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Chair

Mr. Larry Miller

Standing Committee on Agriculture and Agri-Food

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● (1530)

[*English*]

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

For our first hour, our witnesses are with us by video link. With us we have, from the British Columbia Fruit Growers' Association, Mr. Joe Sardinha and Mr. Glen Lucas; and from Winnipeg, Manitoba, at the University of Manitoba, we have Dr. Michael Trevan, Dean, and Dr. Karin Wittenberg.

Thank you very much to all of you for being here.

I guess you've been versed on what our topic of discussion is today, and I would ask that you stick to that.

I look forward to your testimony.

Mr. Sardinha or Mr. Lucas, which one of you is going to lead off? Either way, you have a total of ten minutes between you.

Go ahead, please.

Mr. Joe Sardinha (President, British Columbia Fruit Growers' Association): This is Joe Sardinha here, president of the B.C. Fruit Growers' Association.

Mr. Lucas is not with me, so I will be presenting alone.

The Chair: Okay. Go ahead, Mr. Sardinha.

Mr. Joe Sardinha: Thank you very much for this opportunity. Through the miracle of modern technology we're able to participate in these consultations, something I would like to do in person, but unfortunately I'm still harvesting my apple crop here in B.C. It's a little bit late this year, so that has kept me at the farm.

In terms of science and innovation, I believe the right mix of investment in research will lead to innovation at the farm level, resulting in a more competitive and, more importantly, a profitable farm sector. We need to get it right. We also anticipate that the risk management tools we have today and are developing for the future would experience a decline in demand if we do get that basic research flowing correctly throughout the industry.

Research is a vital part of agriculture's unbroken record of improvement in quality and productivity. It is particularly important to Canada as a nation of exports with vast agricultural capacity. Canada has a stake in advancing farm productivity, with research as a key component.

Food security may not be an issue in Canada but it is an issue as food supplies tighten. In Canada we're looking more at the issue of rising food prices than food shortages. Comparing this to the Canadian agricultural sector, where the road of productivity is allowed to slide compared to other competing jurisdictions, we know that other world areas have higher yields than Canada, and we have to continue on the research and innovation front to maintain our competitiveness in that regard.

The value of inventions that are created in Canada can alone compensate for the investment in productivity enhancement. This is particularly important to the tree fruit industry in terms of variety development or the plant breeding programs we currently have. It's key to the innovation in the tree fruit sector.

I want to address a question that we developed here. It states, what are the interests of agricultural producers, especially tree fruit growers in research? Growers are most keenly interested in improvements to horticultural practices, for example, more efficient irrigation, more efficient pruning/thinning, picking, grading, and storage of produce, using automation and computer technology. As I've said, the development of new varieties that are suited to our northern climate is extremely important, as is more environmentally friendly pest control, which builds on successes of integrated and area-wide pest management, enabling producers to manage both current and emerging pest and disease issues. We are an importing nation and seem to be landing new insect and disease species on our shores on an ongoing basis.

What is the reality? We've seen with Growing Forward 1 that the delivery of research programs to high-value Canadian horticulture needs to be upgraded so that we are competitive and build value for Canadians.

The switch that established national research science clusters was well intentioned but poorly implemented. It took longer that expected to launch and the criteria and eligibility of research projects changed up to the final moment.

The Canadian Horticulture Council assumed the role of administrator of the edible horticultural science cluster and has done a commendable job in dealing with the many changes to the science initiative since its inception. Under the CHC's guidance, the Canadian apple industry, a very big part of which I am in, invested substantial effort in synthesizing provincial research priorities into national research priorities. The industry then worked to develop its top three project proposals, as did other commodity representatives of the CHC. Application deadlines were met, but the guidelines changed after the fact, and two of the industry's three proposals were turned down because they involved federal research employees at AAFC research centres—some of the criteria that was not spelled out from the outset of the industry developing its research priorities.

The process really undermines the industry's confidence in investing all this time and effort when projects are rejected for what we feel are new and inconsequential reasons.

Following that debacle, the CHC was informed just this past summer that additional unallocated funding existed for the horticultural science cluster. It was a last-minute scramble by all to submit new project proposals in a very short timeframe to take advantage of this additional funding that no one knew anything about prior to the government's announcement. The apple industry did submit for a new project, but this was done in a very ad hoc way and it didn't really follow the priority-setting process that we had used in identifying our previous three projects.

● (1535)

So was it the right project for our scarce resources? Perhaps not, but it certainly exposed some inadequacies in the funding process, and certainly all the changes we've been hit with in the cluster initiative have led to much confusion.

If agricultural associations are willing to commit their share of research investment, it's perhaps time that government programs are made more transparent at the outset, and certainly the science cluster initiative could have used more transparency and better program development because we saw far too many changes throughout the implementation of the program. We need less bureaucracy so as not to sideswipe industry’s efforts to capitalize on research that I believe will ultimately enhance the competitiveness and profitability of the agricultural sector.

We do have some Growing Forward 2 recommendations that we'd like to propose to your committee. The government has increased other types of agriculture and processing research at the expense of horticultural practices, often referred to as primary production research. We recommend ensuring the level of funding for research and horticultural practices be balanced with other research needs.

The government has let key research positions go unfilled when retirements occur or are imminent. In a round of consultations a few years ago, this was a high priority to resolve, yet no strategy is emerging, and the erosion of our science capacity continues.

For tree fruit, we recommend that a weed scientist, a post-harvest physiologist, and a plant breeder be hired to replace recently retired or soon to be retired scientists at the Pacific Agri-Food Research Centre in Summerland.

We recommend that advisory committees for research stations, composed of producers nominated by provincial commodity associations, be re-established, with meaningful input into business plans, including succession planning for researchers and adequate and balanced resources required for senior researchers and technical staff to ensure a balance between horticultural and other types of research.

Lastly, we recommend that the federal government provide incentives for consolidation of research. We believe that research can take on a more focused approach throughout research stations across Canada. We recommend that Agriculture Canada's research branch take strong measures to re-establish consolidation of research activities, such that we may not have a model where we're doing horticultural research at every station across Canada, but we will have what I believe will be centres of excellence for applied research that will deal with horticultural issues, grain, grains and oilseeds issues, and animal and livestock issues—so it is more targeted, much more efficient, and we can have the appropriate expertise placed at those positions.

I would like to thank you for this opportunity to present. I did want to speed it up, so if there are any questions, I would be more than willing to answer them.

Thank you.

● (1540)

The Chair: Thank you very much.

I'll now move to Dr. Trevan and Dr. Wittenberg, for minutes or less, please.

Dr. Michael Trevan (Dean, University of Manitoba): Thank you very much, ladies and gentlemen.

I think we come at this from a university perspective, which covers a wide range of activities, and we have a number of things we wish to talk about that are broader rather than specific.

One of the first things that actually concerns us, as a university, is the ability to address public perceptions about agriculture. Having technological innovations that you can't use because they're resisted by society is worse than not having them at all. Surveys have identified that the majority of North American consumers, for example, make purchase decisions on the basis of taste, affordability, and nutrition. But has their perception about agriculture been too susceptible to adverse messaging from various minority fringe elements? This, we believe, is something that AAFC, together with universities and other third-party entities, can play a role in by entering a dialogue with the Canadian public regarding Canada's role and capacity to address global nutritional securities. I think without that, a lot of the innovations we see as coming forward and helping Canadian agriculture to adapt to an uncertain future will be difficult to implement.

Let me give just one example. We are told all the time that the climate is changing, and it may well be. If the climate is changing, we cannot be certain precisely how, anywhere across Canada, that will affect the local weather. We would need a strategy to ensure that crops can still be grown by developing crops that are resistant to salt, resistant to drought, resistant to heat, resistant to wet, and resistant to cold. We can cover any eventuality, but if we end up with a public perception that genetically modified crops are not to be eaten, then the technologies we develop in order to adapt and implement them will not be usable. This is something that has happened, of course, within the European sphere.

We also need to find ways of overcoming...and having better collaboration among universities themselves, AAFC, provincial organizations, and the industry. Dealing, as we do at the moment, principally within provinces, because of the way in which the funding arrives across Canada, is not necessarily particularly helpful when you're dealing with one contiguous geographical region like the Prairies. So we need some way of generating memorandums of understanding between all the players within one geographical region as to what should be developed. Without this, we will not be developing the sensible innovations that we would be able to pass on to the agricultural industry, which have to be developed in association with them.

I'll give you one example. In Brandon, Manitoba, we have a beef herd. Collaboration in research and development would have been much higher in the past years were it not so hard to get agreements in place to access Agriculture Canada's facilities or animals.

Another very concrete example is that it's extremely difficult to hook a university tractor to an AESB trailer, for insurance reasons. So we need some innovations, not just in the science but in the way in which we presently do things.

Agriculture is a complex industry. It impacts society, it impacts the economy, and it impacts environmental health. Complex issues need complex solutions, and those complex solutions come about by having multidisciplinary approaches across institutions, sustained and supported in the long term and not just in the short term. We see value in these models to address the issues facing agriculture, and we believe greater support is required if those multi-disciplinary innovations are going to be achieved in terms of the coordination of those projects and activities.

A specific issue to be tackled in this area might therefore be a stronger requirement in Growing Forward 2 for interprovincial collaboration.

I will now pass on the rest of this statement to my colleague, Dr. Wittenberg, to talk specifically about the activities we are engaged in, which we believe are important, in terms of innovation, for the future of Canadian agriculture.

