House of Commons
CANADA

Standing Committee on Agriculture and Agri-Food

AGRI • NUMBER 008 • 2nd SESSION • 39th PARLIAMENT

EVIDENCE

Monday, December 10, 2007

Chair

Mr. James Bezan

Standing Committee on Agriculture and Agri-Food

Monday, December 10, 2007

● (1535)

[*English*]

The Chair (Mr. James Bezan (Selkirk—Interlake, CPC)): I call this meeting to order.

We will continue with our study on Growing Forward, and hopefully get this wrapped up by the end of the week.

I welcome to the table today Jeff Reid, vice-president of the Canadian Seed Trade Association; from BIOTECanada, we have Phil Schwab; from Performance Plants, we have David Dennis, president and CEO; and from Pulse Canada, we have Gordon Bacon and Todd Stewart.

I welcome all of you.

If you could keep your opening comments to 10 minutes or less, it would be greatly appreciated.

With that, we'll kick it off with you, Mr. Reid.

Mr. Jeff Reid (First Vice-President, Canadian Seed Trade Association): Thank you very much.

Thanks again for the opportunity to present before you today on behalf of the Canadian Seed Trade Association. I'll start off with a few words about who we are.

The Canadian Seed Trade Association represents over 130 member companies engaged in all aspects of seed research, production, and marketing, both domestically and internationally. The membership ranges from those who market garden seed and herbs to large western grain handlers and from small family-run businesses to large multinational corporations.

CSTA members work with seeds from 50 principal crops, including grains, oilseeds, special crops, forages, turf grasses, flowers, vegetables, and fruits. The mission statement of the Canadian Seed Trade Association is as follows:

> The Canadian Seed Trade Association is committed to fostering an environment conducive to researching, developing, distributing, and trading seed and associated technologies with the goal of bettering the choices and successes of our members and their customers.

Given our mission, we welcome very much the Grow Canada initiative, Growing Forward. We very much appreciate that mission statement, which reads:

> A profitable and innovative agriculture, agri-food and agri-based products industry that seizes opportunities in responding to market demands and contributes to the health and well-being of Canadians.

This element of innovation is central to CSTA's efforts, given that innovation in agriculture starts with seed.

What I'd like to do today is not to present from our submission before you but to speak with some personal insights and observations from my own involvement in the industry as first vice-president of the Canadian Seed Trade Association and also as general manager of SeCan, which is based here in Ottawa. We distribute about 370 different varieties of seed throughout the agricultural community across Canada. Those are developed by both private and public plant breeders.

Why is the Canadian Seed Trade Association concerned with innovation and competitiveness?

First of all, I'd like to say again that we're very happy to see that this is a big part of Growing Forward. I'd like to start off by saying that obviously the Canadian Seed Trade companies supply seed to farmers. When farmers don't make money, they spend less on seed, or in many cases they don't buy seed at all. When seed companies have bad years, they don't rely on safety nets. In many cases, they end up going broke, as a lot of seed companies have over the last decade. There's been a tremendous rationalization within the seed industry across Canada.

Those companies that are left in the seed industry today are very much focused on innovation; they're innovation-based. That's really based on the fact that they're still existing in the marketplace today. They depend on that ability to innovate to ensure their livelihood.

Canadian seed companies actually invest about 26% of their operating budgets into research. Despite that, we see that four out of five of the major crops in Canada are becoming uncompetitive, and farmers are choosing other options. For example, we see that wheat acreage and productivity continue to decline in Canada relative to other options. We see that in many cases the U.S. has a competitive advantage in other crops due to their climate. We believe that in Canada we should have a competitive advantage in cereals. But again and again we see that farmers are choosing other options in which there's more investment in terms of private research.

In summary, the majority of acres in Canada have virtually no private investment, which is illustrated on page 2 of the submission you have before you. We feel those sectors of the Canadian seed industry are beginning to decline in competitiveness due to a lack of synergies being created between public and private investment.

Where should innovation come from?

The CSTA feels that this should be a balance of both public and private money. If we look at the canola example, we see that public money was invested up front to get the industry going, but then private dollars have come in, and we have a healthy and growing industry in canola due to things like hybridization and the ability to perform genetic transformation. There's been a large investment of private sector money in canola.

In that crop Canada has become a world leader, and that acreage continues to increase because clearly, farmers can make money growing canola. This has been achieved in a few crops—canola, corn, and soybeans. Again, when we look at four of the five largest acreage crops in Canada, we see that there's very little investment there.

Illustrating that lack of private investment, on page 2 of our submission you can see when we refer to cereals that less than 6% of the private investment is going into cereals. That's projected over the next five years, based on a survey of CSTA member companies, to decline to less than 3%.

Why is there a lack of investment from the private sector? I would like to illustrate with a couple of examples of my own. Last year, in 2006, we launched in western Canada a unique durum wheat variety called Strongfield, and we had a very successful launch. It was based on strong agronomics and some unique milling and processing qualities, but we found that while there was a large uptake of the product early on, it was very rapidly commoditized, and in just the second year of sales we found that sales were only 40% of what they had been in the first year's introduction. So while the acreage of that crop continues to climb substantially—that variety is now the number one selling durum wheat variety in western Canada—by the second year we already have seen seed sales diminish very significantly. Obviously, there is very little opportunity for the private sector to benefit from seed sales by introducing a new variety.

