, Canadian Swine Research and Development Cluster): Thank you very much, Mr. Chair.

If you don't mind, I will speak in French. It will be easier for those who have to do the translation.

First of all, I would like to thank you very much for this invitation.

[*Translation*]

As you mentioned, I represent the Canadian Swine Research and Development Cluster. That company is better known as Swine Innovation Porc.

The Canadian Swine Research and Development Cluster, or Swine Innovation Porc, is an organization sponsored by the Canadian Pork Council. The Canadian Pork Council represents all hog producers in Canada, 8,000 hog producers and 10 provincial associations of hog producers. The Canadian Pork Council is a member of the Canadian Pork Value Chain, Canada Pork International and the Canadian Swine Health Board.

These are all national organizations mandated, in one respect or another, to develop pork production and products in a manner respectful of the environment and society, as well as to establish an efficient pork value chain.

The objective and mission of Swine Innovation Porc, our company, is to facilitate research, technology transfer and commercialization initiatives designed to support our partners in the Canadian Pork Value Chain.

We are currently associated with some 100 Canadian researchers from 28 different organizations, research centres, institutions and universities. They are working with us on 14 research projects. We hope that the results of those projects will make significant contributions for the 8,000 Canadian hog producers and our partners in the value chain.

To carry out its mandate, Swine Innovation Porc has partnered with two regional organizations in Canada that conduct applied research and have developed very good expertise in technology transfer. On the one hand, we have the Centre de développement du porc du Québec Inc., which has a team of professionals who serve Quebec's pork value chain. It relies on its expertise in genetics, health and building and breeding management.

On the other hand, the other partner involved in Swine Innovation Porc's efforts is the Prairie Swine Centre, which is indirectly linked to the University of Saskatchewan. The Prairie Swine Centre conducts applied research and has developed very good expertise in technology transfer.

With this team, we have established a program of research projects to transfer findings to our producers.

Now I will present our four findings or messages in what little time we have.

The first message concerns innovation. The data confirm that agricultural research can produce very positive results in terms of economic drivers and economic activity. We are convinced of the importance of science and innovation and of the importance of investing in research.

We are also convinced that research must be balanced, that is to say that research must cover all aspects of production. It must address society's issues and the needs of consumers. We must ensure that we have a dynamic and efficient pork value chain. The strategic aspects of research must be balanced to enable an industry to develop and respond to the expectations of society, consumers and customers.

The second message is important. I must emphasize—and this is to your credit—that we are very satisfied with the strategic framework established for agriculture entitled Growing Forward, which is a support program for the initiatives of agri-science clusters. That program is in response to a request that we made of the Canadian government, and we are very pleased with it. With the funding obtained through the program, we have managed to involve a number of researchers. There are a lot of researchers in Canada, but research is somewhat scattered. We, the producers, or the users, the industry, need to get the best researchers in Canada. It's important to get them to work together. I believe we have been successful in that regard.

● (1535)

We have called upon 28 research institutions, universities and Agriculture Canada research centres for their expertise. One hundred researchers are collaborating with us and are active on 14 research projects. It is interesting to note that at least two universities are involved in all those research projects. That means that, even though certain researchers tend to work in isolation in certain cases, we have managed to have the others work in collaboration. Synergies have been created as a result of the collaboration among researchers from various universities and regions in Canada. We have managed to make our researchers work as a team. That is also the case of Agriculture Canada's research centres because eight of the 14 research projects involve at least one Agriculture Canada researcher together with one or more university researchers.

One other factor attests to this success. We have managed to interest other private partners in investing with us. Five provincial organizations of hog producers have invested in research projects, as well as 14 other private industry partners. We feel the objectives of this program have been achieved to the extent that we have managed to combine the strengths of everyone involved, regardless of where they are in Canada, and to interest various private partners.

There is a third message that I would like to add. In research, there is no point in generating new scientific knowledge if we are unable to transfer it quickly and efficiently to our partners. Research development serves no purpose if our competitors from other countries are faster than we are at using researching findings. This is also an important issue. For us, innovation means generating new knowledge through research, but also ensuring quick and efficient transfer. However, the expertise that can guarantee that kind of transfer is not the same. Researchers do not have it. It requires equally significant resources and the mobilization of people with other types of profiles. In addition, everyone has to work together because we must be able to recover that knowledge as quickly and effectively as possible. This is an important factor for us.

The final message directly concerns the strategic framework entitled Growing Forward 2. We believe the agri-scientific initiatives program is a success. It is therefore important to maintain continuity and to take advantage of the favourable circumstances established through this program. We must maintain the program's continuity because its first phase worked well. We must take advantage of favourable circumstances because the response was greater than the expectations that some of you might have had of the program. Interest has been expressed and people are mobilizing; consequently, it's worthwhile to take advantage of the circumstances.

To do this, we suggest that you significantly increase the funding allocated to this program. In addition, some flexibility should be afforded to enable these scientific clusters, which form the link between the industry and the various research centres of Agriculture Canada and the universities, to do more in future.

I won't take up any more of your time, and I will be pleased to answer your questions.

● (1540)

[*English*]

The Vice-Chair (Mr. Frank Valeriote): You have another minute.

Mr. Claude Miville: That's enough for me. We'll have more time for questions and answers.

Thank you very much.

The Vice-Chair (Mr. Frank Valeriote): Thank you, Mr. Miville. I appreciate it.

JoAnne Buth now.

Ms. JoAnne Buth (President, Canola Council of Canada): Good afternoon, and thank you very much for inviting the Canola Council of Canada to speak with you today about Agriculture and Agri-Food Canada's Growing Forward 2 policy framework.

Let me start by underscoring the importance that our industry attaches to strategic, forward-thinking agriculture policy development at the federal and provincial levels. These five-year reviews of strategic direction are important for a number of reasons, not the least of which is to keep up with the fast pace of change in the agriculture sector.

Canola itself is a good illustration of change and growth. Invented only in the 1970s here in Canada, canola is now Canada's most valuable crop. The Canola Council of Canada represents the canola value chain: growers, seed developers, crushers, and exporters.

Let me give you some basic numbers on our industry. Canola returns the highest value to farmers of any crop: in 2011, it was $5.6 billion of farm cash receipts. The industry supports 280,000 jobs across Canada, and the industry is worth $15.4 billion to the Canadian economy.

Innovation and investment is the backbone of our industry. Our motto is: “Innovative. Resilient. Determined to create superior value and a healthier world.” Constant innovation has led to significant improvements in seed development, production practices, stewardship, and the development of markets. In 2007, our industry announced a stretch goal of 15 million tonnes of sustained demand and production. In 2011, we will reach the 13-million-tonne mark. Through science, innovation, and investment, we are confident in reaching that goal, generating even greater returns to the Canadian economy.

There are two main themes identified in GF2: competitiveness and market growth, and adaptation and sustainability. The two drivers identified are infrastructure and innovation. We agree that these are useful lenses through which to assess the future policy framework direction.

Consistent with these themes, the canola sector has five specific priorities, not all of them related to science and innovation. I'd like to outline these to you, and then of course to be available for any questions you have.

Number one is science and innovation. Canola owes its success to innovation, from seed development through production practices to new uses and benefits of canola. Research, both private and public, is critical to innovation. Through the Canadian agri-science clusters program, the Canola Council is coordinating focused research in partnership with AAFC. The program is driven by producers, industry, and researchers, who collectively determine the priorities and then implement the research plan.

While canola is a big crop in Canada, it is dwarfed by other competitive commodities in the international marketplace, like soybeans and palm. These industries are investing in innovation. We need to ensure a continued partnership between industry and government in Canada on research in order to stay competitive. Research needs to be industry-driven, supported by government, and we must make the most efficient use of resources, which is what the cluster program is all about.

In GF2, we think we can improve on this coordination role and build on our success. We need to continue research on the nutritional benefits of canola. We already have results on reducing the risk of cardiovascular disease. We need to continue our research on reducing inflammation in the body, improving the ability to manage diabetes, and the impact on metabolic syndrome. The results of this research will increase the value of canola, thereby increasing consumption, lowering health care costs, and increasing returns to growers.

Canola meal has the unique ability as an animal feed to increase milk production in dairy cows by one litre of milk per cow per day, on average. But we need research to find ways to improve the energy content of the meal to be able to increase the amount of canola meal that can be fed to swine and poultry.

Last, but definitely not least, we need to continue crop production research so we can increase yields, lower input costs, manage new diseases and insects, improve storage, and ensure growers will be sustainable. Most of this research is conducted at Agriculture and Agri-Food Canada research stations, which are important to our ongoing success as an industry.

● (1545)

Priority number two for us is science-based policies and regulation. Our industry depends on investments from companies that have wide choices on where to undertake research and product development. To attract this investment, we need a predictable, transparent, and encouraging regulatory environment.

The same is true when it comes to accessing markets. The best way to ensure that technical and non-tariff trade issues are not used as protectionist barriers is to ensure that they are based on sound science and that the rules of international trade respect this.

Priority number three is a continued partnership in international market development. One of the most successful programs delivered through the current Growing Forward framework is the agri-marketing program, which is a cost-shared approach to international market promotion.

Our producers and industry have worked closely and strategically with AAFC to promote canola in key markets identified by our board. The program has played a key role in helping lift canola oil's market share in the U.S. to 12%, making us the number two oil in the U.S. In fact, for every $1 invested in U.S. market development, we have seen an additional $1,000 of canola oil sales to the U.S. The program is also helping to promote canola meal in the U.S. and canola oil and its products in Mexico and India. We think we should build on this success by making sure that agriculture commodity promotion is a continued priority in GF2.