● (1545)

Dr. Karin Wittenberg (Associate Dean, Research, Faculty of Agricultural and Food Sciences, University of Manitoba): Thank you.

At the University of Manitoba we have strategically invested in six key areas of research and development. And I think there is an opportunity for alignment of Agriculture and Agri-Food Canada activities in Manitoba on several fronts, to be able to develop national leadership in student training, research, technology transfer, commercialization, and outreach. That is not to say that both parties need to be engaged in all activities, but combined they can support this continuum.

These areas also would be expected to contribute to the provincial or regional, or in some cases national, risk management strategies that might be associated with the changing environment in which our producers and processors are operating, whether we're talking about changing markets, changing societal expectations, or, again, weather patterns.

The areas in Manitoba where we have significant investment include the area of livestock and the environment, where Manitoba is leading in areas such as greenhouse gas, nutrient management, food safety, and water management for integrated livestock crop production systems. There is also good strength here in the area of functional foods and nutraceuticals, in crop and plant health, in development in the area of entomology, which we see as very important if we look at changes in how our environment will be behaving, how climate and weather will be behaving in the future, and, finally, in the development of a sustainable by-products sector.

The fifth area is related to something that we are seeing on this campus and several other campuses across Canada. Increasingly, universities are entering into a dialogue with remote and aboriginal communities. This serves as a unique opportunity for Agriculture and Agri-Food Canada to link with such entities as Aboriginal Affairs, or the appropriate provincial department, and our agriculture-based universities, to enter into a dialogue towards a nutritional security or, if you will, a nutrition for health strategy in Canada's remote and aboriginal communities.

These would be the recommendations that we'd like to bring forward to the committee.

The Chair: Thank you very much. I appreciate your both staying under the time.

We now move to questioning.

Mr. Atamanenko, five minutes.

Mr. Alex Atamanenko (British Columbia Southern Interior, NDP): Thank you very much, Chair.

Thank you to all of you for being here.

Good to see you again, Joe.

I'll try to divide my questions in half. Maybe I'll start, Joe, with you. You talked about the fact that on some of these programs the concept is good but the implementation needs working on. In your recommendations you touched upon the research positions. As you know, I've been in contact with Greg Norton from the cherry growers about Summerland, and his concern was that scientists, those who have helped the industry in the past, aren't being replaced.

Could you zero in specifically and give us a few hard points and recommendations, specifically in regard to Summerland, before I move on to the other witnesses?

Mr. Joe Sardinha: Thank you, Alex.

First of all, to go back to the science cluster initiative, I think it was a fantastic idea that was really allowing industry to lead things—developing and identifying priorities, developing project proposals, and then tapping into 75% government funding. That was a fantastic initiative. But in the end, because it was so new to everyone, the whole program wasn't figured out and the goalposts kept changing. This was frustrating for industry. We didn't know where we were from one day to the next. Fortunately, as time has gone along, we have projects under way, and we're capitalizing on the federal government's generous funding.

As for the Summerland research station, we've had gaps. We haven't had a research pathologist for two or three years now, ever since Dr. Peter Sholberg retired. We had Dr. Frank Kappel with the cherry-breeding program. He's had a fantastic track record. He's just retired. So now we don't have a cherry breeder in Summerland. I'll remind this committee that Summerland is world-renowned for cherry breeding. Some 80% of the new cherry varieties worldwide have been developed at Summerland. So there's been some real prestige for the Canadian plant breeding program right here in Summerland as a result of that individual.

Now we have one plant breeder. Her specialty is apples. We'd like to have someone come in and work on cherries, because of the proven track record.

And there are other retirements that are imminent. We need to keep the capacity going in our research facilities. Horticulture is kind of small in the scheme of Canadian agriculture. We don't export as much as other sectors, like grains and oilseeds or beef and pork. But horticulture is important. And we need to maintain our prominence in Canadian research. That's why we're gravely concerned with the slow recruitment of replacements to fill these important positions that work on industry priorities.

● (1550)

Mr. Alex Atamanenko: Dr. Trevan, you touched on the issue of GMOs and helping to alleviate world hunger. Increases in yield have not been because of genetically modified traits. The answer to feed the world hasn't really come. They're developed basically for two traits: herbicide resistance and pesticide resistance.

On the other side, there are people on the ground, such as Oxfam, whom I met with a few days ago. There's also the Union of Concerned Scientists and IAASTD. They are saying that maybe what we have to do to feed the world is develop local sustainable agriculture, and give more weight to the local organic sector.

We have two points of view here. I'd like you to comment on them.

Dr. Michael Trevan: That's very interesting. One of the problems is that it's extremely complex. It is not as simple as saying you have to have a genetically modified plant or you have to go to organic agriculture. If you want a plant to be more productive, whether you bred it conventionally or used some form of genetic engineering, that plant is almost certainly going to require more water. Where is the water going to come from? Your strategy will depend on whether you're growing this stuff in an arid area, a semi-arid area, or a place with lots of water. And this is really what I was getting at when I was talking about a complex agricultural system.

It's easy for lobby groups to pick out one of these problems and demand that it has to be solved right now at all costs, without thinking of the unintended consequences of those actions. That is why I come back to making sure that the public is properly informed so they can make good choices, not choices based on partial information or on powerful lobbies. That is the thing that concerns me.

If it is more appropriate for a small farmer with a holding of maybe a hectare in India to grow crops organically using farmyard manure, that's fine. There is no one solution to this. But the problem is that as soon as you get into these issues, it often appears as though there's just one solution. And that's where we need to engage the public more in these debates about the importance of the agricultural industry. After all, we have to feed another three billion people and we only have 40 years to do it.

The Chair: Okay. Thank you very much.

We will now move to Mr. Lemieux for five minutes.

Mr. Pierre Lemieux (Glengarry—Prescott—Russell, CPC): Thank you, Chair.

It is an important part of our work as a committee in looking at science and innovation and on how we can improve in the way we support science and innovation. I would like to ask the BC Fruit Growers' Association a question.

You received some funding, about $2.3 million. It went to the Okanagan Plant Improvement Corporation to focus on new apple and sweet cherry varieties. The research is not being conducted by the government per se. We are moving money to a corporation that is coordinating the research. I wanted to know your input on that because you've been talking about government shortages in government research. I would say, too, there has been discussion about industry. Their strength is being focused on the needs of the farmers at this time and in the near-term future, but also the commercialization of the research that is being conducted. I am wondering if you might have some comments on where you see money being spent most effectively. Is it through government research stations and channels? Is it leaning towards the more private corporations that would conduct it on behalf of industry and organizations?

● (1555)

Mr. Joe Sardinha: Personally, I think it's a bit of both.

In terms of the Okanagan Plant Improvement Corporation, it is a wholly owned subsidiary of the BC Fruit Growers' Association. Clearly, their direction is to commercialize new varieties. It never was in their mandate to actually breed those varieties. Over time, we have developed a tremendous relationship with Agriculture and Agri-Food Canada in Summerland, with the plant breeders who were there. As you know, the Okanagan Plant Improvement Corporation does the commercializing of any new varieties developed at the Summerland station.

As time has gone on, naturally, through the DIAP program, PICO did apply to receive some substantial funds, as you've indicated—$2.3 million. That money is really going to flow a benefit across Canada in terms of what the breeding program in Summerland is able to supply. PICO will then turn those plant varieties and new cultivars around and allow producers in the various producing provinces across Canada to try those cultivars in their particular climactic region to see if they are viable and have potential to grow in their specific region. Much of the money allows trial planting on a limited basis throughout all of these provinces, such that the industry in Quebec, Nova Scotia, Ontario, or New Brunswick are given a chance to do first-hand trials. It is being funded through that very same DIAP program that PICO has.

I still see a really good, strong bond and relationship existing between the employees of AAFC and PICO. Also, on the commercialization side, PICO has been sharing royalties with AAFC to pay for some of the costs of the plant breeders. It has been a win-win situation. I think this has been a positive collaboration. I would sure hate to see it totally transferred to the industry, because what better example of collaboration—and we are talking about collaboration—can you have than industry working with researchers who are basically AAFC employees?

Mr. Pierre Lemieux: Okay. Thank you.

Let me ask Michael and Karin about commercialization.

Sometimes there is research done that is not necessarily commercialized, transferred into useful commodities that farmers can use, for example. We've heard from previous witnesses that this is certainly a concern, in that they feel with research resources being scarce, there is a real need to focus the research so that it can be commercialized and is ultimately useful to farmers.

I am wondering, from your perspective and experience, how you would see one being prioritized against another. It shouldn't be zero of one and a hundred percent of the other. There isn't much money spent on commercialization right now, and if there was a shift.... Could you make a comment on that—if there was a shift in research funding towards commercialization, and therefore research might be more focused but the end product might be more commercial?

Dr. Karin Wittenberg: Thank you. There are two points I would like to make.

The first is when I was referring to strategies that allow the various entities to work together through a continuum. The opportunity this presents is that the people at the front end doing the research have more opportunity to identify or to find out what the identified needs are at the working end of the producer, the processor, or the other industry members. We've sometimes lost that continuum. Perhaps we've had good research, but it hasn't been directed to where we need to be going. That's one of the points I want to make.