We see that it's not just our ability to sell the certified seed, but we can't protect the variety name downstream in order to make sure that farmers enjoy the value-added benefits of processing. We don't have the ability, either, to patent those products in Canada and thus to manage the longevity of that intellectual property. We feel we should have many of the same tools available in agriculture that we have in other sectors of the economy to make a true value chain.

As another example, we introduced another hard red spring wheat variety in 2006, and it was the same story: by 2007, rapidly declining seed sales to less than 40% of the launch year. So there's very little incentive for a seed company to bring on new technology.

This is particularly of concern to us now, as we are introducing midge-tolerant wheat varieties in western Canada, which should have a tremendous benefit to farmers. But without any control over the use of that seed or that technology once it gets out into the marketplace, there's a real concern that farm-safe seed will be used for many generations, and thus the refuge that's in that varietal blend will be diminished and that trait will thus be lost to Canadian farmers. It's very difficult not only to justify bringing on new innovation but also to manage it once it's out in the market.

Where there has been substantial investment from the private sector, in crops such as corn, canola, and wheat in eastern Canada, we've seen that yields have been up substantially. In 15 years we've seen a 59% increase in corn yields, a 27% increase in canola yields, and a 62% increase in wheat yields in eastern Canada. This is due to two things: a lot more private investment, and also getting rid of “kernel visual distinguishability”, which we're very happy to see we're moving ahead on in western Canada.

I reported just over a year ago to the standing committee that we hadn't received any new varieties of winter wheat in western Canada in five years—we'll now make that six years—based on kernel visual distinguishability. We feel strongly that the sooner we can get away from that KVD constraint, the better for Canadian agriculture.

In current opportunities going forward, Grow Canada has estimated that the bio-economy in plant-based agriculture could be worth $500 billion within the next decade. That's a real opportunity that I think we need to consider in the Growing Forward initiative.

In the case of ethanol, we're seeing in western Canada the oncoming of high-yielding, low-protein, high-starch, and, in many cases, non-distinguishable varieties that are going to be very beneficial for western farmers.

Higher-yielding feed-type wheats are really needed in western Canada; we have a feed industry in western Canada that's begging for new innovation in that regard.

As proposed solutions from CSTA, first of all is regulatory reform. We need amendments to variety registration, which would allow us in many cases to open up variety registration on the major cereal crops, to be more flexible.

● (1540)

We have noticed that there has been really no change in the registration system for most of those crops, despite the fact that we've been talking about variety registration for the last 20 years.

On export facilitation, we need to accredit companies that can do their own export sampling and testing. We had a pilot program in place five years ago that was very successful, but which hasn't been followed up on. Now it's taking companies up to eight weeks to get approval for shipping containers for export. This is something on which we really need immediate action.

To encourage more certified seed use, we have a number of proposals in place, including: a tax incentive that would allow producers to claim 155% of the cost of their seed against their income; crop insurance amendments to allow for either a discount in premium or enhanced coverage on the basis of certified seed use; and of course enhancements to intellectual property, covering both making plant variety patents available in Canada as well as becoming UPOV 91-compliant and recognizing the legitimate interests of breeders.

In conclusion, we feel there are real consequences to not taking proactive steps to encourage innovation, and there are exceptional opportunities right now to invest in industrial fuels, food, and feed. We need a more flexible and nimble regulatory system and greater incentive for innovation through a stronger system of intellectual property protection. Incentives for certified seed are required that share the cost of innovation across society as well as among all farmers. Again, we appreciate the fact that innovation is central to this Growing Forward proposal.

Thank you very much.

● (1545)

The Chair: Thank you, Mr. Reid.

Mr. Schwab, please.

Dr. Phil Schwab (Vice-President of Industry Relations, BIOTECanada): Thank you very much, Mr. Chairman.

It's also my pleasure to be here today to address the standing committee on the Growing Forward plan for agriculture in Canada, and specifically to address the chapter on innovation and science.

I'm joined today by Dr. David Dennis, who is the CEO and president of Performance Plants. He will be completing my remarks.

BIOTECanada is the national association representing over 200 companies working in the broad spectrum of biotechnology across the agricultural, health, and industrial sectors. We are also proud to say that we are the most innovative industry in Canada. According to Statistics Canada, in 2005 biotechnology R and D accounted for 12% of Canada's total business-related R and D. That was the highest single sector in the country.

We have been pleased as an organization and as a community of companies to be engaged with Agriculture and Agri-Food Canada throughout the past year as they have consulted on the Growing Forward initiative. Our members believe that Growing Forward does provide a strong opportunity to move the Canadian agricultural sector to new heights of productivity and profitability.