Number four is market access. Before we can promote canola in foreign markets, we need access. Today, high tariffs remain in some markets, but in addition to those, we face a wide range of non-tariff barriers. In the last year, for example, canola exports have been affected by concerns over imports of a crop disease to China, feed safety regulation in the U.S., and production sustainability standards in the U.S. and Europe. These are complex issues requiring expertise in science and technical knowledge, but also diplomacy and negotiation.

We applaud the establishment of the market access secretariat within AAFC. Their work, along with that of the Canadian Food Inspection Agency and DFAIT, and the support of Minister Ritz on market access, has helped our farmers and industry maintain important markets in the last years. Increasingly, sustainability is a key consideration in promotion and market access. We are confident that canola will be grown in a sustainable fashion even as we increase production levels. We support having sustainability as a key pillar of Growing Forward 2.

Going forward, we recommend that the government implement a cost-shared program like agri-marketing, but focused on market access, which would feature a close, strategic partnership among farmers, industry, and government to maintain and build market access.

Number five, last but not least, is people. The canola industry needs the expertise and commitment of government staff in AAFC, DFAIT, the trade commissioner service, and the CFIA, as well as other departments. These people are important in terms of research and innovation, but also, many issues in international trade can only be resolved government to government. We encourage the government to support research and international efforts by supporting current staff in these departments and, when required, training new people to take their place.

Thank you for your time. I look forward to further discussion.

● (1550)

The Vice-Chair (Mr. Frank Valeriote): Thank you, Ms. Buth.

Mr. Brandle.

Dr. Jim Brandle (Chief Executive Officer, Vineland Research and Innovation Centre): Thank you very much, Mr. Chair, and thanks to the members for their interest and their invitation.

I'm here to speak for innovation, and I'm also here to speak for change. Since I wanted to talk about the future, I thought I would focus a bit on the past. If we think about agriculture, we should think that 10,000 years ago agriculture itself was an innovation. Over those 10,000 years, those innovations have sustained us as a species, and we're going to need innovation for another 10,000 years if we're going to be sustained.

At that point I start to think about what's the underlying philosophy of our innovation system here in this country, and I think to the Experimental Farm Stations Act of 1886 that set in motion the creation of the system we have today, to help the country transition from the fur trade to food production, to help all those settlers feed themselves through the winter. It was necessarily a paternalistic system in which new Canadians needed their hands held and they needed to be told what to do.

Obviously, times have changed, and we see very sophisticated innovation, structures, and pipelines, like the one on the Canola Council, but they don't exist everywhere in agriculture. I would wonder again about that act and if there isn't a new way forward. Although I wouldn't argue that it stands in our way, it certainly doesn't lead us into the future. I think we need to do innovation differently. Where we suffer right now is that we take too long. The public system of innovation takes forever. We have product cycles that are three years long, and we have an innovation system that takes 15 years to build. It doesn't work anymore. We have to innovate faster. So it's a very critical piece.

At the end of the day, I speak for horticulture largely. That's our area of interest. Horticulture is a $5.2 billion piece of Canada's agriculture economy. Horticulture is health and nutrition, exercise and healthy lifestyles, so it's fruits and vegetables, flowers and trees, and all those good things, and a lot of value added. It's very important for us. I think it's a place where we're losing ground, where you think about food sovereignty and you think about the importance of that. I don't think we want to get to the place in Canada where we can't grow our own apples anymore because we've lost the ability to do it; we've missed a generation.

That doesn't mean we have to put walls up to protect ourselves. We simply need to be better; we need to innovate faster. We need to have the right apple at the right price. How do we do that? We have to connect everybody together.

When I first came to Vineland—it was only four years ago; I worked a long time for Agriculture Canada and was challenged by this idea. When I started I was told that private sector research was right and public sector research was wrong. My job was then to go to the public sector and ask them for help. Anyway, I wasn't that receptive, as you could imagine, so I thought about that. I thought it was a false choice. It's not an either/or. The real truth is this: the private sector commercializes research really well and the public sector does research really well. So why not create an organization that does both? Out of that we created Vineland.

Vineland is a unique construct. We're an independent, not-for-profit organization, dedicated to research and innovation in horticulture. We're stakeholder driven. We're uniquely Canadian. What do we do in Canada when we have a level of public support here and a level of need or interest up here? We create not-for-profits. They run our minor soccer associations, they run our Canadian Diabetes Association, and the list goes on. That's how we solve problems.

With that you get stakeholder focus, not a single stakeholder but in this case a whole value chain. We work for the whole industry, and it goes all the way through to consumers. Those people really matter. What do people want, and what can we give them and how can we get it to them?

Our whole piece is really again to create this new system, to move from the old isolation model of science, where it's an individual researcher and you have to work really hard to lever them together into groups who work on their own, to a new connection model. I think I told Sylvain today that how we make our 60 people at Vineland into 6,000...you do it with partnerships. Through the cluster program, for example, we can reach all the way across the country, all the way to Kwantlen College in Langley, B.C., to Memorial University in Newfoundland to solve problems for our industry. So it's a great program and a great way to bring people together.

As far as a couple of reference experiences go, I have two things. Again, bringing organizations together.... The private sector is a key piece in this, because research organizations and producers...we do not do sales, marketing, service, or any of those things. You have to have everyone together in the whole value chain to make this work and they need to be part of the project, right from the beginning. Innovation is a pipeline, right? Your partners create the aperture. You want the best possible partners and the biggest possible pipe so you can move as much through as possible.

● (1555)

We work, for example, with Campbell's Soup, creating healthy mushrooms. Campbell's Soup is into positive nutrition. Campbell's Soup feeds a lot of people. They have enormous market penetration. If you want to shift the health status of the country, maybe you could get Campbell's Soup to feed people healthier foods. That's it: feeding diversity and recognizing opportunities.

Canada has changed in the last 50 years and you just need to look across the country to realize it. We get 1.1 million immigrants every five years. They mainly come to Montreal, Toronto, and Vancouver. They're mainly Chinese, Indian, Filipino, and Afro-Caribbean. For all of the time that they've been coming to Canada, they don't get the vegetables they want. So we feed them imported vegetables to the tune of hundreds of millions of dollars per year. All we've tried to do is to teach them to eat turnips and they don't like them.

So we launched a project, a very simple thing. We went out and asked them what they wanted. Out of that comes a list and out of that list comes an experiment. We can grow many of these vegetables. Certainly, in southern Ontario we have a wonderful climate. We have a huge market just across the lake from where we are and it all works, but you have to bring together the people who want to buy those things. You have to understand what they want. You need grocery retail; you need grocery distribution; you need science; and you need farmers. What happens? In two years, you have vegetables in the grocery stores. It doesn't fall into the hamster wheel of basic research. That runs for a long time before things come out.

I'll finish with a few things that I think are important. I've seen some of them in the Growing Forward strategy.

Consider investing in sector and subsector strategies. It's difficult when you're trying to work with producer organizations or with an industry if they don't know where they want to be. I think it's an important part of the program that those things become virtually a requirement. If you don't have a strategy, I wouldn't make the investment. You want to know where people can go. The greenhouse vegetable growers are a good example. They grow greenhouse vegetables for only nine months of the year, and they want to grow greenhouse vegetables for 12 months of the year. That's a simple strategy, and when you're a researcher you can immediately start to solve that problem, because you know what the issues are. It's energy, light, and varieties, and boom, you're working away.

Insist on innovation across the value table. Don't suggest it, but insist that if you can't see right to the end, why would you do it?

Foster better productivity. In horticulture, labour costs are very high. We mainly generate jobs that no one wants. We need to automate. I think we need to focus on the strength we have in our economy and move it into agriculture.

We have to focus on innovating faster. It's a simple thing: faster is the new fast. We have to catch up with everybody else; the world is passing us by.

Help build a new innovation system. The old system is fragmented, particularly in the area where I work. As it's contracted down from over 1,000 scientists to just over 400, there are great gaps and pockets. You can see that across the board, whether it's in universities, the government research system, or extension systems. How do we fix that? We need a new system. We need a stakeholder-focused system, one that's all about connecting those pieces together.

Then pay what it costs. That's a problem with an organization like ours: everyone wants to lever everybody else in the research business. Well, we're not leverable. If you want new organizations and new focused organizations, you have to pay what it costs.

With that I'll finish my talk. Thank you.

The Vice-Chair (Mr. Frank Valeriote): Thank you, Mr. Brandle.

Dr. Charlebois.

Dr. Sylvain Charlebois (Associate Dean of Research and Graduate Studies, College of Management and Economics, University of Guelph, As an Individual): Thank you, Mr. Chair.

I want to thank the committee for the opportunity to speak today. So far, I'm quite pleased with the comments of my colleagues. I think we're in for a nice discussion afterwards.

Nationally and internationally, the food landscape is changing fast. Food security is a critical issue, not just for emerging markets but for a growing number of Canadians who are food insecure. Many around the world, including many Canadians, will live with a fixed income in years to come. Food price increases and the global economic downturn will make the concept of eating three healthy meals a day challenging for a great number of people, unfortunately.

The sustainability of agricultural production is by no means assured. In particular, the conservation of precious soil and water resources remains threatened worldwide. Climate change is having a significant impact on global food systems. Understanding both ends of the food continuum will be crucial for moving forward, especially when considering innovation and biotechnologies.

Food authenticity and provenance have been eroded by globalizing demands that threaten developing and ancient food cultures as well as choice for consumers worldwide. Many consumers feel uneasy and are reacting to a phenomenon that is barely comprehensible.

That is why we have seen a severe granulation or fragmentation of market demand. Organics, fair trade products, the 100-mile diet, and the ethical treatment of animals have all been getting significant market traction in the last five to 10 years. And who can blame this varied response to consumer demands? The trust between the food industry and consumers is slowly eroding in the minds of many consumers. Innovation in agriculture in our country has for many years been supply focused. Consumers have been barely part of the systemic equation when evaluating risks and perceptions.