The second point is that we in Canada perhaps have a little bit of difficulty around how we manage IP—I think I'll put it that way. As a result, we sometimes see avoidance of getting into that pitfall because it's a huge human resource effort to move something through to commercialization. I think you've witnessed that probably within the ranks of AAFC, and we've witnessed it in the universities. Where it has worked very cleanly, very well, has been in areas like variety development, plant breeding programs. I think that is working well. In some cases we can say the same thing where IP is moving directly into a processing system. There are other examples, new assessment tools for environmental assessment, or other examples where it hasn't been that easy to move forward. That's one thing I'd like to share with you.

The types of issues we're addressing in agriculture are not simply focused on the identification of intellectual property for commercialization if we want to be successful. There are practices and processes that are very important to the operation of our farms and our primary and secondary processors that don't necessarily even need to go through that kind of process. What they need is the opportunity to bring new tools in so they can address the market as the market changes, or address the environmental elements as those elements change. To some extent what we want to do is be able to move forward on good practice and processes, for example, on green processing technologies, not necessarily to patent and protect, but rather to allow industry to pick up on it and use it as quickly as possible. So we have a few barriers there.

● (1600)

The Chair: Thank you.

Mr. Valeriote does not have any questions.

We'll move to Mr. Zimmer.

Mr. Bob Zimmer (Prince George—Peace River, CPC): It's good to see you, Joe. It's good to see somebody who still gets their hands dirty as part of our panel here.

I know you mentioned some concerns with the way the program had been run before. I want you to focus, and you already have, on the positive parts of our investments.

Can you explain in a little more depth the positive results of our program?

Mr. Joe Sardinha: In terms of the science cluster initiative?

Mr. Bob Zimmer: Absolutely, yes.

Mr. Joe Sardinha: There's more than one positive result. One was clearly that the five different commodity groups all came together as commodity groups, looked at their own provincial priorities, assessed what those research priorities were, and then looked at developing national priorities. That's where it really was a consensus-building exercise that resulted in some very positive work being done by each commodity group. From that, of course, some tremendous project proposals came forward to take advantage of what I believe was some pretty generous federal funding, with industry coming up with a 25% share. In some cases, it's difficult for industry to come up even with that, but we feel it was a very good funding percentage, because it was going to stimulate some much needed research work in those priority areas.

Perhaps one of the truly negative parts was this. We understood from other hort clusters that AAFC research centres were involved. When it came to the edible horticulture cluster, we found out at the 11th hour of the 11th day that no AAFC research centres or their employees would be permitted in any of these CHC projects, which was news to us. That's where some of the frustration comes in. It is when things aren't spelled out from the outset.

It has created a lot of headaches for industry but also for our national association, the Canadian Horticultural Council, which has gone to great lengths to make this thing work for their commodity representatives. I think they've done a tremendous job, not to say that AAFC staff haven't been accommodating in trying to work through these things too.

I think the initiative was so new—it was a new direction—that perhaps not all of the bugs were worked out as they should have been.

Going forward, I'd say that if the federal government wants to sort of repeat this initiative with the lessons that have been learned, I see a great opportunity. We're also, through this national research science cluster initiative, involving more universities and involving provincial research people, so the collaborations are happening on a much wider basis.

● (1605)

Mr. Bob Zimmer: You explained a few of those suggestions.

Could you give us your biggest suggestion to make it better next time? What would you do?

Mr. Joe Sardinha: The frustrating part is that you can't be throwing out changes to the program at the 11th hour.

I'll give you an example from just this past August. The Canadian Horticultural Council was originally told that $3.6 million, I think it was, would flow to the edible hort cluster initiative. It was scaled back to $2.7 million. So the commodity groups worked within that funding, knowing that there were some administrative costs as well for CHC, and we worked such that we identified the projects we wanted to do. We scaled back. Each commodity group got to choose one, in some cases maybe two, if there was enough funding. And we made it work.

Suddenly, 18 months into the Growing Forward initiative, we find out from AAFC that, lo and behold, there's another $900,000 available to the CHC. Well, it's a little bit late to be telling a national delivery organization that you have this extra funding available when the current projects are already well under way. And now, all of a sudden, you have 16 months, if you do identify some new projects for this additional funding, to conduct a research project that must end by March 31, 2013.

The Chair: Okay, very good.

Thank you very much.

We'll now move to Ms. Raynault, and we'll come back to you, Mr. Valeriote, right after that.

[*Translation*]

Ms. Francine Raynault (Joliette, NDP): My question is for Mr. Sardinha.

You said earlier that for three years now pathologists have not been replaced. What does that mean for research? What can we do to replace those researchers? What can you suggest we do to replace them, so that we have the necessary expertise to plan our responses to climate change? What do you suggest?

[*English*]

Mr. Joe Sardinha: Thank you for that question.

Certainly we do need a pathologist in Summerland, particularly because we do have such a horticultural focus at the Summerland Agricultural Research Centre site.

The Okanagan is known not only for tree fruits but for wine grapes. It has built up quite a reputation for those now, so there are certainly pathology needs there for that industry as well.

I'm just wondering how much longer we'll go without a researcher, because I can recall in the past some very important work done by the individual who did retire.

I would only suggest that if we were having trouble attracting candidates from Canadian universities for this position that we look to foreign universities, because a lot of tremendous expertise can come from foreign countries, and in a lot of cases those individuals are also from countries that learn English. So they're coming as ready-made research specialists.

● (1610)

[*Translation*]

Ms. Francine Raynault: That would be helpful to you? You would like people to come from outside of Canada if possible? Do I understand you correctly?

Mr. Chairman, I think we do not have interpretation.

You did not understand my question, Mr. Sardinha?

[*English*]

Mr. Joe Sardinha: Yes, I did. If we are having trouble filling the research positions that are being vacated by retiring researchers and scientists within Canada, then I think we have to look to outsourcing. Whether we can attract individuals from the United States or from Europe, if they have the abilities, if they have the credentials, I think we need to find a way to fill the voids, because we see the situation getting worse and not improving if we don't do that. I just have to visit my own research centre—it's only about three kilometres from my home and my farm—and I can see a lot of grey hair there and a lot of researchers who are going to retire. It's rather alarming that we already have these vacancies and they haven't been filled.

[*Translation*]

Ms. Francine Raynault: People are not being replaced because there is no one to replace them? There are no researchers who are trained to fill those positions?

[*English*]

Mr. Joe Sardinha: Well, that's part of it. When I'm talking about researchers who need to be replaced, it's usually those individuals who of course have their doctorate. We do have other researchers who are graduate students or whatever, but they do not have the credentials to replace the individuals who have retired. We need researchers with the same abilities, really.

[*Translation*]

Ms. Francine Raynault: I see.

Do I have some time left, Mr. Chairman?

[*English*]

The Chair: You have about a half a minute.

[*Translation*]

Ms. Francine Raynault: My question is for Ms. Wittenberg.

I have heard that universities are holding discussions with aboriginal people. Could you tell us more about that please during the short time I have left?

[*English*]

Dr. Karin Wittenberg: Here at the University of Manitoba one of the pillars of our future development is related to the education and dialogue with our remote and aboriginal communities.

We know that nutritional security is an issue. We know that our communities of the north are not in control or they have limited knowledge of the food value chain upon which they rely. And there is an opportunity for agriculture to contribute in a positive way to the nutrition of those communities and to the health of those communities.

It is my understanding that this has to start with good dialogue and focused programs resulting from that dialogue. So it's not a prescriptive thing; it's something that has to be developed in conjunction with the entities with which these communities are already in dialogue, or it has to start from scratch.

I think agriculture has a role to play, but we are maybe not well versed in how to initiate this dialogue process and how to help respond to the need. Agriculture and Agri-Food Canada, as well as universities such as ours, has a role to play, and there may very well be other departments in the federal government and provincial governments that need to be linked to this.

The Chair: Thank you very much.

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

Mr. Frank Valeriote (Guelph, Lib.): Thank you, Mr. Chair.

I guess my questions will be of Michael and Karen in Winnipeg, but Joe and Glen are welcome to jump in.

I have really two questions.

This week the government's expert panel on federal support to research and development noted that Canadian business expenditure on R and D has fallen every year since 2006, both in real terms and as a percentage of GDP. The panel noted that at 1% of GDP, Canada's business expenditure on research and development is well below the OECD average of 1.6%.

My first question will be, do you concur with that assessment and do you feel that it is time now that this gap be closed?

My second question is about commercialization. I come from Guelph. There's a great deal of agricultural and food innovation in Guelph, either at the university or in the clusters around the university. I am continually told by people such as Dave Smardon at Bioenterprise and by other organizations, including a new innovations centre that has been established in Guelph to help innovators commercialize—in other words, “get their ideas to market”....

I'm wondering to what degree you see a problem existing and what you think might be a solution—for instance, the introduction of flow-through shares or other tax credits to incentivize that industry.

● (1615)

Dr. Karin Wittenberg: On the commercialization side, I'll give you an example of where I think commercialization has happened but may not have been recognized.

We have a bioethanol processing plant in the province. It became very well recognized for the quality of dried distillers grains it was producing as a result of collaboration with animal nutritionists at the University of Manitoba showing them how processing practices in the plant could influence the quality of the dried distillers grains and the variation from run to run of dried distillers grains. That plant, recognizing how they could solve the problem, did and had some of the premier quality dried distillers grains available for the feed industry.

Do we consider that a successful commercialization? In the traditional terms we do not, because there's no single product that is now commercialized and for sale; yet this processing plant and the producers buying the product have both gained. That's one point I wanted to make.