The members of the committee are well aware that Canada is a global leader in the adoption of agricultural biotechnology. Agricultural biotechnology has led to reduced herbicide and insecticide use in our agricultural environments and has led to an increase in environmentally friendly activities, like no till. Our farmers are becoming aware of the growing advances for biofuels and industrial uses for our crops.

We're here to tell you today that this is just the beginning of what biotechnology is going to bring to Canadian agriculture, that great things are happening, and that biotechnology will allow Canadian farmers to adapt to new global markets, changes in our climate, and changes in consumer demands. This innovation is happening from coast to coast, in all provinces, and it's happening in small, medium, and multinational companies.

A key message that we'd like to leave with you today is that the government does have a role in continuing to help our companies and our farmers innovate and compete globally in order to add high-value jobs to our rural communities and strengthen investment in our small towns and villages. The strong support for innovation found in Growing Forward, if fully realized, will allow Canada to continue to be a global leader.

We have distributed to you a slide deck that contains some great examples of innovation happening across the country. I'd just like to briefly mention a couple of those. Our first example comes from Summerland, British Columbia, where Okanagan Specialty Fruits is working in partnership with Agriculture Canada scientists to develop varieties of apples and pears that do not brown when you slice them. If you think of your kids' lunch boxes, this would be a great thing: you can provide them with sliced apples so that they actually eat the apples instead of throwing them in the trash can or trading them with their friends for candy bars. Providing an opportunity for a more convenient healthy snack is going to align with a lot of our societal goals for healthy living and fighting obesity. We're really pleased that Okanagan Specialty Fruits is doing something about this type of issue.

Secondly, I'd like to move to Bellevue, Ontario, where Bioniche Life Sciences is currently commercializing a vaccine against E. coli 0157H7. This bacterium, we know, is a devastating health crisis in the meat industry and for consumers. Bioniche has currently received preliminary approval from the Canadian Food Inspection Agency to market this stunning advance in animal health.

Multinational companies have been investing in technology to develop canola and soybean varieties that contain healthier oils that can help our restaurants and food manufacturers replace trans fats with healthier oils and help all of us be more heart healthy. It's from that investment in that research and the ability to commercialize and market those new varieties of soybean and canola that we will all benefit, not to mention the farmers who get a premium for growing those varieties.

● (1550)

Those are a few examples of what we can accomplish, but there are a couple more that are also quite interesting. Many people know about SemBioSys of Calgary, which is currently commercializing university research that will allow them to grow a small acreage of crops that can supply a significant portion of the global need for insulin. This is a tremendous opportunity for a new use for the adoption of Canadian technology for a serious health crisis.

Stirling Products of Prince Edward Island is developing technology that came out of the University of Prince Edward Island to develop a new type of growth-promoting product that uses yeast extracts to replace the need for hormones and antibiotics in animal feed.

Finally, companies like DuPont and Pioneer Hi-Bred are working to bring what we know in Canada as the bio-refinery concept to fruition by taking corn and turning it into carpeting, clothing, and even a de-icing solution.

These are just some of the advances in technology we see moving forward. What are we asking the government to do in promoting this new technology? First, we need a regulatory system that is grounded in science, predictable, and can adapt to new technological advances. We're pleased to see that Growing Forward contains a strong message about the need to modernize our regulatory system.

The industry is doing its part too. Our member companies have agreed, through our product launch stewardship policy, that we will not commercialize a new product in Canada before receiving regulatory approval in our major trading partners.

A regulatory system also needs to have sufficient resources so that applications and submissions can be processed in a timely manner.

Finally, I'll echo the comments of my colleague Jeff Reid: Canada needs to maintain a strong and predictable intellectual property regime for agricultural products.

In conclusion, Growing Forward represents a strong, positive message for innovation and science in Canada, and we believe that the innovations under development in our biotechnology companies can add a great deal of profitability and productivity to Canadian farms.

I'd now like to turn it over to my colleague Dave Dennis, who will tell you about a specific example of Canadian technology that's being used globally to advance agriculture.

Dr. David Dennis (President and Chief Executive Officer, Performance Plants): Thank you very much for letting me make this presentation to you today.

My own background is that I was a professor at Queen's University for 28 years before we founded a company in 1996.

Just about two weeks ago, Sir David King, the chief science advisor to the U.K., said that the U.K. must embrace GM crops because it's crucial for the revolution we need to feed nine billion people in the world before 2050.

Performance Plants is a Canadian plant biotechnology company. We have an 11-year history. We have labs in Saskatoon and Kingston. We completed the biggest private equity financing in 2006 in ag-biotech, and we've got licence agreements with the major multinationals. We just moved into a new facility a few months ago in Kingston; it is state of the art and gives us a tremendously enlarged capacity.

We target two markets: food, which means we've got to get more seeds per acre to give us more oil, protein, and starches; and biofuels, which means more energy per acre for things like ethanol and biodiesel. We have 47 patents issued and pending around the world.

The drivers for new crop traits are that there's no new arable land available in the world. We're using all the land available. Global warming is going to cause drought and heat, which is again going to reduce yields and give us great problems. We've got depletion of fresh water supplies, which is probably going to be an even bigger problem than global warming and climate change. We've got to increase yields per acre, or else we're going to have major problems.