Biotechnology, particularly the introduction of GMOs to our plates in the 1990s, is one of many examples in Canada. For years the biotechnology industry was obsessed with the idea of selling genetically modified seeds to farmers, without educating the consumers. We should have done things the other way around. We have no evidence that suggests that food with genetically engineered ingredients is a significant risk to the health of Canadians, but many believe it is so.

Innovation should also mean public awareness and education, and I believe universities, governments, and industry jointly have a role to play. As such, Growing Forward 2 should entice universities, governments, and industry to do the following things.

First, encourage partners, stakeholders, and communities to create a true relationship between industry and consumers—those who buy food in the end.

Second, develop a unique functional portal to food intelligence resources and research networks that would include farmers and consumers and allow them to better understand and appreciate longitudinal risks.

Third, leverage public engagement with intellectual property in our country and truly celebrate innovation and we should get a full understanding of what innovation means and what intellectual property means. As Canadians, we should embrace new biotechnology's intellectual property. As a nation, we currently don't value intellectual property, especially in agriculture and food, I'm afraid.

● (1600)

Significant changes in sources of research and development funding, in opportunities in science, in intellectual property rights, and in new technologies have been occurring since the 1990s. Some have large social impacts. As mentioned before, having encountered consumer resistance we need to look seriously at public-private sector linkages and their importance in generating value for agriculture, food, and research and development. A clear value proposition should be defined to allow consumers to embrace, value, and celebrate innovation and intellectual property generated in our country.

Canada is recognized as a nation that can design and create widgets, but we're not particularly good at selling widgets; that really seems to be the problem for us. Without this, the proper buy-in from consumers and global challenges in agriculture that will require innovative biotechnologies are going to be difficult to address efficiently and appropriately.

Thank you, Mr. Chair.

● (1605)

The Vice-Chair (Mr. Frank Valeriote): You have another four minutes, but that's great.

Dr. Sylvain Charlebois: I'm looking forward to a discussion with the committee.

The Vice-Chair (Mr. Frank Valeriote): So am I.

Those were extremely enriching and enlightening presentations. We're very pleased.

We'll now start our questioning, first with Ms. Papillon.

[*Translation*]

Ms. Annick Papillon (Québec, NDP): First of all, I would like to thank you for coming. Your comments were very interesting in all respects.

We've talked a lot about the importance of investing in innovation and research, in particular. We've also talked about this problem that is not exclusive to agriculture, the issue of the transfer of knowledge to produce results, as Mr. Miville explained.

I was wondering whether each of you were considering any courses of action to enable us to invest in knowledge that would produce results more quickly.

Perhaps we could start with Mr. Miville.

Mr. Claude Miville: With regard to courses of action, it is important that the industry be able to mobilize on the basis of clear objectives. We therefore need to establish strategic planning and to determine where we want to go. We have to mobilize researchers to make the breakthroughs we need.

The industry is mobilized, but we have to focus on the type of research findings because research findings are not transferred in the same way. If you develop a new vaccine or animal feed product, intellectual property is involved and royalties are paid. A contract is signed and a licence is granted. This type of transfer can be done quickly, if everything in the area of intellectual property is clear and the approval mechanisms and regulations facilitate matters.

There are other types of innovations that do not immediately generate marketable benefits for a seller of inputs or products. The strategies in that instance are different.

Consequently, from the moment we agree on a research orientation or on the findings we want to reach, we must immediately establish our transfer strategies to ensure we recover them to the maximum degree.

There's no single answer for that. However, partners have to be mobilized. We need people around the table who will be able to generate that knowledge—the scientists—and also people who know how to transfer it quickly and who know the tools we need.

That can only be done if information is shared within the context of a structure, if the communication among the various partners is good and if people are seated around the same table.

That, I believe, is what we're trying to do with the scientific cluster approach. It facilitates research.

Ms. Annick Papillon: I'm going to pick up on that. I'd like you to tell me about the strategic framework entitled Growing Forward. You seemed to say it was very good for you. However, do you have any minor criticisms to make?

Mr. Claude Miville: The criticisms we would like to state concern all the new programs that are implemented, because the standards and rules have to be learned. That comes with time. The results we've managed to achieve and the potential this tool offers are what count above all. There are no real criticisms on the mechanics as such. I'm convinced that minor adjustments will be made as a result of the experience. The important thing is for us to take advantage of the momentum. There has been a quite interesting degree of adherence, of sharing. We've put the Centre de développement du porc du Québec Inc. in touch with the Prairie Swine Centre. These two organizations realized that they were complementary and were reinforcing one another. That's what has to be emphasized: we don't know each other.

Agriculture and Agri-Food Canada's researchers have access to research programs specific to Agriculture and Agri-Food Canada. However, with a scientific cluster, we don't fit conventional funding models. We're getting these people to think differently and to share information. We're looking for solutions, which means that a number of stakeholders are meeting around a single table for that purpose.

In short, the program I mentioned to you has potential. To take maximum advantage of the momentum, we have to maintain continuity. However, we must have much more funding so that we can meet the demand that has been created.

● (1610)

Ms. Annick Papillon: That's very good. Thank you.

[*English*]

The Vice-Chair (Mr. Frank Valeriote): Your time is up at this point. Thank you.

Mr. Lemieux.

Mr. Pierre Lemieux (Glengarry—Prescott—Russell, CPC): First let me say thank you for your presence, particularly on short notice. The committee is always faced with the dilemma of wanting to get started with its public meetings, but the first meetings at least leave you, the invitees, with very short notice. I thank you for that.

This is a very important matter.

I had the privilege of attending the swine cluster board meeting less than a month ago. I had a chance to meet Claude and to partake in their discussions.

I like the comments you have made, that you have found the cluster type of format to be new, to be sure, but that there are many advantages, in that it seems to be integrating many different aspects of the science and innovation strength across the country so that there is less stove-piping and more collaborative efforts.

I wanted to ask this particularly. Perhaps, Claude, you might be able to elaborate on this. In terms of improvements for the future, you might be able to elaborate on a few of the things that you really like with regard to how things are operating now, and perhaps you also might be able to elaborate on some of the potential changes you would recommend as we are looking forward into Growing Forward 2.

Mr. Claude Miville: Thank you very much.

I would first suggest more flexibility in this program.

What is important for us, for the industry, is to develop a project or research portfolio with some very short-term research that we need to solve some specific issues. We also need a long-term vision so that we can do research, the results of which will be longer term.

We can have this flexibility. For example, a three-year program was in fact a five-year program because it took one year and more... one year to plan the program, and so on. The next phase will be five years. We think maybe it will be five years or seven years.

What would be interesting is when you sign an agreement with a cluster you could say, “You can use 60% or 75% of your funds on projects that are already very well defined.” In the course of a program, before two, three or four years, it would perhaps be much more efficient to be able to switch a part of these funds to do research on something new and very interesting should the opportunity come up.

The point is to have more flexibility between the clusters and also a bigger emphasis on the transfer, because we know it takes time to generate research results. It also takes time to be sure that we are efficient in using it. We have to use it in the fastest way we can, so with this kind of flexibility it could be easy to achieve. Finally, it could make better and more efficient use of the money that we want from Parliament, especially since it is public money. It is also private money. We have many private partners who invest with us in this.

● (1615)

Mr. Pierre Lemieux: Can you explain some of that to me? First of all, it underlines that there's a partnership between public and private interests and finances. But just explain to me how the cluster manages the money it receives. It receives public funding and it receives some private funding. You see a project that you like, which you would like to fund; it's a multi-year project because it's in science and innovation, or perhaps longer term. Is the project cost-shared right at the beginning, until its end? Are you able to say that your overall budget is a certain amount and you're going to allocate it that much money? Do you have any flexibility right now to say, for example, that in year three of the program something just came up and you want to fund that kind of research? Do you have that flexibility now?

Mr. Claude Miville: No. In fact, when we did our first exercise, we invited all the scientific community to submit proposals, and we received more than 50 proposals. Of those proposals, we chose 14 of them. We go through a science advisory body process, and those scientists who are not involved in the project told us that maybe this project is less interesting, or the risk is higher, or the benefits are less, and maybe we should do something else.

We submit all our requests for proposals, for projects, to AAFC, and our scientific advisory body told us that maybe we should do another request for proposals to add on some other specific project that could be more interesting. So we said to the scientific advisory body, “That's good, we really appreciate your comments, and maybe we'll try to do it”. But when we went to do this we were told, “No, I'm sorry, guys, you submitted a proposal with those 14 projects and you cannot do anything else”.

Mr. Pierre Lemieux: Was it because you used up all the funding?

The Vice-Chair (Mr. Frank Valeriote): I'm sorry, but your time is up, Mr. Lemieux.

I'm going to leave the chair to simply ask a few questions myself, and I'm going to ask Mr. Lobb to take the chair.

Do you mind if I just stay here and ask the question?

An hon. member: Yes, just stay there and ask your questions.

Mr. Alex Atamanenko (British Columbia Southern Interior, NDP): André will ask them in your place.

The Vice-Chair (Mr. Frank Valeriote): All right. Thank you.

I'm going to start at the other end asking questions. I've had some opportunities, as others on the committee have had, to go across Canada to research facilities. Over the summer I had opportunities to speak to many in Guelph, in the clusters and at the university. I'm acutely aware of the fact that there is some marvellous innovation and research going on, but a lot of our innovation is being exported. My concern is the commercialization, the turning of all these wonderful ideas into products and jobs, and their being sold here in Canada. We just lack the money to do that.