With respect to investments, Manitoba is perhaps a model for what we have observed in Canada. We do not have very many headquarters of businesses in Manitoba, and headquarters tend to make the decisions around investment. We have a little bit of the same scenario in Canada, and that worries me, because successful enterprises tend to be bought by multinationals, and the decisions around reinvestment and investment in research do not tend to favour the Canadian portion of the enterprise.

So I think you make a very good point. How to reverse that situation, I'm not sure. I feel confident that the tax credit system is a part of the equation, but small enterprises—at least in my experience in dealing with those smaller companies and Revenue Canada—have a difficulty becoming aware of where these programs are and how to take advantage of them, and then with the administration associated with them.

I think you make a very good point. There probably are some solutions there.

Dr. Michael Trevan: Let me add that before I moved to Canada I worked for an organization called the London Development Agency. My role there was to work out how to extract technology from London's 42 universities, institutes of higher education, or whatever. The thing that became very apparent was that it wasn't that universities couldn't do it—they had lots of ideas—but that small industries didn't have the time to go and find those ideas.The solution became to give the industries money whereby they could seek out, from places such as universities, solutions to the problems they experienced.

So there is a way in which you can actually encourage them to innovate.

But I think the other point is that if you look at the history of wheat in the Prairies, the productivity nowadays is probably about 240% of what it was 100 years ago. Most of that increase in productivity has come about through changes in agronomic practices. They are not really commercializations, but they made a huge difference to productivity on the farm. Within agriculture there are many examples like that.

I think it's a rare thing to have a new product you can actually sell in an agricultural industry.

As for your figures about spending on R and D, I would take them at face value. They don't particularly surprise me.

● (1620)

The Chair: Thank you very much.

I'll now move to Mr. Lobb for five minutes.

Mr. Frank Valeriote: Mr. Chair, someone was trying to communicate with you from the other end of the table somewhere.

The Chair: Mr. Trevan was.

Dr. Michael Trevan: It wasn't me.

The Chair: Mr. Sardinha, were you trying...?

Mr. Joe Sardinha: Yes. I just had a quick observation, Mr. Chairman—

The Chair: Be very brief, because we're out of time on this one.

Mr. Joe Sardinha: I'm putting on my producer's hat regarding the dropping of R and D investment.

It's no mystery. We've had negative net farming income in British Columbia for the past four years. Working capital is an issue for individuals, associations, and co-ops. One only has to look at the science cluster initiative. Had the federal government only provided 50% funding, I think we would have seen far less uptake. Farmers are cash-strapped; otherwise we would be putting more of our own dollars into research and development, believe me.

The Chair: Mr. Lobb, you have five minutes.

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

The first question I have is for either the dean or the associate dean, if they are inclined to answer.

Could you put on the record for the committee some of the stories of success that you've had in collaboration with Agriculture and Agri-Food Canada, with industry, or with the producers themselves, or with organizations within the agricultural community with which you've worked through the first phase of Growing Forward, and specifically within the science and innovation portion of it?

Dr. Karin Wittenberg: I'm not sure I caught the full focus of what you said. Are you looking for an example of a university, Agriculture and Agri-Food Canada, and industry collaboration?

Mr. Ben Lobb: If you could, give us some examples within your faculty in which you've had partnerships with Agriculture and Agri-Food Canada or where you've had them with industry and have had some tangible results. I guess that's the question.

Dr. Michael Trevan: Probably the most well-known one is the relationship between one of our biosystems engineers and entomologists from Agriculture Canada around grain storage.

Grain storage is a big issue in a lot of the world. China loses more grain in storage each year than Canada produces. What these scientists together have done is develop a life-sized grain bin that can model the environmental condition for the movement and infestation of insects in grain in any environment in the world. This has become so successful that it's now being copied by the Chinese and the Indians, and the Ukrainians are also interested in this particular model.

This would only have happened because of the unique ability of these scientists to work together across that sort of institutional boundary. We could do it partly because the Agriculture Canada cereal research station where the entomologists were employed was on our campus.

Dr. Karin Wittenberg: We have some other models within the functional food and nutraceutical area. Both the Richardson Centre, which has Agriculture and Agri-Food Canada scientists and technical staff working within the centre, and the Canadian Centre for Agri-food Research in Health and Medicine, CCARM, where we have professors and Agriculture and Agri-Food Canada scientists working together, have been developing new products. They have been attracting significant industry interest, and not just local but national and international industry interest and investment.

It is our ability to develop that critical mass of expertise to carry out some of these larger programs that is the underpinning of the success there.

Mr. Ben Lobb: My next question is for you two as well.

Moving forward, let's say hypothetically that there are increased dollars within the next phase of Growing Forward for science and innovation, which would probably mean there would be more projects in collaboration with industry, producers, and academia, can you or how do you handle the increased labour requirements among your researchers and professors? How does the faculty build the bench strength to do that? And what period of time does it take to be able to handle an increase in dollars and projects?

The problem is that if there is an influx or increase in dollars, the last thing we'd want is to have the universities come back saying they don't have the bench strength for the next couple of years to handle the projects.

● (1625)

Dr. Karin Wittenberg: We're going to be announcing a $3 million project shortly in livestock and forage research. I can tell you that one of the ways that we have been starting to cope with it is by bringing in research coordinators. These are people who can help at the front end to bring the teams together to discuss what might be a good research program and strategy. These same people, once the funding comes in, help coordinate the carrying out of that research across the various disciplines or institutions. We have gone as far as Texas to get the research done in compliance with the goals of the program and the specific project. If there's some support for good coordination, it can help a great deal in getting work done in a timely fashion.

The second thing is the difficulties with modern accounting requirements—dealing with last-minute changes. This is something we also have difficulty with. Longer-term programs are probably the best solution. Generally, it's defined sums of money, and often the decisions about that money don't happen until the 11th hour, which is year four of a five-year program, or year three of a five-year program. The effectiveness with which the dollars are used is then an issue.

Dr. Michael Trevan: May I add to that?

The Chair: You may, very briefly.

Dr. Michael Trevan: I think the research capacity exists, and without wishing to sound flippant, it is the case that money speaks. Our research scientists are continually applying for research grants. If there is one that is particularly attractive, they will go for that one rather than another. The capacity is there; the question is whether the money is there to buy that capacity.

In some places it worries me that the capacity isn't there, which is why we are investing in entomology. We foresee that in a few years' time, as some of the senior entomologists retire, there will be a void in the new set of professional entomologists. We have about the only program training graduate entomologists left in Canada. We have the only department of entomology left in Canada. There are some areas where if you came and offered us $10 million for entomology, to be spent any way we want, we might have some difficulty finding the capacity to do so.

Mind you, I wouldn't object.

The Chair: Thank you. We have run out of time.

I would like to thank the witnesses for taking the time to appear before us. Your testimony has been valuable. Good luck in your work.

Mr. Sardinha, I hope your crops are good and you get them off.

Mr. Joe Sardinha: Thank you.

The Chair: Thanks to everybody. We'll take a break now before we move on to our next witnesses.

● (1625)

(Pause)

● (1625)

The Chair: We're ready to roll again.

Ms. Buhr and Mr. Boon, thank you for being with us here today.

I want to remind the witnesses that our study right now is in science and innovation, so I would ask you to stick to that topic.

First of all, we'll go to Ms. Buhr from the University of Saskatchewan.

● (1630)

Dr. Mary Buhr (Dean and Professor, College of Agriculture and Bioresources, University of Saskatchewan): Thank you very much. I appreciate the opportunity to appear before the committee.

I was in Ottawa for a meeting earlier this week that was looking at the future of animal agriculture to serve the food needs of the world and Canada, so it was a delight to be able to stay over and come and join you personally. It's good to see you here.

I wanted to start off by talking about what I see as the major issues facing Canadian agriculture and then move from there into some of the things that I think Agriculture and Agri-Food Canada might best address.

There's really little question that a major issue facing not just Canadian agriculture but global agriculture is food security for the future. Define food security however you want, but it's basically physical and economic accessibility to safe nutritious food: meet dietary needs, meet food preferences, and provide enough for active and healthy lives. We look at the issue of food security in the face of what is known to be the growing world population. We reach seven billion this month. We're expected to reach nine billion by somewhere between 2040 and 2050. Various projections go well beyond that in the years past that. We have to be able to feed not just those people but our own people as well, and basically the estimates are that we have to increase food production by at least 70% more than what we're doing now—170% more food in 40 years from now. That's enormous. It's terrifying. And at best, 10% of that can come from increasing arable land. There's just simply not enough arable land in the world to do that.

Of the seven billion people we've got now, 1.3 billion are known to be seriously malnourished and/or starving, and a reasonable proportion of those are in our own communities, as was mentioned earlier, in our remote communities, our northern communities, and in our inner cities and around. So when we address food security, we are addressing things that matter to our own peoples as well, and that makes it really, really critical to face these kinds of issues.

On top of needing 170% more food, we've got to do that and manage the environment better, because we're not doing a particularly good job right now. So that means we have to be more ecologically sensitive. We have to have more environmentally sustainable practices. We have to make more than just food from renewable products. We have to do feed, fibre, energy, plastics, anything and everything, nutraceuticals, cosmeceuticals—I can never say that word. We have to look at all of these kinds of products that have to come from renewable resources in a world where water is becoming incredibly limited and we don't want to have any additional problems with more pollution.