The drivers for biofuels are reducing Canada's carbon dioxide emissions and finding alternatives to fossil fuels. The timelines for doing this are very short. We've got to move on this very quickly.

In terms of new crops for biofuels, we must increase the mass of the entire plant for biofuels, whether you're making ethanol, biodiesel, biogas, incineration products, or bioproducts. We've got to increase the amount we can produce per acre by large amounts.

The crops we're going to be growing are in fact new types of crops—sweet sorghum, hemp, poplar, miscanthus, switchgrass, and a variety of other novel crops—which will give us high biomass per acre.

In our own technologies we have developed drought-resistant plants, which we call YPT technology—the yield protection technology. On the next slide you'll see the impact of drought flowering on corn development. A normal corncob is somewhere between 450 and 500 kernels, and if you have drought, flowering can get down to something like 15 kernels. It's a massive problem.

We have made this little plant called arabidopsis drought resistant. These are plants that have not been given any water for eight days. You'll see the plant on the left, the parent plant, is dead, but the other plants will in fact survive and produce a crop.

Unfortunately, you can't see my movies, but if anybody wants to see the movies afterwards, I've got them on my computer with me, and we'll send a disk for anyone who wants to see them.

We've done this with canola. We've had field trials now with canola for four years. If you look at the next slide, the amount of oil we're producing, the light blue shows the control plants, and the dark blue is the impact of our technology on improving yields of canola plants under different conditions. In 2003 there was no drought, and you can see we don't get a loss in yield; there is a slight increase.

We're producing a whole series of other crops; BET is increased biomass. We can increase the biomass of a plant by six to ten times, so this is going to be useful for biofuel crops. We're making crops that can break down more rapidly. This is a big problem when making ethanol from plants as a whole, rather than just from starch, and we've got some now that will break down incredibly rapidly.

We've got the WET technique, which allows plants to use water more efficiently, and we have a HEAT technique that prevents damage to plants during heat. In canola, a 29-degree temperature will in fact reduce the yield dramatically; just this morning I got some data suggesting that with our technology we can increase the yield under heat conditions by something like 40% to 50%.

The next photograph shows you the impact of our BET gene. You get a huge increase in the stem size and, again, a great increase in the biomass. This is a wonderful movie, but unfortunately you can't see it. If anybody wants to see it afterwards, I can certainly show it to you.

We're taking our technologies to Africa. We've been working with a person called Florence Wambugu, one of the most marvellous people I've ever met. She now is the president of the Africa Harvest Biotech Foundation International in Kenya. We've got the alliance in place and we're now looking for funding from foundations to support this and to develop new crops. The first one will be for drought. Drought is a huge problem in Africa, as you know. As Florence says, Africa cannot afford to be excluded from the biotech revolution, so we're developing this. We hope that in the next very short while we will in fact be developing things like white corn for African countries.

That is my presentation.

Thank you very much.

● (1555)

The Chair: Thank you, Mr. Dennis.

Mr. Bacon, you're on.

Mr. Gordon Bacon (Chief Executive Officer, Pulse Canada): Good afternoon, everyone. I thank you for the opportunity to appear before the standing committee.

Todd Stewart, who is the board member from Manitoba on the Pulse Canada board, as well as the six other board members of Pulse Canada, representing grower groups and processors from across Canada, appreciate the opportunity to talk to you today to give some of our views about government policy framework that will guide programming in this sector for the next five years.

I'd like to start by saying Pulse Canada was very pleased to hear that ministers have agreed to seek the authority needed to continue the existing non-business risk management programming for up to one year. There are two important messages we would like to leave with you regarding the extension of these programs.

The first message is that timelines are already very tight. Once the authority for continuation is in place, organizations like Pulse Canada have to work with the department to work on applications, approvals, and getting agreements signed. This has been a very lengthy process under the ag policy framework. All of these elements need to be done on or before April 1, as some small organizations or those with large programs under the policy framework rely on advance payments and timely payments on claims. Timely cashflow under these programs is important for obvious things such as salary and administration, but it's also important to allow sufficient time to ensure work isn't rushed at the end of the extension because of delays at the start of the program.

The second message we want to leave with you is this. By extending the non-business risk management programs, the federal, provincial, and territorial governments are ensuring that we continue with these strong government-industry partnerships. I want to highlight several of these partnerships and in doing so signal the programs the pulse industry feels are important to continue in going forward.

The Canadian agriculture and food international program, CAFI, is a very good example of a government-industry partnership. CAFI has helped the pulse industry to address market access barriers, enter new markets, and promote the Canadian pulse industry during a time of rapid expansion. The government will match up to 50% of qualifying claims. This has allowed the money that is invested by grower groups in the trade to go a lot further on some of the high-risk but high-reward activities.

The advance in the Canadian Agriculture and Agri-Food program has played an important role in funding industry-led initiatives. By focusing on building capacity within the industry, positioning the industry to capture market opportunities, and working to strengthen the ag sector, this program has been of enormous help to the pulse sector.