What came to my mind were things like flow-through shares and other incentives that the government might introduce to spark the industry and get it going. I'm wondering, Dr. Charlebois, if you could speak to us about that—commercialization.

Dr. Sylvain Charlebois: I don't necessarily think we lack the money; we just lack the will. If we do it right, we'll generate even more growth and wealth to support the industry. If we're able to connect supply and demand properly, we'll generate the growth we need to make our agricultural economy more prosperous.

Just going back to my comment about intellectual property, in Canada I don't think we actually understand what that means. I know that a few months ago PotashCorp had a hostile takeover bid from BHP Billiton, and the government at the time deemed that it was a strategic asset. But it was potash and it wasn't going to leave; it was going to stay here in Canada, whereas other companies have been bought out with licences. Right now, RIM, which is close to Guelph, has patents, and a lot of people are afraid that perhaps that knowledge can actually be bought out by another company elsewhere around the world. I don't think we actually appreciate the book value of what intellectual property is.

I do certainly agree with your comment on commercialization. We don't know how to market products in Canada. We try to always adopt a supply side of commercialization, whereas we need to connect both.

● (1620)

The Vice-Chair (Mr. Frank Valeriote): What do you see as the solution, then, to that commercialization?

Dr. Sylvain Charlebois: I think the solution is to replicate Vineland's model, but across the board, not only in horticulture. I've been to Vineland. I think it is a model that actually works, and it should be expanded.

The Vice-Chair (Mr. Frank Valeriote): Okay.

Mr. Brandle.

Dr. Jim Brandle: I agree.

The Vice-Chair (Mr. Frank Valeriote): There is an innovation centre in Guelph that started, and I know the many comments I've heard, for instance, from Dave Smardon at Bioenterprise.... And I don't mean to take issue with you, but people are afraid to invest. You're right, the money's there, but there seems not to be the incentive to invest or the models through which private people like myself and others would want the opportunity to invest in all of this great innovation.

I'm wondering, Mr. Brandle, if you could speak to that.

Dr. Jim Brandle: Again, I think success breeds success, of course. We have to bring confidence. You have to have systems in place that de-risk it in a way.

I think largely there's a lack of investment as well, just to speak to the amount of value that's trapped in the ivory tower. The Conference Board gives us a D in innovation, and that's because we're great at science and we're poor at translation, and that translation piece is all about a gap. There's no hand-off. So part of the deal in innovating faster is the stop and go problem.

I'm a basic scientist. I invent something. I write a manuscript, it gets published, and I go back to my laboratory. And there's nothing wrong with that. That's what that job is. But we don't have systems and organizations in place that take the hand-off, that are there effectively scouting for opportunities, and they're the folks who move it one level further. In many cases, that innovation isn't ready yet for commerce. It's not ready yet for investment.

So there are more steps in between, and therein lies the gap. If you're working in a straight public system where everyone's boat floats and you give things away, it's very easy. But to be strategic about innovation takes a lot more thought, and I think what we lack is organizations that sit as we do in this space between upstream research and the hand-off, either at the farm gate or the grocery store or into your fridge. So the piece that's missing in the system is connecting research with innovation.

Innovation is the act of doing something with a research outcome. It's invention taken to practice. So that part of it is the piece that I think we need to invest in most and where we need to get good. Where indeed we did have a system back in the 1880s that functioned very much that way, the whole pipeline existed. It still exists in many of our plant breeding programs, but it doesn't exist elsewhere.

The Vice-Chair (Mr. Frank Valeriote): Okay, thank you. My time has run out.

Mr. Zimmer.

Mr. Bob Zimmer (Prince George—Peace River, CPC): Yes, a question for Dr. Charlebois. You had mentioned your three items and you said “true relationship”. What do you mean by that?`

I have three parts to my question, so do you want to take all three?

Dr. Sylvain Charlebois: True relationship—relationship means understanding. Do farmers try to understand consumers more and more? But it's not enough. I've been meeting farmers around the country, I've been on panels, and the comments I get at times are quite backward looking.

We are in a market-driven economy. We operate within a global economy. That's a reality. We have to accept it. We have to define what is our competitive advantage as a nation when it comes to agriculture and food. I don't think we've actually had that discussion.

One thing I would suggest for Growing Forward 2 is to actually better define what that competitive advantage is for our nation. Are we going to have to pick and choose at some point? What are the industries that we want to nurture and support? I think we need to have a debate, because at some point we can't be good at everything.

Mr. Bob Zimmer: I understand now.

You also gave a negative...an example of what climate change has done to our food supply. I wanted to know if you had at least one or two examples of that.

● (1625)

Dr. Sylvain Charlebois: I didn't say negative; I just said changes.

Mr. Bob Zimmer: What effect would global climate change have on our food supply? Do you have one or two examples of that?

Dr. Sylvain Charlebois: Irrigation is certainly an obvious one. Out west, on the Prairies, obviously there are some water issues. Climate is a factor that has been affecting crops and yields over the last 10 or 20 years. That trend will continue.

Climate change does offer some opportunities as well. We'll have more and more land to grow fruit, vegetables, and wine. Different products are being developed right now because the climate is friendlier to those kinds of commodities. We couldn't develop them 50 years ago.

We need to consider how that will influence our country as a trade-focused country.

We do trade. The majority of our dollars are based on trade. We have to accept that. What can we sell abroad that would allow our farmers to make a good living? I suspect that in many different industries there are factors related to climate that can either help or not help their positioning.

Mr. Bob Zimmer: Do I still have some time?

The Vice-Chair (Mr. Frank Valeriote): Yes.

Dr. Sylvain Charlebois: I try to be as short as possible with my answers.

Mr. Bob Zimmer: I have a question for Dr. Brandle, the same question we talked about before. How do you see government, in our role here on committee, making that work better? You said there is a disconnect between the scientist and the farmer or the consumer.

Dr. Jim Brandle: Particularly the consumer.

Mr. Bob Zimmer: It's one thing to say this is a problem, but what would you suggest we do to make that better?

Dr. Jim Brandle: Given that you hold the purse strings, it's just a question of the way you structure programs. You need to insist on the connection. It's like insisting on a strategy: If you don't have a strategy, I don't think we can really fund your program; we don't know where you're going to go.

Within those programs, you say if you can't see a Canadian buying that product or an export market for it, or whatever it is, then you question why we do this. It need not be lip service, but real relationships all along the value chain. You do it by insisting it's an element of the program. You're going to fund it; you're going to have every piece put together so you can measure an outcome.

The Vice-Chair (Mr. Frank Valeriote): Time is up.

Mr. Atamanenko.

[*Translation*]

Mr. Alex Atamanenko: Good afternoon. Thank you for being with us today.

My first question is for Mr. Charlebois.

[*English*]

You mentioned food security and you mentioned GMOs, and as you probably know, I've done some work on this and a bit of research. You mentioned there's no evidence of a health risk to Canadians. At the same time, some of my research has found studies by, for example, Professor Séralini from France, who has done some research on Monsanto corn with rats and found some liver disorders. Apparently there were some court cases. Lately, apparently, he's got some access to information and found out that some of Monsanto's research was flawed.

A number of articles and a number of people are saying there isn't really any independent research. Often it is company-based and rubber-stamped by government.

Should we be using a precautionary principle? In other words, if there are studies like this popping up in parts of the world, shouldn't our authorities, together with universities and others, conduct truly independent studies to say once and for all that it's either good or it's bad?

My second question is about Enviropig, and I don't want to ramble too long because I also want to ask Dr. Brandle a question. There doesn't seem to be a consumer demand. There is some evidence that farmers might take a hit because of that. What studies have you done on health and the Enviropig?

● (1630)

Dr. Sylvain Charlebois: I'm not sure I understand the first question, but I'll do my best to respond.

Now, in terms of scientific research when it comes to GMOs specifically, there's still no hard evidence that would suggest that GMOs actually represent a risk to Canadian consumers. There have been all sorts of studies on both sides of the story suggesting otherwise. I've read some of them, and obviously you have. It doesn't mean that we shouldn't be transparent about it, but this goes back to my comment about basically catching consumers by surprise. When people were told, well, some of the products you eat come from cultivations that were genetically modified, all of a sudden we were talking about Frankenfoods and all of that. We shouldn't be surprised by that reaction.

The trans fats debate is the same thing. For 30 years we put trans fats into foods that consumers were buying without telling them what it was. It represented a health risk, in the end, so of course we came up with some harsh policies to get rid of that.

So it's always in reaction, but it's often supply-driven. I think we need to make sure that there's a better connection between the two so that we don't face that situation ever again.

One thing that's at risk is the trust of consumers. That's slowly eroding. We're doing some studies at Guelph. People trust our supply chain but less and less. Mad cow, Maple Leaf, trans fats, sodium—it goes on and on. The more we go through these sorts of situations, the more consumers will start really asking some hard questions that the industry, or government, may not be able to answer.

On the Enviropig specifically, I know the folks who are involved in the project, but I'm not specifically involved with the Enviropig issue, per se.

Claude, would you like to respond to the question?

Mr. Claude Miville: No. You know more than I do on this Enviropig.

Voices: Oh, oh!

Mr. Claude Miville: You're at the University of Guelph.

Mr. Alex Atamanenko: Unfortunately, gentlemen, I only have five minutes, so maybe I'll move on to Mr. Brandle. Thank you, by the way.

Mr. Brandle, you mentioned that we'll lose a generation of apple farmers, and we need more innovation. Some of us were on a committee study last year where we went to the Okanagan in B.C. We talked to fruit growers. They told us that the reason we're losing a generation of farmers is that we don't have a market. We don't have a market because we're scrambling. We're doing all these new varieties. The Americans, however, are pumping money into their apple industry and throwing the apples across the border.