How are we going to do that? Again, the problems become almost terrifying. We have the moral imperative to feed the world and look after our environment better. We have the moral imperative to look after our own Canadian population better. Moral imperative is one thing; it sounds good. But practically speaking, it's no doubt that food insecurity—inadequate access to good food and clean water—is absolutely a cause of social unrest and huge instability. It probably was one of the leading factors that actually got the people in Egypt on the streets, and it goes beyond that.

So there's the ethical reason, there's the political reason, but if we're really, really practical, there's a third reason to look at this issue. If we can significantly increase what we're doing, it's going to make our producers and our country an enormous profit, in terms of our already highly lucrative exports of agricultural products and of our research and development. So there are some very, very black and white reasons that we need to go ahead with this.

If one major issue that we're facing is food security or food insecurity, the second one that compounds it is climate variation.

● (1635)

The estimates in the world again are that the climate is changing. Most people will agree and most good science will agree that it's warming, but you don't need to believe in that to look at the storms, to look at the rainfall, to look at the droughts in Texas, where they didn't get rain for how many months, to look at the changes around the world and to know that we need to be able to adapt to huge variations in the environment in which we are growing food and in which agriculture is going to be operating.

I think you only have to look at the Arctic to recognize that something is very, very different, and we have to be prepared to deal with that. The flip side of that one is that if we adapt our practices and our products to a wide variety of climates, we're not only addressing our own immediate needs in our own country, but again that climate exists now somewhere around the world and we can sell it. Isn't that right? It's something that we can export and that we can be doing that will make a difference.

Again, water is a limiting factor. Biodiversity is something we need to protect.

The third one I wanted to speak about just a little bit is policy. There's very little doubt that a major issue facing Canadian agriculture is policy for agricultural regulations and the science innovation side of it. In all of the most recent statements on science and innovation that have come from the federal government, there is no mention of the word “agriculture”. We speak of science and innovation, and occasionally we will speak about commercialization and occasionally we will speak about environment, but the word “agriculture” is not there. And when you remove the word “agriculture” from that front face, you are essentially saying that agriculture as it exists, from taking that high-powered science and making it ultimately applicable, that range, is not important. It is not saying to the world that Canada is standing up and supporting agricultural science and innovation for the future. We will talk about science and innovation, but agriculture gets lost. I think that's a huge signal that we don't want to support, at least from my point of view, and I'm biased. There are lots of other policy issues, but you get the basics.

The other thing that I really wanted to speak to you about in a very focused way is the need for high-quality people. High-quality personnel are hugely important. We need the trained people to go out into industry and to go out onto our farms and to go out into our businesses and to come into our educational institutions.

So what should Agriculture Canada be doing about all of this? Agriculture Canada should focus on the long-term, expensive, slow research that neither universities nor industry can really undertake effectively. There are aspects of animal and plant breeding...looking at novel species that will be used in new or challenged environments. There is something called life-cycle analysis. There is something called nutrigenomics—looking at nutrition that's dedicated to how your genetics work.

Agriculture Canada should also be very involved in collaborative R and D and the development of highly qualified people. Certainly the lessons from the cluster need to be there. We need to be collaborative in a wide variety of ways and reduce barriers, as people have already said.

Thirdly, Agriculture Canada needs to be there fighting to promote policies and regulations that support desirable industry practices: rules-based trade; standards for practices that promote sustainability and standards that promote health, whether that's personal or ecosystem health; and safety of food and peoples.

Thank you.

The Chair: Thank you very much.

Mr. Boon, in 10 minutes or less....

Mr. Kevin Boon (General Manager, British Columbia Cattlemen's Association): Thank you very much for the opportunity to present here. My presentation might become a little shorter here for the simple reason that I had added a portion on business risk management, and I'll remove that as you're dealing with science and innovation. I will restrict it, and it will be in the written part or if questions need to be asked.

The Chair: I appreciate it. If you want to forward us that in hard copy, in both languages, that can be distributed at a later date. So thank you very much.

Mr. Kevin Boon: Thank you very much.

Despite the challenges of the last eight years, the beef industry remains one of the biggest generators of gate cash receipts in Canada. In 2010, cattle-calf receipts in Canada totalled over $6 billion, with beef production contributing $24.6 billion. Of this, B. C.'s portion of the Canadian herd is about 4.5%.

While it is very important that we recognize the economic input of the beef industry, consideration also must be given to the contribution made by producers who are the stewards of the land. In B.C., beef production utilizes about 85% of the available agricultural land base of 25 million hectares. Society depends on clean environment and fresh water. As long-term stewards of the land, our producers continue to bear this responsibility.

Regional differences also need to be a focal point. While we recognize and realize that Growing Forward 2 is being designed as a federal program with provincial and territorial partnerships, it needs to be understood that regional differences prohibit a one-size-fits-all program. Ranching in B.C., for example, presents unique challenges and benefits that distinguish it from the Prairies. Programs need to have enough flexibility to enable a province or territory the ability to tailor programs to adapt and compensate for these differences.

In some of our requests for Growing Forward 2, these are some of the things we feel need to be looked at under environment, animal health, and on-farm food safety program investment. Research and development of programs designed to protect the health of the Canadian herd as well as on-farm food safety programs and environmental protection and enhancement are important for the new Growing Forward. However, research is not enough. Programs need to provide the opportunity to be implemented in a cost-effective manner as well.

Farmers and ranchers are responsible for being caretakers of a large part of Canada's lands. Resources for conservation programming and management tools need to be established so that ranchers have a better ability to continue to maintain and enhance the grassland's ecosystems as well as improve biodiversity, conservation, and wildlife habitat. More and more the public is demanding environmentally sustainable food production, and there is no doubt that much of the responsibility to meet the demand falls on the producer. However, the public must be prepared to compensate these producers for financial losses caused by wildlife.

Incentives for best management practices need to be rewarded, not taxed. B.C. currently has a carbon tax, but no other province has, and there's no incentive for sequestration. Taxes imposed in one province and not in others create disparities in costs of production, which create competitive issues. We feel very strongly that this is where the research and the programs in carbon initiatives need to be closely looked at in a combined effort on a national basis as we go forward.

Environment, clean water, on-farm food safety, and animal welfare practices in Canada are marketable assets for trade and need to have sufficient resources to utilize in foreign and domestic markets.

The accessibility to funds needs to be simple. Currently, Growing Forward programs are often so restrictive that they are not used efficiently or meaningfully. There needs to be less red tape and more common sense applied.

Multi-year funding for projects and programs needs to be applied. When budgetary deadlines are imposed, projects do not reap the same benefits for industry. The value of the project cannot be jeopardized by having to meet a deadline that will restrict its outcome. Multi-year funding needs to be available, especially for research and AgriFlex-style initiatives.

On investment in research and regulatory improvements and market development, we have three points that we'd like to put forward.

Number one, research funding must be included as part of the next Growing Forward initiative. A national checkoff study conducted in March 2010 showed that for every dollar invested in research, there is a $46 return. Many of the present Growing Forward criteria impose reporting timelines that dictate research rather than the project carrying out the most important work. Increased flexibility could ensure that the research is able to be conducted in a seamless manner.

● (1640)

Regulations are one aspect of our industry that are necessary to ensure the safety and marketability of our product, but they need to be implemented with great care and consideration. In the past we have seen how creating and implementing regulations that are more onerous than those in other countries and jurisdictions limit our competitiveness. To compete in both domestic and world markets, we must be careful not to put ourselves in a position through regulations that limit our competitiveness. It is easier to create a regulation than to change or eliminate it, and therefore science and common sense must dictate any implementation.

Market development, both foreign and domestic, requires coordinated and cooperative collaboration. Government needs to continue its aggressive role in opening markets and remain diligent in negotiating meaningful access with minimal restrictions and regulations based on science, not politics. Once access to markets is available, industry has the ability to expand on these, but often resources are a limiting factor. Trade within and outside our border is crucial for the long-term sustainability of the beef industry in Canada. Recognizing that the beef industry is a major contributor to the Canadian economy, it is in government's best interest to continue to invest in the industry's future.

In summary, when looking at how best to design the next Growing Forward, it is imperative that consideration be given to the increasing importance of food production in the coming decades. Growing populations around the world will dictate food demands to fewer nations able to produce more than they consume.

Canada needs to continue its enviable position of producing more food than we consume. Growing populations will result in fewer nations in this category. For this reason alone, agriculture will become one of the world's most sought after resources, making it an even larger economic driver for Canada. Without profitability for Canadian farmers and ranchers, foreign ownership of agricultural lands will become an increasing reality.

The programs designed through the Growing Forward initiative must create stability for those producing the food. We urge you to use common sense in national program development, reduce the red tape and regulations, and have a clear vision of where Canada wants to be as a supplier of food products throughout the world.

Government alone cannot develop these programs but must have an open relationship with industry to allow meaningful input that is both listened and adhered to.

Thank you.

● (1645)

The Chair: Thank you very much.

We will now move to Mr. Rousseau for five minutes.

[*Translation*]

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

My first question is for Dr. Buhr.

[*English*]

I'm sorry if I mispronounced your name.

[*Translation*]

The European Union has a strategic agricultural plan to increase production using half the resources. Clearly, innovation will have to be at the very core of the new Growing Forward plan.

Do you think that Canada could turn to the European plan for inspiration, and do we have the necessary resources at this time to reach such a level of agricultural effectiveness as regards the environment and productivity?