While farmers may be the first to see the benefit that has come from funding for reduced-risk and minor-use registration programs for crop protection products, there have been benefits for all Canadians as new low-risk crop protection products come to market and as farmers are helped with pest risk management practices that lead to improvements in sustainable production. Funding for these programs needs to be increased.

As an example from the pulse sector, funding for the development of a grasshopper identification booklet for farmers helped them identify which species of grasshoppers were not likely to cause major damage to their crops. By adopting a practice of spraying only when needed, they were able to ensure more sustainable production.

Another example I'd like to cite is the funding under this program that has allowed the use of some new technology on genetic resistance for a bean disease, which eliminates seed treatment, again providing benefits to the environment and all Canadians.

First of all, with limited time, I want to focus on the science and innovation program that was introduced under the agricultural policy framework. This program is having an enormous influence on the direction of the pulse industry and is a great example of an industry-government partnership that has it right. This program needs to be maintained in its present form, because it's working, and I want to tell you why this program is working so well.

Research is the key to innovation. To make money in agriculture, the research results have to be commercialized. Since 1885, Agriculture Canada has focused on production research, because more tons mean more money, and we have a rich history of innovation on the production side in our industry.

However, the science and innovation program has focused not on the tons of production but on where those tons might be sold for more money. This program is helping the pulse industry to focus on innovation at the market side and to think beyond a commodity focus.

● (1600)

Let me give you an example: pulses can be sold into the food market, the feed market for animals, or into the bio-product market.

The food market for pulses is strong in countries like India, but North Americans eat very few pulses. With funding from the science and innovation program, the pulse industry sat down with the food industry, medical researchers, and health professionals and asked what should be done to use the attributes of pulses—high protein, low fat, low glycemic index, high fibre—to address such health issues as obesity, cardiovascular disease, diabetes, and more.

The approach of agriculture sitting down with other players in the chain seems very straightforward and logical. However, the reality is that agriculture has looked primarily at increasing production for traditional markets.

We have been to India because they already buy pulses, but in the pulse industry we maybe haven't looked as closely as we should have at areas where we could create new demand.

The science and innovation program has invested in linking agriculture and health issues and has invested in linking agriculture and environment issues. These are very good examples of high-risk, high-reward program investments and very good examples of linking research with business innovation.

Today the pulse industry is working with medical researchers and, importantly, has a list of research priorities that have been jointly developed by the pulse industry, the food industry, and the medical community. This list of research priorities is a blueprint for all kinds of funders. And because the people who put food on grocery shelves—the food and ingredient companies—have been part of putting our research priorities together, we are fairly confident that research will lead to innovation and that this innovation will be commercialized.

It's also important to note that this program has attracted interest from non-agricultural research funding groups, specifically from the health and medical community. This is the kind of agricultural partnership we need. I think it's one that the industry can best deliver by bringing together not just departments of agriculture from across Canada, but health interests, academia from around the world, and the people who will be instrumental in commercializing research results—namely, the food and ingredient companies.

In closing, we want to stress the value of continuity in programs under Growing Forward. Market demand has to drive research, and we need a strong industry link at every step. The industry has to be able to raise its game in order to play its new role in the area of health and environment. We have to promote the new role for agriculture and enter these markets where we're well suited to play a bigger role.

The continuity must exist from research ideas through to grocery shelves, and finally to the dinner table or the pickup window at a fast-food restaurant, and then back to the research community. Growing Forward will be a success if it continues to enable industry. Government is needed as a partner, but there are some strong arguments to suggest that industry needs to provide the direction.

I expect that this committee will hear a lot more about pulses under Growing Forward. We're off to a great start in having pulses play a much bigger role in addressing health issues of importance to all Canadians. But perhaps more importantly, pulses will play a huge role in agriculture's role in sustainability and the environment. Pulses fix nitrogen, and in doing so save huge amounts of natural gas, resulting from the reduction and elimination of the need for commercial fertilizer produced from natural gas.

So let's take this great story we have on the environment and tell the world. Let's do our homework on health issues.

If Growing Forward is a success, Mr. Chairman, you're going to have to change the name of this committee to the Standing Committee on Agriculture, Health and the Environment, because agriculture is about healthy people and a healthy planet.

Thank you.

● (1605)

The Chair: I hope you're not making that a motion, Mr. Bacon.

To committee members, I will tell you about the order of business today. We're going to go through our witnesses. We'll do at least two rounds, and then we'll move in camera to deal with the report on the beef and pork sector crisis.

I am prepared to extend the meeting today. We have votes at 6:30, for which the bells will start ringing. We can take right up to that time to deal with the report and the motions after.

With that, we'll kick off the first seven-minute round.

Over to you, Mr. Easter.

Hon. Wayne Easter (Malpeque, Lib.): Thank you, Mr. Chair.

Thank you, folks, for your presentation. There seems to be a lot of optimism on the part of all of you, and that's good to see. But to be honest about it, where there's less optimism is at the primary producers' gate. We're constantly hearing, increasingly so, and especially in the beef and hog sector these days, that we've have had in Canada our five worst years on farm income while the Americans have had their five best years. I think we want to do everything we can do to ensure that there is investment in your industry, that government is there, that the farm community is there, and that the regulatory regime is right.