Our guys can't compete. It's as simple as that.

Last year, at the Federation of Agriculture banquet, I sat next to one of the directors. He's probably the largest broccoli producer in Ontario. He said that he has a good year when there's a drought in the States. He has a good year when they have a bad year.

Does trade enter this? How do we maintain access to markets for products like canola, and expand them, and at the same time protect those in the horticulture industry?

Dr. Jim Brandle: It may be that the underlying issue is more complex than just trade. Trade is an easy thing to point at, but still, is your production system the most razor-sharp, efficient system in the world? Do you have the right varieties? And when you made that decision about the variety, did you ask any apple consumers what they wanted? How do you know you have the right varieties if you never asked those questions?

So I think it's more complex than that. There's a whole system thing. It's not just trade. Trade is an issue, but when it comes to cost production and production efficiency and production ability, I think we're just as good as anybody. So that isn't it.

Do we have it right? Do we have the right apple at the right price? I'm not so sure....

Trade may be an element of it, but I think there are other elements in the system that are also problematic. People like to buy Canadian apples, local apples. That's actually worth money. We could charge more for our apples internally if they were marketed the right way. So I think it's a little more complicated than just trade.

But I'm no expert, either. This is just my instinct, and we know that instincts can be wrong sometimes.

The Vice-Chair (Mr. Frank Valeriote): Thank you, Mr. Brandle.

Mr. Payne.

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

To the witnesses, first, I'd like to thank all of you for coming out today. As my colleague indicated, you had only very short notice, so your presence is very much appreciated.

Monsieur Miville, I was interested in your comments about the clusters in research. In particular, you said you had 14 projects. I'm wondering if you could touch on a couple of those projects and tell us what they were, what success you had, what the issues were in terms of trying to make sure they moved forward and were successful, and then what inhibited those.

● (1635)

Mr. Claude Miville: Thank you very much.

I cannot say that it will be a success. What is important is that we selected those projects because we think that maybe some of those projects can be game changers. For example, one of these is an evolved automatic feeding system, an individual feeding system for pigs. It's already used for dairy production, but we think that with the technology we have, we could use it for swine production. If we succeed in this, we think we can lower the cost of production by at least $4 per hog. We think we can lower the level of phosphorus.

[*Translation*]

I'm going to continue in French, with your permission.

We think we can make significant environmental gains by reducing the levels of phosphorus and nitrogen excreted by hogs by 20% to 30%. That means that the environmental impact is major. However, this is a research project in which the findings will be known in three years. It's a project that can change the way we do things. The challenge we'll have, once feasibility has been demonstrated, will be to provide our farms with this equipment in order to start feeding hogs individually. So there are all the costs associated with that, but the economic gains are major. That's one example.

The other example concerns genomics. We know perfectly well that dazzling progress is being made in the field of genomics. Single nucleotide polymorphisms, SNPs, are parts of genes that can be identified on chips. We can now put 60,000 SNPs on a chip. These tools were not available 10 years ago. They have been developed for human medicine and are now used in milk. For pork, we believe that, if we can establish a proof of concept, we will be able to determine the quality of pork meat on a living animal based on the SNPs we find in its genes. It will therefore not be necessary to slaughter a hog to determine whether its meat is of high quality. That will enable us to identify hogs that have very high potential and meet quality standards.

These are quite important projects requiring efforts on everyone's part, but they are worth the risk. That is why we have accepted them and we hope the results will be positive. If they are, in three years, we will focus on commercialization or on ensuring that our producers are the first ones to use them.

[*English*]

The Vice-Chair (Mr. Frank Valeriote): You have another minute.

Mr. LaVar Payne: Thank you.

I find that very interesting.

I'm assuming that all of the pork producers are behind these particular projects you're working on.

[*Translation*]

Mr. Claude Miville: Yes, always. What is important is that we ask to have private partners associated with us. In these projects, provincial associations of hog producers, Canadian producers of pure-bred hogs, are taking part in the genetics project. The western, Ontario and Quebec associations are taking part in this effort, and the genetics companies are doing so as well.

There is enough potential for everyone to interest various private partners in the industry. That's what is becoming interesting.

● (1640)

[*English*]

The Vice-Chair (Mr. Frank Valeriote): Thank you.

We'll go to Madame Raynault.

[*Translation*]

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

Thank you for accepting our invitation. My question is for the president of the Canola Council of Canada.

I'd like to make an incidental comment. Having been a farmer myself, I know that farmers rely to a considerable degree on the weather, soil drainage and so on.

With regard to canola, earlier you said that it is Canada's most valuable crop and that there were considerable benefits involved in using it, even in animal feed. Consequently, if animals are well fed, we, who eat those animals, will be in better health.

Here's what concerns me. Since this will be a valuable crop affording considerable benefits, will we be invaded by canola crops from other countries? How will you inform the public about the benefits of canola? Will you indicate them on labels? What did you think of?

[*English*]

Ms. JoAnne Buth: Is the question related to how we promote the characteristics of meal?

We have promotion programs where we partner with the government. I mentioned the agri-marketing program where we have a partnership with the federal government. Through that partnership program, industry puts in 50% of the funds and the government puts in 50%. We do promotion activities in various markets where canola meal can go. We also have an oil promotion program. As an example, most of our canola meal is produced in Canada. We don't have a livestock industry large enough to consume all of it. A large percentage of it goes to the California dairy industry, where the dairy industry fully recognizes the value of canola, because of the increase in milk production with canola meal in the ration of a dairy cow.

We've done the same in Mexico. We haven't focused on the dairy industry but rather on the pork and the poultry industry. We've done this with seminars. We've also recently completed some fairly large-scale demonstration projects for canola meal in China. This is due to the increasing dairy industry in China. We're trying to link the benefits of canola meal back to the importing of Canadian canola seed into China. We have a fairly focused promotion program in partnership with the government. We also do some promotion in Canada.

[*Translation*]

Ms. Francine Raynault: That's fine, thank you.

Do I have any time left?

[*English*]

The Vice-Chair (Mr. Frank Valeriote): Yes.

[*Translation*]

Ms. Francine Raynault: My next question is for Mr. Brandle and it concerns our food sovereignty.

A little earlier you said we had to help the Campbell company of Canada obtain healthier, better food. How do you think we can help that company?

[*English*]

Dr. Jim Brandle: The way we plan on doing this is straightforward. Of course, there is not just one kind of mushroom. Even with white mushrooms, in the group of button mushrooms, there are literally tens of thousands of different types. The trick is simply to sort through all of that and find the most nutritious and use it as the base for soup or mushroom products. You can see the same concept in all sorts of things. Carrots vary significantly in their nutritional content. The question is, what's our advantage and what's the best carrot we should grow? We're looking for the one that's the most nutritious or the one that reacts best to the Canadian climate and becomes the most nutritious. It's a straightforward process: screening and understanding what's there and then using it as the base ingredient.

The Vice-Chair (Mr. Frank Valeriote): You have time for another short question.

[*Translation*]

Ms. Francine Raynault: Then I'm going to ask another question.

A little earlier, Mr. Charlebois said it was hard for people on fixed incomes or declining incomes to obtain healthy foods so they can stay healthy because pensions aren't indexed to the cost of living.

How could we help those people? What's your take on that?

● (1645)

Dr. Sylvain Charlebois: In fact, the food issue is multidimensional. That's what I'm trying to explain.

People who are finding it hard to make ends meet have to pay rent, a mortgage and all kinds of things.

As increasing numbers of people will be retiring in the next few years and we are having fewer and fewer children, the population supporting the population that is retired is declining. Consequently, the pyramid is gradually inverting.

Food will become an enormous issue in Canada. I know everyone is talking about food insecurity, but I believe it's the federal government's responsibility to consider a domestic national food security strategy as a result of those issues.

Food is a multidimensional issue.

[*English*]

The Vice-Chair (Mr. Frank Valeriote): Mr. Storseth.

Mr. Brian Storseth (Westlock—St. Paul, CPC): Thank you for recognizing me, Mr. Chair. I was afraid you forgot about me.

Thank you, ladies and gentlemen.

The Vice-Chair (Mr. Frank Valeriote): I just knocked your time down to three minutes.

Voices: Oh, oh!

Mr. Brian Storseth: There's partisanship from the chair.

I come from the Edmonton area, where we have the University of Alberta. There's a lot of biotech at the University of Alberta.

It seems that partnerships are a key when it comes to the advancement of biotechnology. Do you have any examples of industry teaming up with biotech, and some of the success stories there? Has the government been a positive or a negative in enhancing that relationship with industry?

Dr. Jim Brandle: I can think of quite a few.

I have a canola example. Is that okay?

Ms. JoAnne Buth: I'll correct you if you're wrong.

Dr. Jim Brandle: Okay. I was thinking about the marker consortium. There's a consortium to generate molecular markers for use in canola breeding. In fact, all of the companies participate in this consortium, and I believe Agriculture Canada generates the markers.

Ms. JoAnne Buth: Yes, it's related to managing diseases in canola. There are some devastating diseases, like blackleg. There is also some cooperative work on sclerotina with the Agriculture and Agri-Food station in Saskatoon, and also a partnership with the Plant Biotechnology Institute in Saskatoon, which is NRC.

They form industry consortiums. Each of the seed developers puts in a certain amount of funding, and then the markers for the SNPs are available, essentially to all of the companies. They're tools for biotechnology, so it increases the chances of success for the companies to incorporate that type of disease resistance into the canola varieties.

Mr. Brian Storseth: Canola has been a tremendous success story, particularly on the Prairies over the last several years.

Is this model being looked at in other areas of agriculture as well —agrifood?

Dr. Jim Brandle: You could almost argue that our feeding diversity efforts are like the early days of canola. You're trying to create crops where they didn't exist before. It's a bit of a discovery effort, but I think everyone would dream about that.