[*English*]

Dr. Mary Buhr: Canada has the ability. One of the things that was stated carefully and clearly at the conference I was at was that we could readily increase productivity and efficiency of production to meet food needs. Whether or not the food can be efficiently distributed and whether or not we can make all the differences we need to make, we still don't know for certain.

Different crops and products are at different levels of efficiency now. For instance, when we look at GMO crops that are resistant to herbicides or pesticides, we see that we can produce more crop in the same amount of land with less pesticide and herbicide because of those genetics. So these things are all very intertwined.

The other thing we should be focusing on, something that I think we at AAFC and the rest of the research community can work on together, is decreasing waste. There's about 30%, best estimate, of foodstuffs that are wasted, whether it's through losses in harvest, losses during storage, or losses during processing. If we can reduce that loss due to wastage, we will increase automatically the amount of foodstuffs that are available. So we're increasing our efficiency by doing nothing other than harvesting, storing, and processing foods more efficiently. These are some of the things that, if we focus on them, can have a significant effect.

The other efficiency that we have to be careful of when we're dealing with any of these things has to do with food safety. When we're storing food, we're not just storing it and keeping it; it has to keep its nutritional quality, and it has to be safe and healthy. It's a multi-faceted problem. The best minds say we can do it if that's our purpose.

● (1650)

Mr. Jean Rousseau: Thank you.

Mr. Boon, what type of science innovation was helpful for the cattle industry in the past years? Did Growing Forward help in any way?

Mr. Kevin Boon: Yes, it did. Most of our research has been done and organized at the national level with the Canadian Cattlemen's Association through the science cluster. There's been an awful lot of research. We need only look to BSE—I refuse to call it mad cow in public because she wasn't mad, she was only a little angry. If it were not for Canada's getting BSE, if it were not for Canada's science and research, the world would still be probably 10 years behind. It was we who brought the science to the table to prove that this disease is not the serious human health issue it was originally proclaimed to be. It's that type of research and science generated right here in Canada that has changed the entire world in this aspect.

Unfortunately, that science hasn't been adhered to in trade. This is where that crossover needs to be made. When research and science take place and show that there is a better mechanism, we have to make sure we aren't penalized in trade issues.

Mr. Jean Rousseau: Ms. Buhr, what can we do about climate change, about science and climate change? Is there any way to forecast impacts in different regions?

Dr. Mary Buhr: It would be wonderful if we could, and I think this is the science and technology that the meteorologists and other scientists need to work on. Quite frankly, the best we can do is come up with more ways to adapt to varying climates so that we can have more crops, better practices, different kinds of animal species that are better adapted to a wider variety of climates. This way we can have options and tools to use no matter what kind of climate we end up with.

Mr. Jean Rousseau: Do you have anything else, Mr. Boon, on that subject?

Mr. Kevin Boon: I would just add that for our industry one of the most important things in climate change is making sure that the forage and the grass technology and research continues to allow us to adapt to these changes.

The Chair: Mr. Zimmer, you have five minutes.

Mr. Bob Zimmer: Thank you.

I have a question for Mr. Boon.

After attending meetings of the North and South Peace cattle feeders meetings in Dawson Creek and Montney, I'm beginning to get extremely close to the industry and understand some of its concerns and also its benefits to our province, specifically B.C.

It's not very well known that Alberta doesn't sell the only beef in Canada. In B.C. we have a large amount of that to sell.

I want to ask you what our government has done, specifically with regard to B.C., in your mind—and as part of our Growing Forward program prior—to specifically benefit B.C. cattle producers.

Mr. Kevin Boon: We do have a challenge with the British Columbia government. One of our biggest problems and handicaps is the fact that it does not have a huge agriculture budget and does not seem to have it as a huge priority there.

Having said that, where its help has benefited us, and it was actually announced in 2010, but we got access to the funds in 2011, was a joint federal-provincial AgriFlex initiative on research and marketing of $5 million—$2 million provincial and $3 million federal. That was brought forward as an incentive by the British Columbia government and as part of our ranching task force that we put together in 2009.

One of the issues we have had, and it's more to do with the business risk management end, is that the B.C. government hasn't participated in the past. It is one of the reasons why, when we come forward on a federal basis, we think there has to be some improvement made in assessments, in how we go out, and in how it's implemented, so we can have a more fair system across the entire country. That's because when a neighbouring province gets assistance or a program, it will create competitive disparities, but it will also create market fluctuations that can be very detrimental within the province. That had been one of our issues within British Columbia, just having it step up to the plate.

● (1655)

Mr. Bob Zimmer: Sure. To be more specific, I meant to ask about our federal role in B.C. cattle production. How did our federal program benefit B.C. cattle producers?

Mr. Kevin Boon: In the one program we have put forward now in AgriFlex, you mean?

Mr. Bob Zimmer: Yes.

Mr. Kevin Boon: Right now it is very beneficial. We are just getting the program under way. There are several research program projects that are being put forward. But on the marketing end of things—and we're working very closely with the British Columbia government on this, on trade with the Asian market, for example—we're seeing that B.C. is a gateway to Canada.

With the way cattle production is in B.C., I think we are very much seed stock growers. We haven't got the ability to produce enough grain in the right areas to feed our cattle to finish so they end up in Alberta or into the United States. We're looking at more innovative ways of keeping that at home. And by at home, I mean within Canada. We don't like to see the cattle being fed in the U.S. because one of the biggest things we can do for our industry and for our economy is add value. When we start shipping off raw product, no matter where it is sent—to the U.S., overseas, to Asia—we lose opportunity within our own country and our own provinces to keep people employed and to keep our economy strong.

I think these innovations like the research and marketing flexibility fund are giving us a lot of opportunity there, and we welcome it.

A couple of other places the federal government has been really helpful is in.... We've had a couple of disease outbreaks in the last couple of years that have turned out to be not disease outbreaks. We've had anaplasmosis and we've had brucellosis. In the first one we had some issues around the investigation with CFIA. Through communicating, through help from our local MP, Cathy McLeod, we had some very positive results come out of that.

As a result, when brucellosis was discovered and then it turned out not to be brucellosis, we had a little change in attitude and we worked a better relationship with CFIA.

Now we have tuberculosis in British Columbia, and this time it's for real. But that communication and that ability to work together with CFIA on the ground was cemented through the other two and we've been able to do very well, and it's some of those programs that are really helping us out now.

The Vice-Chair (Mr. Malcolm Allen (Welland, NDP)): Thank you, Mr. Zimmer. Your time is up.

Mr. Valeriote.

Mr. Frank Valeriote: Thank you, Mr. Chair.

I'll start with Mary.

Mary, thank you. It's good to see you again. And thank you for your candour on your reference to the moral imperative to deal with food security and the environment. We're ignoring it. We have 10% of our population who are food insecure in Canada, living in poverty, and we just don't seem to be willing to do anything about it.

You also heard me reference earlier the government's own expert panel on federal support to research and development, which noted that we've consistently dropped our expenditure on research and development each year since 2006, to the point where we spend only 1% of our GDP on business expenditure on R and D, as opposed to the 1.6% that's spent on average by 34 other OECD countries.

And it gets worse. NSERC has dropped quality and novel by-products from its list of target areas for strategic grants, and the Network of Centres of Excellence, as you know, didn't renew its funding for the Advanced Food and Materials Network, otherwise known as AFMNet. I'm sure you know Rickey Yada, in Guelph.

It's disconcerting to me that this trend exists when we have to increase our food production by 70% over the next 40 years if we're going to feed the world.

So can you tell us, are we heading in the wrong direction? Should we be reversing our course? What do you think should be done to restore agriculture and agrifood as a priority for granting agencies?

● (1700)

Dr. Mary Buhr: Asking a researcher and a dean if there's enough money in the system is always.... I mean, there isn't. There never is. We always have to—

Mr. Frank Valeriote: But I'm talking about the trend.

Dr. Mary Buhr: I understand. And the trend, particularly in the NSERC system of science and technology, has been going down. The changes in the NSERC system have been an issue for us for sure.

Within the science and technology of Agriculture and Agri-Food Canada, it's been increasingly focused. That focus has been a choice of AAFC, and we're not really unhappy with that. The problems we have in working with AAFC are exactly what have been referred to by a number of other people: the large increase in the level of bureaucracy, the difficulties in making programs work, and in the rapid-fire changes or the lack of forethought.

With that, as a direct answer to your question, what I would like to encourage, particularly within Growing Forward 2, is that AAFC continue to increase its researcher base, which they started in Growing Forward 1. Also, don't throw out the cluster program. We've had a lot of problems with it, yes, but those were the implementation problems; those are not the problems of the actual program itself. In the first two years, if you mentioned the cluster program, people would spit at you, but now, as we've gotten through the problems and we're actually seeing how those collaborations are really working well, people don't want them to end. That's why losing AFMNet was such a problem, because this was working.

Let's fix the problems, but let's not throw out the baby with the bathwater. Let's just sort out the issues, learn from the mistakes we've made, build on the good portions of it, and keep it going. We really like having AAFC as collaborators, with its political connections, with its interest in application, and with the power it has in the research stations across the country. We like having them to work with; we find them to be really good partners.

The other thing we'd like AAFC to be able to do is to be more openly involved in the training of people, in the training of graduate students and technicians, and reduce some of the barriers, such as the high-level security just to get in and out of an Ag Canada building, even if you're collaborating with them. Those pieces would really be helpful to us in order to enhance our ability to collaborate.