The great concern in the farm community, at the farm level, is that everybody else in the farm food chain seems to be making a profit. It's a little different right now in grains and oilseeds, but primary producers, to a great extent, haven't been. When you talk to primary producers, at the production level, there is concern about some of the companies that you folks associate with as well.

It's not on the technological side, actually, but do you see from your perspective anything that can be done to ensure that there's a better sharing of profits at the farm level, of those total profits throughout the system, so that the primary producers get their share?

I do have some questions on inspection fees and the regulatory regime, but if you can think about that one.... Does anybody have any answers? That's the big concern. As somebody said in the beginning—I believe you, Jeff—if you don't have primary producers, then you folks are impacted too. And we do know that research companies tend to target the American midwest. That's where the biggest market is, and we're often considered niche markets in terms of the larger companies. Have you any thoughts on that?

● (1610)

The Chair: Mr. Bacon or Mr. Reid?

Mr. Jeff Reid: Sure, I'd be happy to take the first crack at that.

Absolutely, we're concerned that our primary producers, first and foremost, need to make money in order for anyone else in the value chain to make money. You alluded to the U.S. Certainly we don't believe that the Canadian government, in the long term, can afford the kinds of ad hoc programs or funding and the stabilization in the same manner that the U.S. can on a per capita basis. That's why I think we need to look to more long-term systemic solutions in terms of innovation, and look to things like intellectual property, which is going to encourage investment over the long run and is going to keep our sector competitive, and competitive not just on the basis of handouts but on the basis of innovation going forward to drive profit at the farm gate level.

Certainly, I would say that the primary producers, particularly in western Canada, have struggled for quite a number of years. I think if you look at the areas where they're struggling, that goes back very much to those crops where there has been very little private sector investment. So while you say there are few dollars flowing back to primary producers in those areas, there have been few to no dollars, in some cases, flowing back to the private sector seed industry in those same crops.

So we very much echo those exact same concerns that producers do about profitability, because the numbers speak for themselves in terms of our submission that the seed industry just hasn't been able to afford to invest in those crops. We're on exactly the same page there.

Hon. Wayne Easter: On the regulatory regime—and it certainly affects you folks and producers as well—I'll give you an example from the hog industry that I heard yesterday. It absolutely amazes me that in Canada, producers, for whatever reason, are not allowed to use a certain product and sell their finished product to consumers, and yet we'll import food that was produced with that product from elsewhere.

A hog producer whom I was talking to yesterday, who was an 800-sow producer, went broke three weeks ago. There's one product —which they can use in the United States and we can't use in Canada—that if he'd had it for five years would have saved him $4 to $5 a hog. That's $560,000 in his operation over that five-year period. Now, $4 to $5 a hog doesn't sound like a lot. To him, $560,000 might have been enough to keep him in business.

Do you see any areas in your industries where our regulatory regime, the higher costs of inspection fees, and so on, which really should be, in my view, not a fee on farmers but should be provided by government because it's a safety factor...? Can you list any of the regulatory problems that you see in your industries that are a burden to you and our producers and not to the U.S.?

The Chair: Mr. Bacon wanted to get in on that last question, and I'll let you kick that off.

Hon. Wayne Easter: Oh, sorry, Gordon. I didn't see you.

Mr. Gordon Bacon: I would echo Jeff's comments about how innovation is going to be one of the ways that Canadian farmers can separate themselves from the pack. If I were to speak specifically about the pulse industry, five of the seven board members on the Pulse Canada board are farmers, and it's a question I receive all the time. The approach we're trying to take is to show where we are apart from the rest of the suppliers in the world on the health and wellness side as well as on the environmental side. We compete on a global basis, and if we are still competing on a commodity basis, we are going to be challenged because we aren't always going to be the most efficient or the lowest-cost producer. We need investment in science so that we can have innovation to separate ourselves from the pack.

To make one quick comment on your second question, Mr. Easter, I just want to cite an example that's somewhat similar and that shows why Pulse Canada has been a strong supporter of NAFTA harmonization of crop protection product registration. There have been examples in our industry in which U.S. pulse growers have had access to crop protection products that weren't available in Canada. We are a smaller market, and that's why we feel it's important. We are very supportive of what PMRA has done recently to harmonize and look at encouraging companies to register products simultaneously. Also, I'm encouraged to see that PMRA has even started sharing some of the evaluation of products with Australia. This is a way that we can ensure we are getting these reduced-risk products on the market quickly. Again, all the products that are coming out now are far safer than older products. The harmonization of regulations is an important part of competitiveness.

● (1615)

The Chair: Thank you. Your time has expired.

Monsieur Bellevance, pour sept minutes.

[*Translation*]

Mr. André Bellavance (Richmond—Arthabaska, BQ): The importance of research and innovation was highlighted in the report tabled by the Standing Committee on Agriculture and Agri-Food last June. I am pleased to hear that we were obviously not alone in thinking that.