Ms. JoAnne Buth: I think one of the big successes about the canola industry has been the value chain. Jim has talked about that with the Vineland research centre.

Essentially what has driven the Canola Council of Canada and the canola industry is having growers at the same table as the seed developers, along with the crushers and the exporters. With that value chain sitting around the table, essentially crushers are selling to consumers. That's where the market comes from. They have an idea of what are going to be the market drivers. The seed developers are trying to develop varieties for the market, but also varieties for the growers, so it's that linkage.

Going back to an earlier comment in terms of how you get technology transferred, number one, it has to be focused on what that value is going to bring to the industry; and two, it's got to have an economic impact. No matter what you do, you need to put some type of an economic analysis against it so the industry downstream can evaluate whether or not there's going to be any demand for it. What's the point of doing research if there's not going to be the demand at the end of the day?

You can do basic research and blue-sky research, and that's fine, but when it comes to looking at applied research and very, very specific projects, you need to keep focused on the economic impact and the value. Otherwise, it's not going to be transferred; consumers aren't going to want it. I think it's fairly simple in terms of focus.

● (1650)

The Vice-Chair (Mr. Frank Valeriote): Dr. Charlebois, you wanted to take a crack at this?

Dr. Sylvain Charlebois: To quickly add to JoAnne's comment about research, I have the beauty of being a teacher, a researcher, but I'm also an associate dean. I manage over 100 researchers within my college. It's not always easy to influence research agendas within the college.

All the universities in Canada face the same reality. If we are to make these researchers more responsive to industry needs, we need to do two things: provide incentives to them—and that's not just money, but it can be funding for graduate students, anything that could help them get tenure or get promoted; and the other piece is to make them more accountable in some way.

At Guelph, we're keen on pursuing the initiative that would make researchers dealing with industry more accountable. One of the things we're trying to do is to design measurable, quantitative results: how you actually quantify performances down the road, and whether we are delivering what we promised to deliver to industry.

Mr. Brian Storseth: Thank you very much.

The Vice-Chair (Mr. Frank Valeriote): Thank you, Mr. Storseth.

Mr. Rousseau.

[*Translation*]

Mr. Jean Rousseau (Compton—Stanstead, NDP): Thank you for being here today.

My first question is for Mr. Charlebois.

You raised the multidimensional aspect of the food issue. In your opinion, should climate change, both the opportunities it affords and the problems it will be causing, be taken into consideration in the strategic planning of agricultural and agri-food research in Canada?

There are crop concentrations in various parts of Canada. There will be migrations; something will happen. There's too much water in Quebec in spring and so on. I'd like to hear your comments on that subject.

Dr. Sylvain Charlebois: Yes, definitely. One of the major problems is that people in the universities often see that the government operates in isolation. If a strategic plan or framework is to be developed that makes any sense in meeting the needs of the population, concepts such as human health have to be included. We're talking about wellness, the wellness of individuals. You also have to take into account demographic, socio-economic and climate changes. I don't mean just climate change: that's one factor among many.

As regards the multidimensional aspect of the issue, that includes a host of factors. It's the economy that troubles me, obviously. There's a lot of uncertainty at the present time. We are observing what is going in the United States, our main international trading partner, and in Europe. We're trying to find solutions and, in the meantime, there are people who don't have jobs. But those people have to be fed. All that will cause other problems that I think should be considered in the context of the strategic framework.

Mr. Jean Rousseau: You also said we couldn't be good in all fields. That moreover is an economic principle that is about two centuries old. Are there any choices that we should make among certain agricultural or agri-food sectors?

Dr. Sylvain Charlebois: Absolutely.

I'm really in favour of the value chain approach, the cluster approach. An unconditional value is attached to that. Quebec was the first province to use it. The federal government has in a way followed the Quebec model. Ultimately, that's what's happened, and I'm happy about that. I believe it was a good idea in the context of the first strategic framework entitled Growing Forward.

However, we can't please everyone, for two reasons. First, we can't afford to. Second, to be competitive and to rely on economic growth, we absolutely have to allocate the necessary resources for a value chain to develop. So, yes, we're going to have to make choices. We've seen that in the pork industry in Canada. Considerable sums have been invested, starting with Quebec, to maintain an industry that was nothing more or less than dead. It was being kept on artificial life support when tough decisions should have been made. I don't mean you should completely abolish the pork value chain, but we absolutely have to meet a demand. At the time, however, there was simply no more demand for pork at the price they wanted to charge.

As for the strategic framework entitled Growing Forward 2, I believe it is high time decisions were made. We have a lot of natural resources in Canada. It's a big country. So we have to deal with major logistical problems. As we have 34 million inhabitants, but this is one of the largest countries in the world, it is expensive to transport goods. We therefore have to establish economies of scale in production and transportation, but especially manage to develop value-added products across Canada.

● (1655)

[*English*]

The Vice-Chair (Mr. Frank Valeriote): You have 30 seconds.

Mr. Jean Rousseau: I have a last question for Mr. Brandle.

Mr. Charlebois talked about how the consumer is not very aware of GMOs. How do you think we should educate consumers about the effects or the non-effects? Every time you talk about GMOs, they think about DNA transformation and things like that, so how do you think we should educate consumers?

Dr. Jim Brandle: I think it's going to take a long time. It's a generational shift. I look into the suite of crops I have to work with, and I realize, particularly for fruits and vegetables, that there are major barriers. People are concerned. You eat fruits and vegetables because they're good for your health. Maybe they're worried that this process is bad for your health.

How do we have that conversation? It's difficult. Fear is a very strong emotion. How do you do that? You do that with slow and steady education.

I once heard a story, and whether or not it's true, it's still pretty good. It's about ice cubes. Of course, back in the day when freezers first came along, first of all there was a fridge, and they created the freezer on top. People would not eat the ice cubes out of those freezers because they weren't natural. It took some time for people to get over that. I think we're in the same situation. It's slow and steady.

For many of the major crops, of course, they're over that hump. Do people know yet? They understand a bit that corn, soybeans, and canola are genetically modified. They're relatively comfortable with that. They eat the products. Everyone's fine, so that's good. I hope the slow process will allow other crops to benefit from genetic modification, because again, if we have to feed 9.5 billion people in 2050, we can't do it with one arm behind our backs.

The Vice-Chair (Mr. Frank Valeriote): Thank you, Mr. Rousseau.

We'll go to Mr. Boughen.

Mr. Ray Boughen (Palliser, CPC): Thanks, Chair, and let me also add my voice of welcome to the panel for taking the time to share your thoughts with us this afternoon.

I have kind of a general question for the panel.

Agriculture now has a degree of profitability that hasn't been evident for a number of years. How do you see the industry continuing to grow and profit? What specific things do you see that should be addressed, and how will they be addressed so that at the end of the day there are a few more dollars in the jeans of the folks who are out on the farm?

Dr. Jim Brandle: It seems simple to me. This is a time to invest in innovation to get further ahead—even further ahead. What do we need most? We need more mechanization. We have to drive out costs. We need new products. I think that's the thing that has to be done now, particularly when times are good. It's easier.

Ms. JoAnne Buth: I think it's related to demand. We need to make sure that what we're producing, essentially, there is demand for, and we need to create demand. Yes, it's about production efficiencies, but at the same time, you can produce it efficiently, but if there's no demand for it, you're not getting paid for it.

The Vice-Chair (Mr. Frank Valeriote): Mr. Charlebois, do you want to say something?

Dr. Sylvain Charlebois: Innovation is really about selling something to someone who doesn't know he needs it but he does need it. That's really what innovation is, and I'm not convinced that agriculture in Canada has done a good job recognizing these opportunities over the last few years. We're particularly good at growing things very quickly and producing things, but without really understanding whether there's actually a marketing purpose to whatever we're growing faster and better and tastier.

I certainly agree with JoAnne's comment. We need to assess the marketability of anything we grow and do in agriculture and connect the two ends of the food continuum, as I was mentioning earlier.

The other thing we need to do within agriculture and food is nurture entrepreneurship. Lots of farmers out there have great ideas. At times I just don't feel that they're well supported or recognized as being entrepreneurs. Certainly universities would have a role to play in building or nurturing entrepreneurship within agriculture and food in Canada. Right now there are a lot of folks out there who are just building new products and ideas. They're thinking about certain things, but they're not at the point where they're willing to share all that much. They're not ready to go on *Dragons' Den* yet, unfortunately. We just need to push them enough so that they actually have the courage to move forward. And of course they need access to venture capital, which is always a big challenge in Canada. There's not a whole lot of venture capital out there. We need to make sure that these entrepreneurs have access to venture capital as much as possible.

● (1700)

Mr. Ray Boughen: Thank you.

[*Translation*]

Mr. Claude Miville: With your permission—

[*English*]

The Vice-Chair (Mr. Frank Valeriote): Go ahead.

[*Translation*]

Mr. Claude Miville: —I would nevertheless like to answer the question.

With regard to what you mentioned, I'm not concerned. I'm confident and I have every hope that businesses will manage to adjust to those changes. These are major changes, but there is a lot more coordination within the value chains, the national pork value chains and other value chains. People will start moving. Innovation will clearly be central to all that. The industry is changing, but people will meet that challenge. We must trust in the entrepreneurial abilities of individuals and groups. Facilitating those changes is the government's role.

In short, I fundamentally have every hope that those changes will occur.

[*English*]

Mr. Ray Boughen: Thanks, Chair.

The Vice-Chair (Mr. Frank Valeriote): Mr. Lobb.