Mr. Frank Valeriote: Do I have time to ask Kevin a question?

The Chair: You have time for a statement only; you've got less than 10 seconds.

Mr. Frank Valeriote: Can you tell me about the competitive disadvantage associated with your need to deal with carbon emissions? And do you think it should be a national program to level the playing field across Canada on—

The Chair: Maybe in answering you can respond to that one.

I'll move to Mr. Hoback for five minutes.

Mr. Randy Hoback (Prince Albert, CPC): Thank you, Chair.

I'd like to thank the witnesses for coming out this afternoon. It's always great to see you here and to talk to witnesses who have some credibility. I think that's great.

I'm going to start with Ms. Buhr. The last time we met it was actually a great day in Saskatoon. It was the opening of the VIDO-InterVac laboratory, and we had a special guest there.

When we look at the funding of that operation and the process you went through to get that, from basically a theory to actual cement and mortar...have you any advice? Would you say that is a process we should look at for other projects in the cluster? Or is there something we could be doing better? Have you any opinion on that?

● (1705)

Dr. Mary Buhr: The VIDO-InterVac Centre was jointly funded with large input from the federal and provincial...and the university as well. It's level three research that can actually do disease research on large animals. So we can take in cows and do level three disease research. It's really useful and important.

Again, with the issues that went into it, from start to finish it took about 10 years, but that huge collaboration on what was recognized as a national need is absolutely a model that we would certainly promote. It is also the kind of thing where you can say, “We need one or more of these in the country, and who can best do it? Let's focus it there and make sure everybody has access to it.” And that collaborative spirit of building plus the joint access subsequent to that is a very important model.

Mr. Randy Hoback: Actually, you went right where I was going to go next, and that's the collaborative aspect. If you were to look today at the collaboration among universities and the work among researchers from campus to campus—and it would have been nice to have the University of Winnipeg online here at the same time because I'd like to ask them the same question—are there things we could do better? Is it important? Or how important is that collaboration?

As that moves forward, as I said, are there things we could be doing better?

Dr. Mary Buhr: We are working better together as agricultural universities across the country than we ever have been in the past, and that is just growing. So that is very useful, we think.

Again, the kinds of programs that you put out there to entice us to work together are the ones that are very useful. In the agricultural community we appreciate the programs that work with Agriculture Canada, the universities, and industry, because that grounds us in a great reality and helps the kind of dialogue we need.

It might be very useful if the same sort of approach were used in a public dialogue. One of the reasons we don't get enough students coming into the universities to service the industry and everybody else is that agriculture is not thought of as a highly technical and very exciting kind of career for the future. We don't have an image problem; we have a problem with the public trusting us. They trust farmers, but they don't trust agriculture, and they don't understand agriculture to be the breadth that we understand it to be. So if you can partner with industry, universities, and government—provincial and federal—to undertake that kind of a public dialogue that would actually get the truth out and find out what people need to know in order for them to trust us, it would be very helpful, I would think.

Mr. Randy Hoback: On the aspect of trust, that's a good point you make. What's undermining a lot of the research and the work we're doing in moving forward is the fact that we have people who have ulterior motives to undermine that trust and who have economic reasons to undermine that trust. I always come back to the role of this committee, or the role of government. It's always to ensure that we have safe, affordable food. And I always get a little concerned when people say that government isn't doing its job or that farmers aren't growing safe, affordable food when I know differently. Is there anything we can do or any strategies we should look at for overcoming this mistrust?

Mr. Kevin Boon: That's one of those age-old questions. Is it mistrust that we need to overcome, or is it education that we need to put out there?

I think what has happened is that our consumers and society have reached a point at which we have created such a safe product that they are unwilling to accept any risk. If we look back through history, there has always been a risk associated with it. Now it seems that there is no risk that is acceptable in the public's eye.

We by no means condone any chance of a sickness or an illness, and we want to keep it as safe as possible, but there has to be an understanding that there is always an element of risk; that is one thing that comes with life.

Sometimes we work so hard to make it riskless that we have to step back and understand a little that we just can't do it.

The Chair: Okay. Thank you very much.

We will now move to Mr. Allen.

● (1710)

Mr. Malcolm Allen: Thank you, Mr. Chair, and thank you to both witnesses.

Dr. Buhr, you talked earlier about what I will call an input, when you talked about seeing this challenge in front of us concerning 2050. One of the inputs you talked about is the scarcity of water. Could you speak not to the scarcity per se, but to what sort of research we need to do if we indeed have a scarcity of water? Plant life doesn't grow well without at least some. The odd cactus does not do badly, but I don't know that they're very edible. Some are, I suppose, but the spiny ones don't seem appetizing.

At the same time, rather than coming back to ask another question, let me ask this. You talked about the waste stream, and I am quite interested in it. It is a less glamorous aspect, perhaps, of areas in which innovation and research are needed, but one which seems to be—no pun intended—the low-hanging fruit for science and innovation to capture.

What do you see as specific things that we should be looking at in those two specific areas around research and development?

Dr. Mary Buhr: In terms of both plants and animals, we literally need to be breeding for drought tolerance, for lower water needs. We can do that, if we're encouraged to do it. We also need to look at improving the practices we put in place to reduce water losses. We need to be looking, I think—and I'm probably not the one to speak to this—at regulations around irrigation and water capture in many of our different aquifers. It has always been free, and we don't give it the value that it has.

Again, we need to be looking at not just breeding our current plants and animals, but at all of the indigenous plants and animals that may have innately greater efficiency of growth in the absence of excess water so that we can, again, do the best with less.

The other question was with regard to waste streams. Every aspect matters. We need to harvest more efficiently so that we're not losing product in harvesting; we need to make sure that what we harvest is used as thoroughly as possible. Just as now we use canola seed for oil production and use the rest of the plant to feed animals canola meal, there are probably other plants and things that we ought to be using more fully, so that we're capturing all of their value, again without depleting the soil too much of roughage.

There are many examples around this kind of thing that we really ought to be doing. We need to be processing food in a very effective way and processing it so that it is nutritious but also so that it meets the taste needs of the consuming public.

We need processing, storage, and harvest. Those would be the three pieces that are the most obvious in terms of reducing waste.

Mr. Malcolm Allen: From your perspective, are we seeing the research work being done in those three waste stream areas that we need to get done in order to attack the problem you're identifying, in which there seems to be potential, without actually using other resources—no more water, no more arable land—to actually have an increase in production simply because we lose less?

In the industrial world, scrap costs you money, so that if you have waste, it's a cost. It seems that in the food world, the agricultural world, we have a huge scrap value, and yet we're not attacking it as a huge cost to us per se. It's seen as another value added rather than a huge cost that we have lost. It seems to me there needs to be a transformation in thinking, in some sense, to seeing this as a huge cost to us rather than a potential for earning a living from it.

● (1715)

Dr. Mary Buhr: Let me give you two examples. Guelph spent years trying to get sufficient funds to support post-harvest technology, and I don't know whether they ever managed to get it. Nobody was interested. It simply wasn't sexy enough, wasn't interesting enough. It can take a lot of technology, which can be expensive, and it's just not that attractive.

I would say that the research community basically isn't getting some of the research support they need simply because it's not sexy enough.

Then, how much food gets wasted at a restaurant or in your own homes? What do we do with it? Maybe we compost it, but maybe the rest of it—absolutely the vast majority of it—is burnt. And we have legislated that it cannot be used to feed swine because of the health risks. Well, why aren't we looking at how that food could be used to create more food? Is there a solution? We just say burn it.

Mr. Kevin Boon: Can I make a comment about the waste side of things?

The Chair: Well, we're way over time, but if you're very brief, Mr. Boon, you may.

Mr. Kevin Boon: Another aspect of waste is not just what we're wasting in food. We use a lot of products. Ag plastic is one, which we utilize every day to cover and protect our feed. We have no place to get rid of it, because we can't get it clean enough for any of the recyclers to take. We need to look at innovative places such as that to put our money. It's environmentally sound and it makes good sense.

The Chair: One thing we didn't really touch on...and I don't have an answer to this, but it's too bad we couldn't convince the public, rather than our having to deal with so much waste, to create less waste. The amount of food that is thrown out in a restaurant drives me nuts. And people think nothing of it. It's just the way it is.

We now move to Mr. Lemieux for five minutes.

Mr. Pierre Lemieux: Thank you very much, Chairman. I'm going to let Mr. Payne make a comment. He wanted to make a comment on the matter.

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

This is to Dr. Buhr. In your comments about water and waste water and irrigation, I understood you to say it was free. I can tell you that on the Prairies it is not free. Every farmer must pay for his or her irrigation water. Thank you.

Mr. Pierre Lemieux: I am going to keep my questioning short, Chair. I wanted to have a discussion with Mr. Boon.

We've had a lot of discussion about the science clusters with different witnesses. They seem to be a good idea, because they're bringing together industry experts along with government and scientists. When I was listening to your comments, though, I had a general sense that you were on the outside looking in. I didn't get a sense that you felt you were a contributor to that process, from the comments you were making.

Could you comment on that in terms of where your influence is in these science clusters? I know the CCA receives $6 million from the federal government to manage a science cluster; I know they launched certain initiatives. I would imagine, though, that the CCA checks with its members concerning where research should be conducted, but I wanted to ask this. It was nothing specific that you said; it was more in the tone.