Mr. Bacon, you have expressed a certain degree of optimism, as Mr. Easter mentioned. You said that the agricultural policy framework, Growing Forward, was going to be successful. Then a little later, you added, “If Growing Forward is a success”. That is a little less certain.

What makes you think that the agricultural policy framework will be a success?

We have heard a lot of people talk about this because we spend a lot of time on the ground. You must meet with a lot of producers too. They, however, are somewhat less optimistic. For example, consider what is about to replace the Canadian agricultural income stabilization program for cattle and dairy farm operations that produce feed crops. AgriStability will replace CAIS, but that will not change a thing. Under the new program, these people will not have access to AgriStability to compensate them for their losses, which CAIS currently does.

What we are hearing does not sound very optimistic. What makes you think that this will be a success? Were you referring specifically to research and innovation? If not, were you talking about the system as a whole, including business risk management?

[*English*]

The Chair: Who would like to go first?

Mr. Bacon.

Mr. Gordon Bacon: Pulse Canada has not focused on the Growing Forward component of the business risk management side of things. Our board had decided that this was an area that other farm organizations were covering off and our limited resources wouldn't be focusing on that area. So I'm afraid I don't have a connection to talk about our research and innovation investment and how it links to business risk management, because our organization hasn't focused on that side of the Growing Forward program.

The Chair: Mr. Dennis.

Dr. David Dennis: There is a real problem of risk in what we do. A major problem we have in Canada is taking really great research from the universities and government labs and actually commercializing it. The amount of funding available for that in terms of investment funding is very limited in Canada. Actually, commercializing new ideas and new innovations in Canada has problems. It would be much easier for a company like Performance Plants to move down to somewhere like St. Louis and get funding there for these things.

Something that Canada has to look at carefully in all fields, not just for this area, is how we take really great research that is done in universities and in government labs and get it through to produce a commercial product in Canada, rather than allowing it to be commercialized in other countries and then come back to Canada. We certainly need an investment climate that is more conducive to that, especially for companies like ours, which are in the phase of actually expanding to form a bigger company. There's often start-up money to get a company going, but to keep it going to bring new innovative ideas into all areas of research in Canada can be quite a problem in Canada.

The Chair: Mr. Schwab.

Dr. Phil Schwab: Mr. Chairman and Mr. Bellavance, I might add that a lot of what biotechnology companies are investing in, in terms of technology, is also risk management for agricultural producers. Dr. Dennis' company is working on managing the risk of drought, so that even in a dry year, farmers can still maintain the yield they would normally expect from their crops. Other companies are working on new technologies that will ease their market risk, so that you can market a specialty crop with a low saturated fat oil at a higher price.

So some of the very specialized technology and trade development efforts that are going on will hopefully help to ease some of the risk farmers face each and every year.

● (1620)

The Chair: Mr. Reid.

Mr. Jeff Reid: Further to that, from the seed industry perspective, there are a couple of things going on. First of all, just the whole concept of certified seed is a management of risk, in terms of quality assurance, germination, purity analysis, and so on. So those inherent components of certified seed are in themselves a form of risk management.

Again, going back to the traits and characteristics being developed in new products, be it through patented genetic modification or traditional breeding, these are also things that help to manage risk. So we think there should be incentives in place through, for example, enhanced coverage or reduced premiums for production insurance for the use of improved products and certified seed.

[*Translation*]

Mr. André Bellavance: Mr. Reid, I read in your document that you conducted an interesting survey of businesses. They said they are ready to make substantial investments. In fact, they said they are ready to more than double their investments in the next five years. This applies primarily to investments in canola, corn and soybeans.

However, with respect to feed and cereal crops, no major investments are expected, which you suggest could seriously devalue these crops.

Can you explain why there is this disconnect between research being done for some crops and not being done for others? Why do you think that people are less interested in investing in feed and cereal crops?

[*English*]

The Chair: Mr. Reid.

Mr. Jeff Reid: Thank you very much.

There's very clearly a major disconnect between the acreage of the crops produced in Canada and the investment going into those crops. First and foremost, I think it comes back to the ability of companies to receive a return on investment when they invest in those crops. That comes back to a couple of things; first of all, their ability to protect intellectual property through hybridization—and thus their achievement of certified seed sales—and/or patenting being available for crops that lend themselves to genetic modification, such as canola and soybeans or corn.

Again, that's very central to our concern about innovation going forward: how do we create the incentives necessary to stimulate private sector investment in those open pollinated crops, and particularly crops that don't lend themselves to modification?

Again, when we look at four of Canada's five major crops in western Canada—wheat, durum, barley, and oats—there are very, very low levels of private investment in them. Hence, we're coming forth with a number of proposals as to how we can spur higher percentage use of certified seed in those crops and generate more returns back to innovation in those areas.

To this point, even the technology that has been developed in the public sector becomes very marginal, in terms of our ability to deliver that, because the return on investment is so marginal on many of those crops.

Again, we echo your concerns there exactly.

The Chair: *Bueno*. Good.

Mr. Miller.