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

Just to build on what Mr. Boughen asked in his first question—he asked if basically we could do things to help put more money in the pockets of farmers and farm producers. My question is, seeing as we're talking about Growing Forward 2 and we're talking about science and innovation, does what is there currently allow you folks to work with industry and the producers to do that, or are there areas we need to improve upon?

Generally, it sounds to me that, overall, the four of you are satisfied with the suite of programs. That's what I took away from today's discussion. But is there more we can do, and if so, what is it?

Dr. Jim Brandle: The one thing that comes to mind is to make certain that you don't create entitlements, and that when the next round of investment comes, it's based on the same merit the first round was based on. I think that's very critical, because you want to create some tension. All the scientists underneath, who are doing the projects, you can know their feet are held to the fire. So I think the organizations that are receiving the money shouldn't automatically get it, and that those programs and their plans need to be rock solid. They need to have delivered in the last round. I think this is very important, that you invest in success. I'd say that's a piece of advice from me, and I'm conflicted...I get the money. But I believe very strongly that you should make sure that happens.

The program itself is a great idea. It could be bigger. We could bring more people in as well, but of course as it sits now, I think you've done pretty well.

Mr. Ben Lobb: Okay.

Ms. JoAnne Buth: I think the program has been absolutely amazing. It's given us flexibility to take industry initiatives that Agriculture and Agri-Food Canada would never have looked at.

On the human nutrition trials and on the meal studies, the expertise is not within Agriculture Canada, so we have had to go to the universities—the University of Toronto and the Neutraceutical Centre at the U of M—and we even have one site located in the U.S. So it's been remarkable in terms of its flexibility.

I agree with Jim in terms of making sure there's good strong competition for the dollars going in.

I think the funding ratio should stay the same. Right now it's a 25:75 ratio. When you take a look at the research costs for some of these initiatives, they're substantial. And even though we're a large and profitable industry, it's very difficult for us to do human nutrition trials on our own, so that kind of partnership has been important.

● (1705)

[*Translation*]

Mr. Claude Miville: I've commented on the current program, which is very well defined and is achieving the established objectives.

It's the research capability in certain sectors that might trouble us in the medium term. The researchers we need today are not the researchers we needed 20 or 30 years ago. Research fields are changing very quickly, and even when we call upon researchers, we receive research proposals from well-established researchers.

In some cases, we have projects in research fields that are important for us. However, we're not getting a satisfactory response because no one has yet developed the required research expertise. Consequently, we also have to have a critical mass of researchers who can meet our needs.

The scientific clusters program currently does not address this issue. It simply makes it possible to work with the best researchers in the entire scientific community. However, there's an obligation to prepare the next generation of researchers.

[*English*]

Mr. Ben Lobb: Do I have time for a quick question?

The Vice-Chair (Mr. Frank Valeriote): Go ahead.

Mr. Ben Lobb: I have a specific question, Mr. Miville. It's to do with the pork industry.

I just wonder, for the pleasure of the committee...obviously there are some economic issues feeding $6 corn to $1.85 pork. That would be the best-case scenario some days. Is there a study or any research going on? I'm sure there is, and maybe you could tell the committee about conversion ratios that you're looking at right now through genetics or alternative feed stock to maybe improve the economics in the pork sector.

[*Translation*]

Mr. Claude Miville: Yes. In the last competition we held in the context of the scientific cluster, we noted seven or eight fields of expertise or strategic areas important for hog producers.

We are now thinking about our next strategic framework, about the directions research should take, and it's clear to us that hog feed will be important. The cost of hog feed represents more than half of production costs. We believe there are still gains to be made, if only through the use of new ingredients, feeds, etc.

We're relying on the scientific community to help us in this regard in an upcoming research competition. We believe there are definitely gains to be made.

[*English*]

The Vice-Chair (Mr. Frank Valeriote): Thank you.

We will now move to Mr. Atamanenko.

Mr. Alex Atamanenko: Thanks again, Mr. Chair.

I'm going to pursue a question I asked before. I will leave it open to anybody to answer. We talk about innovation, and somehow we say maybe we are not doing as well because we are not innovating enough. It's a fact—people can dispute it—that we have some of the best farmers in the world. We know there is land being plowed up in the Niagara peninsula because people aren't making money. Okanagan people are converting to grapes because they are not getting any money. Yet these are some of the most innovative people in the world. We know, apparently, that before NAFTA, there were in-season tariffs, and we had people making money in the horticulture sector. We know, at the same time, that we're trying to strike a deal with the European Union, which is very protectionist. They have a 0.5% quota on pork. I doubt very much they are going to increase that quota for our producers, whereas our supply management is 7.5%.

Here is a general question we all have to answer at some point in time: how do we make an industry such as horticulture profitable in Canada and at the same time continue to advance other sectors such as canola and other grain sectors or cattle in getting more markets? How can we as a country do that? We are a trading nation. We need to trade. At the same time, we can't have our farmers going out of work because they can't make any money.

This is a philosophical question. I would like to throw that open to anybody on the panel.

Thank you.

● (1710)

Dr. Jim Brandle: Do you want a philosophical answer?

If you think about the grape industry, in fact, the free trade agreement is what created the very successful industry we have now. The old industry disappeared and died, as it should have. A new one was born that was way better. People are going in to grapes because you can make buckets of money. The value you add on grapes that are turned into wine is huge. That's one slice of the pie.

In other crops, when I think of fruit trees—and I don't know the Okanagan as well as I know Niagara, but I see there was a failure to innovate. Our production systems are old and antiquated. Our labour cost is in some cases up to 60% of the cost of harvest. What needs to happen is you need to shift your production system to what looks like a hedge row, because you can automate and use much less labour. That has happened much too slowly.

I can't speak to the reasons why it went that way, but that's the situation. They see that now. We did a strategy with the tender fruit industry—that's pears, peaches, plums, and apples—and they know what their issues are. They are moving very quickly to fix them now.

The other thing is, there was a problem with value chain communication. They didn't really understand their customer very well. They didn't understand the fact that in horticulture, very particularly, people buy those things based on what they look like. That consumer preference piece is extremely important.

How do you speak to people about Niagara peaches or Okanagan peaches, to tell them about the value of that? We commoditized them, and people took them for granted. That part is being reversed as well. That's part of our relationship with the retail guys, who speak directly to consumers.

Mr. Alex Atamanenko: I'm just going to interrupt you for a second. Sorry, we only have a couple of minutes.

A couple of summers ago, our cherry growers in B.C. lost a pile of money. They lost a pile of money because all of a sudden we had cherries from Washington state being dumped by truckloads. Our cherry producers in B.C. could have fed all of western Canada. They are the best in the world. There is clearly something not right here. We need to fix it, but at the same time not at the expense of other agricultural sectors. Is there another solution rather than saying innovation, innovation, innovation? We are doing it, and yet people are losing money.

Dr. Jim Brandle: Go ahead, Sylvain. It's not a question that has an answer.

Dr. Sylvain Charlebois: At some point, farmers need to understand not only that the landscape is shifting but that it's always going to be shifting. Markets are going to become more volatile than ever. There is a new reality out there. As a trading nation, we have to accept the fact that when it comes to international commerce, we sell things and we buy things. It goes both ways. If we are willing to play the game, we have to accept that.

Now, where the government should play a role is in that realignment phase. Farmers will have to make decisions and do other things and grow new products for new markets. It takes time for farmers to become competitive. That's where governments should actually help and support farmers, when there is that critical phase of one to two years of realignment into a new industry, to capitalize on these opportunities. Then, at some point, industry will pick it up. That's how you generate innovative initiatives.

The Vice-Chair (Mr. Frank Valeriote): Thank you.

Mr. Lemieux.

Mr. Pierre Lemieux: Thanks, Chair.

I want to follow up on this theme of transitioning science or innovation into the marketplace. It's a two-part question.

First, do you think the government has a role to play in that? The fear, of course, is that the government picks winners and losers, like the government is supposed to somehow determine that this, this, and this is what we should invest in to try to transition into the marketplace, but not that.

Second, though, I need to ask this question at the same time. If you feel that the government has a role to play in helping to finance the transition of science and innovation into the marketplace, what are your thoughts on using some of your current allocation of research funding to do so? Would you be open to that or not? It's easy to say yes, the government should be involved, and we need more money, but what if I turned it around and said yes, the government is involved and how much of your current allocation would you want to devote to that? That's a very real and practical possibility.

Let me ask those two questions to people who would like to answer.

● (1715)

Dr. Sylvain Charlebois: The government shouldn't pick and choose winners and losers. The market should—big difference.

Mr. Pierre Lemieux: Yes, absolutely.

Dr. Sylvain Charlebois: There's a big difference, so whatever framework we decide to provide to ourselves needs to be flexible enough to allow the market or markets to dictate exactly where the industry should be going or ought to be going.

As I said earlier, innovation is really about selling to markets what they need without markets knowing. We have to be ahead of the game on that. It's similar to Apple. Steve Jobs just passed away yesterday, and it reminded everyone that innovation actually can create tremendous growth. Nobody really thought they needed an iPad, but they bought it—

A voice: That's true.

Dr. Sylvain Charlebois: —and in truckloads, right?

Dr. Jim Brandle: I can see one from here.

Dr. Sylvain Charlebois: Yes, exactly. This is what we should be doing in agriculture and food in the country.

To respond to your second question, when it comes to research, I can speak as a university administrator. It's always difficult to provide capacity to industry. As Mr. Miville was saying earlier, industry gets frustrated dealing with the universities because they can't get the proper knowledge. Well, what I would suggest to government with Growing Forward 2 is to provide incentives to universities to hire the right people to provide capacity to industry. That's what I would say.

Mr. Pierre Lemieux: Anyone else?