Mr. Kevin Boon: Then you're pretty perceptive.

Mr. Pierre Lemieux: Well, all right.

Mr. Kevin Boon: I just don't feel comfortable commenting on something that I'm not thoroughly involved in.

Now, when it comes to the science cluster, to give you a bit of my brief history, I am general manager for the BC Cattlemen's Association, but that's only been two years. For 40 years prior to that I was a rancher in Alberta. I was involved a little bit in the inception, when the science cluster took place. I haven't been involved on the level of the projects they're doing.

We do have representatives from our province who participate within the Beef Cattle Research Council who understand and know what they're doing. Because we're such a big industry and because we're national, we have to trust on their input and that national body to do it. Having said that, I have no worry that if I have an issue with one, or if I have a problem, I can phone up those involved, Andrea or Reynold, and talk to them about it; I know I will get a straight answer.

Research is something where often—and I'll consider myself a layman, as a producer—we need to step back a little bit, too, and not be too involved, because sometimes we will disrupt what the outcome of that will be, or we direct it in a way that isn't right. Research needs to be pure. If research is to achieve what we want it to, we have to keep out as many outside influences as possible.

As I think it was alluded to earlier about those who fund, sometimes we look at the credibility behind it. Often if we fund a research project on food safety, the consumer looks at it and thinks, “Oh, the beef producers did it. What value is it? They have an ulterior motive.” But when we have a cluster and everyone is involved, it gives some trustworthiness to that. It gives some credibility to it, and accountability. I really applaud it.

Too, the other thing that happens with these clusters is that they create some efficiencies as well. All too often when I was involved on a committee level, we would see research come in from different applicants and they were trying to do the same thing. By having it concentrated in one area, we're able to make sure we aren't duplicating that same research.

● (1720)

Mr. Pierre Lemieux: All right. Very good.

Thanks, Chair.

The Vice-Chair (Mr. Malcolm Allen): Mr. Atamanenko.

Mr. Alex Atamanenko: Thank you. I didn't realize I had a question, Mr. Chair. It's so kind of you.

First of all, Kevin, I'd like you to talk a little bit about research specific to the cattle industry. I understand it more when it comes to the grain industry and how different things are developed, but I'm not quite sure specifically what kind of research needs to be improved or done to enhance your productivity or the quality of the cattle. Is it specifically with the breeding of the animals?

You also mentioned the feed. Should we be doing more, for example, in our province to research the types of crops that would be useful to become more self-sufficient in B.C., for our industry?

I'm wondering if you could just give me a Coles Notes idea of what research involves in the cattle industry.

Mr. Kevin Boon: Sure.

The one thing about research is that it is all encompassing. We do research everywhere from market studies to see what is more accessible.... We talk about how much of our waste we are putting out in British Columbia or Canada that...we can't export to some of these countries. Prior to BSE, we could get rid of a lot of our offal, a lot of products that we consider waste. We're doing some research now on the lower mainland to see if we can target the Asian markets to utilize more of that product.

On the other hand, there's research into the health of animals and into antibiotics and resistance and into the feed—we're seeing trade barriers put up in Europe over growth promotants. We know that through proper research and science we can prove beyond a doubt that this is not a health risk. However, that science doesn't always go that far. So we have to find research to determine what we can do to increase our productivity without utilizing this. Is there a natural way of doing it, and can that be done through plant growth research?

Our Kamloops research centre was previously for livestock research, but all of the livestock research has now gone to Lethbridge, and the government has centralized these. They are now making Kamloops into a grasslands research. I believe that's an excellent choice. We have a lot of opportunities there. We have different elevations that we can test different grasses on. We can look at invasive plants. There are so many things that go into growing an animal. Between animal care—proper management tools, proper equipment to be able to do it.... We've got handling equipment out there now that through research has shown how we can effectively move cattle through and....

What is research? Temple Grandin did it on her back in the middle of a cattle pen, and that was research. She revolutionized how we handle cattle in North America. Systems have been created through that.

But we need that to keep up with the demands of society. Most of the practices of the old, where we turned the cattle out, we let them graze, they fattened, and we slaughtered them, are no longer acceptable to society. And we're having this growing population. In order to do that, we have to have the innovation and the technology to get them there and be able to back it up with the science.

● (1725)

Mr. Alex Atamanenko: Can I ask you specifically about Kamloops? I know we had a discussion on Summerland with the other folks. Is it up to sufficient capacity? Do we need more researchers? Do we need more people to work on the grasslands initiative? I've been to the centre. It's quite an impressive centre. Is it working to capacity or are they in need of more scientists?

Mr. Kevin Boon: I would say right now they're definitely in need of more scientists, for the simple reason they're just gearing up. To be quite honest, we still aren't exactly sure of where the program is going and how it will be facilitated. It's just within the last few months that it's changed over to this way. They are being very good about consulting with industry, with the universities, with the Grasslands Conservation Council. There is a very distinct need in this area and a really good opportunity to utilize.... And here again, I talked about some of the differences in British Columbia. Because of our terrain, as you well know, we can't do some of the common practices that are done within the Prairies.

I also have to say the political atmosphere in British Columbia is perhaps a little more green—I'll put it that way. We're influenced by that society, so we aren't able to use herbicides and pesticides in the same manner. In the past at that research centre we were able to create and breed biobugs that went out. I believe it was knapweed that basically we were able to eliminate through bugs. It's that type of research that we're able to do. It's effective; it gets rid of it. It increases our production because we get rid of a noxious weed that is competing for our grasslands, but we do it in a manner that society is making us do it.

Down the road, those attitudes may have to change. If we've got three billion people to feed in the next 50 years or more, it goes back to that element of risk too.

The Vice-Chair (Mr. Malcolm Allen): Thank you, Mr. Boon.

We have Mr. Storseth on the list, but he's not with us, so I'm interested in whether Mr. Payne or Mr. Sweet would care to finish this off. We're okay? I'm happy to come down to Mr. Lobb. He was actually after Mr. Storseth. Does Mr. Lobb want to take the last few minutes?

Mr. Ben Lobb: Thanks, Mr. Chair.

My question is for Mr. Boon. There was an investment last year to deal with traceability and a number of different things with the BIXS system. One comment I've heard from some—not all, but just a few—cattle farmers is the one about the tags. I'm wondering if that is something you folks have experienced and if you can tell us if that is being looked at as well with that program.

Mr. Kevin Boon: Yes, and actually I apologize for not remembering that one; that's one of the most recent ones when you talk about federal involvement. Tags and technology are huge issues for traceability. We have almost two things happening here within our cattle and livestock industry in Canada, and that is an increased demand for traceability, but really it's trackability in some ways. There's this desire to know every place that animal has been, every minute of its life. Technology is not allowing us to do that.

Until it does, we have to use that common sense approach as to how we do it. With tags, because of our environment, we definitely have some challenges—for example, retention: the strings on the bailer twines will pull them off if they're not in right; trees will pull them off. We have to understand that while that animal is on its original place, it's fine and it doesn't need it. We have to put trust in the owners and in the fact that there is research being done. The Canadian Cattle Identification Agency is in the middle of a program doing three-year tests to try to increase that retainability. There is also readability.

I think one thing I want to put in this—and that's part of this research and development—is that we will get a lot better results if we can tie it to a market value and to our value chain. We can utilize that little tag now and that RFID number for value adding, for tracing some of that information to know what the vaccination standards are, to know that they're on a verified beef program, to know what kind of feed they've been on—have they been on grass, have they been on grain, have they had hormones? Those things are extremely important, and if we can put value to that, there is no need to worry about tracing these cattle through because the ranchers and the feedlots and the processors will do it on their own because there's value to it.

● (1730)

Mr. Ben Lobb: I have just one quick last question, because our time is running short, on conversion ratios. I raised this in previous meetings as well. With pricey cattle, obviously everybody is quite happy to see where the price of fat cattle is right now. They are equally unhappy at the price of the feed to get them to that weight. So for conversion ratios of feed efficiencies, can you tell this committee just briefly what you've seen so far in research and where that research is heading?

Mr. Kevin Boon: Certainly. There are certainly different things like chemical additives and growth promotants that will help those conversions. There's also genetics. There's always genetic research going on to find out which genetics convert better, which feeds convert better.

We are trying to cover a problem that is maybe not necessarily going to be solved through conversions. We have to look at why those feed costs are going up and why the other prices are going up. Right now in our feeding prices we're competing with energy for a food product. To get the grain into our cattle, we're competing with biofuels right now. So we have to make sure that when we develop programs such as this.... It's great for the grain farmer, and I'm not one to back off on agriculture, but what are the best grains?

I was listening in this morning on the presentation that was made by the dairy farmers to the Senate committee on agricultural on issues like this, and it brought to mind sugar beet and sugar cane—a much higher return for the investment for what's there. So let's make sure that if we're going to do it, number one, we make sure we're using the right product in the ethanol, and number two, we don't subsidize one at the expense of another. I think that's an extremely important thing to remember going forward, that in producing the ethanol and the biofuels, we have to wonder what we're doing on the other side and what's the importance and what's the cost.

The Vice-Chair (Mr. Malcolm Allen): Thank you very much. Our time is up, and it's been an interesting hour. Thank you to both Dr. Buhr and Mr. Boon.

Thank you to the committee for your time and your questions.

As Mr. Miller would say, we're done. The meeting is adjourned.

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