Dr. Jim Brandle: I have just a comment on the idea of allocating part of our budget to the transition between innovation or research and commercialization. I might even argue that it feels a bit harsh, but if I were you, I might require it; I think that you can't really have a project unless it's there, especially with what you're trying to accomplish with these programs.

It's a built-in. It has to be there. There's a certain allotment of money and you have to build it in. I think as well that you need to hold people accountable at the end of it for that transition. Because you know that much of it gets trapped, right? It gets stuck and doesn't go anywhere. I think you're on the right track. I'm sure there will be a discussion about who pays for it, but I think it's an absolute in terms of requirements.

The Vice-Chair (Mr. Frank Valeriote): Ms. Buth.

Ms. JoAnne Buth: I think it comes back to the strategy. If the strategy is sound and it has all the pieces in it, the transition is there. When you pull together the people who need to direct the research.... We do something different from what the swine centre does. We don't call for proposals. We go out and we find the people to do the research, and we know that they know what needs to be done, so our research has been very directed.

If you develop the strategy from start to finish, the transition is there, because you've already developed something that the market is going to need. We would not give up any of our money to let the government fund transition to the marketplace.

The Vice-Chair (Mr. Frank Valeriote): You have 30 seconds, Pierre.

Mr. Pierre Lemieux: Mr. Miville?

[*Translation*]

Mr. Claude Miville: The important thing for us is the final result. If we don't have a guarantee that the innovations will be useful or serve the industry and our members, that will produce nothing. We need an overall vision. We're concerned about the final result and about the use we can make of it. That goes without saying; we have to take the necessary steps to get there.

In some cases, we need expertise or new fields of expertise in research. If we don't get that, a mechanism could perhaps be used by Agriculture and Agri-Food Canada. I know that, for some time, you had as many as 600 researchers at Agriculture and Agri-Food Canada's research centres.

I believe that's already been done. There might be a way to revive the connections or arrangements with universities. Agriculture and Agri-Food Canada could partner with universities to put young researchers in situations in which we could develop critical masses of expertise.

We're concerned about renewing this research capability. We have to be very flexible and imaginative about the ways we'll use to facilitate this transition so that we can gain access to those researchers.

● (1720)

[*English*]

The Vice-Chair (Mr. Frank Valeriote): I'm going to take my five minutes again, if I can.

Dr. Charlebois, you mentioned the lack of venture capital—and this is really a spin-off from Mr. Lemieux's question about commercialization. How do you incent growth in the venture capital industry in Canada? I'm going back really to the idea of flow-through shares or whatever that might incent it.

Do any of you have any ideas?

Dr. Sylvain Charlebois: Venture capital is about risks, and I'm not sure I want the government to take on all the risks for these endeavours, but we need to figure out a way to better support these widget builders out there. There are many of them. There are many of them in agriculture and food. There are some great products being developed. Mustard is an example. Saskatchewan is one of the biggest exporters of mustard grains in the world, and we haven't figured out how to bottle it and actually sell it to market in a bottle at five times the price.

We have a project in Gravelbourg now. It's starting slowly, but it's not growing fast enough to build some interesting economies of scale. They need some venture capital in there. How do you get that? Well, I think we need to establish a framework that would allow a partnership between governments—provincial and federal—and industry and perhaps angel investors. There are tons of circles of angel investors across the country, and they aren't talking to each other. People tend to keep their cards close to their vests, and there's a reason for that, but at the same time I think the government should become the broker of all these parties to allow these projects to become reality.

The Vice-Chair (Mr. Frank Valeriote): I have another two and a half minutes.

I'm not sure who mentioned this earlier, but they talked about government needing to drive in some way or create the framework in which we could have a sustainable food industry, with food security. It sounds to me as though that has the makings of a national food strategy or policy.

Could I hear from any one of you about the need for that food policy or food strategy and what you think, in its basic form, would be in it?

Dr. Sylvain Charlebois: I'm personally involved with the Conference Board right now. You may be aware that Galen Weston of Loblaws is funding a good portion of this "food in Canada" policy that is being orchestrated by the Conference Board of Canada through the Centre for Food in Canada initiative. We've been working on this since last November, for less than a year now, and we meet three or four times a year.

I think there's some good work being done within the group. First of all, it's a large group, with over 35 stakeholders. Two of us around the table represent the University of Guelph. My main concern is that it's very much driven by political agendas, and in food and agriculture we all know that food politics play a big role when establishing frameworks and a vision.

Do we have a vision in Canada? It's not complete yet because of that disconnect between farmers, processors, distributors, and consumers in the end. I don't think consumers really recognize themselves and what we're trying to provide to them. And if they're trying to vote with their dollars, they're not too sure how to do that.

So if we are to generate a comprehensive food policy in Canada, I think we need to make sure that whoever is driving the boat is a legitimate player who will try to make sure there's no political contamination in the process.

● (1725)

The Vice-Chair (Mr. Frank Valeriote): Do you see government playing a leadership role in that?

Dr. Sylvain Charlebois: No. It will play a role, but not a leadership role.

The Vice-Chair (Mr. Frank Valeriote): Does anyone on the panel see government playing a leadership role in driving a national food policy?

Ms. JoAnne Buth: I agree that it needs to be a facilitation role, not—

The Vice-Chair (Mr. Frank Valeriote): A facilitation role. All right.

And would you agree with that, Mr. Charlebois?

Dr. Sylvain Charlebois: I would.

The Vice-Chair (Mr. Frank Valeriote): Okay, a facilitation role.

Thank you so much.

Mr. Zimmer, you'll take us home.

Mr. Bob Zimmer: Unfortunately, Pierre stole a little of my thunder. That was the question I was going to finish with the first time. It was government's involvement, but we'll take it a little further.

We talk about government's involvement, and I guess to have that gap, but you said it was to facilitate that and maybe build a framework for it. I wanted to know if you know of any examples in the world where this is the case, where they're already doing it well, something we can learn from, where governments play that role. Are there any that you know about?

Dr. Jim Brandle: The British have a pretty good food policy you could have a look at. It's very good. And New Zealand.

Mr. Bob Zimmer: Can you give a reason why? We have a few minutes, if you can explain.

Dr. Jim Brandle: Well, it's the only one, so what do we have to compare it with? It's the only one I've read anyway, the British one. It's simply clarity, that's all, and you can see that underneath now the European Union and their ag research committee have created more clarity around looking at food policy. Their stated goal now is they want twice as much with half the inputs by 2030. How are we going to do it? Boy, then you have to set research goals that can spread across every commodity and every animal.

It's the only one I've read, so I don't have anything to compare it with, Mr. Zimmer, but I felt it was a very bold and brave thing that they did, and it was open-minded as well, I thought.

The Vice-Chair (Mr. Frank Valeriote): England has one and Scotland has one, I've read. It's fascinating.

Ms. Buth.

Ms. JoAnne Buth: Jim and I actually participated in the same process, the CAPI process, the Canadian Agri-Food Policy Institute, on linking food to health, because there is not a clear linkage there in consumer minds and also in the medical community minds. So as the health accord comes up for renewal and as we were looking at Growing Forward 2, we spent quite a bit of time trying to develop a path forward for food and health policy, and we could only get so far.

I think we did okay, but it was extremely difficult with the people around the table. We kept going in circles. I'm not too sure why, looking back on it, but we could not come to consensus in terms of where we needed to go.

Dr. Sylvain Charlebois: Looking at food policies and vision, for the countries that do have a clear vision—Britain, New Zealand—there's a common denominator for all of them. They've gone through major food crises.

The message I would convey to this committee today is that we shouldn't wait for a major crisis to hit us before we actually provide ourselves with a vision.

The Vice-Chair (Mr. Frank Valeriote): We still have time. Does anyone else want to answer?

Mr. Zimmer, do you have any more questions?

Mr. Bob Zimmer: I guess to say that it's refreshing to hear, because it appeared that you were looking to us for an answer for this, or to be the lead role in it, but you've now answered that. It's quite the opposite, and it's refreshing, because we have a role—

Dr. Sylvain Charlebois: We do trust you.

Mr. Bob Zimmer: Yes, good. We're not God.

Thank you.

The Vice-Chair (Mr. Frank Valeriote): Mr. Lobb, you had a question.

Mr. Ben Lobb: A quick question while you're here. I might as well ask it, though I know everybody wants to get home for the day.

Much of what we heard today was about the seed and the molecular structure of the seed and the innovation there, and with the partnerships and clusters. Are any of the partnerships with any machinery manufacturers or equipment manufacturers to improve their end? I understand where you focused today, but I'm interested as well in how that partnership works and does that fall within the context of Growing Forward 2 and the science and innovation.

● (1730)

Dr. Jim Brandle: In horticulture, if I might speak for horticulture, it's absolutely critical.

Our big problem is labour cost. Most of the labour—or a lot of it—is offshore labour, and it's not sustainable in the long run. As situations get better in the countries we draw labour from, they'll be less likely to come, so we need to automate.

I think the machinery piece is around productivity, right? We have productivity problems throughout the country in many of our industries. In agriculture, it's particularly significant.

I think about robots. I hate to get down into the details, but robots are pretty cool. Robots are smart; machines are stupid. There's a lot we can do to drive cost, certainly out of horticulture, where there are loads and loads of hand labour, by using robotics. We've got great strength in the country in manufacturing robots.

This situation recently has allowed those guys to.... They're thinking about other options right now instead of building cars. So I think there's lots to be done with equipment and machinery and automation that shouldn't be left behind that speaks directly to productivity.

The Vice-Chair (Mr. Frank Valeriote): Mr. Brandle, thank you. You've had the final word. That brings the meeting to a conclusion.

I want to thank all the witnesses again for sharing their valuable time with us. I wish each of you and the entire committee a wonderful Thanksgiving.

The committee is adjourned.

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