Mr. Larry Miller (Bruce—Grey—Owen Sound, CPC): Thank you, Chairman.

Gentlemen, thanks very much for coming here today.

Mr. Schwab, you were talking earlier about some of the new innovations your company is making and new directions it's going in. One thing that popped out at me was the different products, including making insulin from safflower. Fill me in a little bit on where you see that taking us. What percentage of the insulin supply can safflower take over today? Will it supply 10% or 50%? What's the goal or potential down the road?

Dr. Phil Schwab: I can't speak for the company's business plan goals, but I'm told several hundred acres of this safflower crop could supply a majority of the insulin needs, especially for insulin in the developing world, where it's probably going to be used as an inhaled insulin or in a patch form, something that doesn't have to be refrigerated and injected. That market is still probably going to be fulfilled by the traditional type of insulin.

But SemBioSys is looking at the non-traditional uses, where there are tremendous needs in the developing world. They estimate a couple of hundred acres could supply a majority of that need.

● (1625)

Mr. Larry Miller: Will it be competitive as far as price, cost-wise, or...?

Dr. Phil Schwab: That would be the goal of any good business plan, I suspect.

Mr. Larry Miller: Certainly. Okay.

To move on, I know there are carpets—I see carpets—and I knew there was some clothing, de-icing. I'm sure there are lots of others, and that's great. But while we're being innovative as a society, and then as companies and as farmers, we have to be cost-effective, which we've already touched on. Society today puts a large emphasis on being environmentally sound.

Where I'm leading on this is at some point there has to be some balance in there, what you're going to use. The ground will only produce so much, no matter what you put into it. At least I think there's a line there somewhere. So when do you get to a point where you're almost getting over the line of cost-effectiveness? At some point, we need to keep a certain amount of our acreage just to feed the population in the world with a growing....

So if you could talk a little about those....

Dr. Phil Schwab: Certainly, and David probably has some comments on this as well. We're talking about increasing the volume of yield from our crops, but we're also talking about using more of the total crop we have available.

For instance, right now in ethanol production we're only using the starch component of that seed. Plant breeding companies and biotechnology companies are looking at how we can use more of that seed for ethanol production, so instead of only using 75% of the seed, we're using 80% of that seed. Then we're looking at how we can use some of that leftover cornstalk for these other industrial purposes, how we can take that cornstalk, turn it into simple sugars, and then refine that into our carpets and our clothing.

So we're talking about getting more value, more yield, more product per acre, and part of that is what Performance Plants is doing in terms of increasing the overall biomass, increasing the productivity of those acres. But part of it is also using the total available plant more completely.

The Chair: Mr. Dennis.

Dr. David Dennis: Just a brief comment on SemBioSys. It's a very clever technology. One of the advantages of using a plant over using animal sources for some of these drugs is that plant viruses and diseases are totally different from animal viruses and diseases, so you can very likely produce safer products.

In terms of productivity per acre, we're going to have to dramatically increase productivity per acre, especially if you're going to go into the things you were talking about, like putting hemp into car seats. If you have a Volvo, you've got hemp in your car from Europe. If you're going to do it that way, if you're going to start using crops to produce biofuels.... China is using much more food, and the demands from China are going to be huge. So people have reckoned we're going to have to double or triple food production just to meet the demands of China and India and the less developed nations to let them have a standard of living like our own. Africa, of course, has massive problems in productivity per acre.

If we're also going to use land for biofuels, the challenges are huge. We're going to have to use new technologies. The only way we can do this is by using new technologies.

Mr. Larry Miller: On the biofuels and ethanol, that's where I was going to move with my next question. One of you made comment about using cornstalks and what have you, and I think that's great. In farmers' terms, we call that the trash, but at the same time, there's a valuable part to that trash. By ploughing that back down, I don't have to tell you what that does for the soil.

What I see in moving into ethanol, there's going to be a moving away from the livestock industry, which of course takes away manure and straw that gets in there to be put back on for that stuff that helps make the ground.... How do we combat that issue, to get away from that? We can get around strictly chemical fertilizer. I think long term we need something more than that.

● (1630)

The Chair: Jeff.

Mr. Jeff Reid: That's certainly something we've been addressing, being in contact with the feed industry. Particularly in Alberta, they have a big concern about drawing more feed grains out of the feed industry at a time when they're hurting to begin with, to say the least, and about those feed grains now having a competing market with ethanol.

I think it comes back to some of David's earlier comments about the real need to increase yield substantially over time. We know, for example, that there are a number of varieties hopefully coming to fruition in the near future in western Canada that are just being held back now by the need for proper regulatory reform, in terms of things like variety registration—opening that up a bit—and kernel visual distinguishability, which we've talked about for some time.

Again, if we look at the Ontario market, where we've had both of those things, we've had some regulatory reform to variety registration, we got rid of KVD back in 1989, and hence, 15 years later, we've made a 62% increase in average yield.

Those are the kinds of real gains that are going to help that ethanol and feed industry in western Canada from the seed industry perspective.

Mr. Larry Miller: Do I have more time?

The Chair: No, you're all out.

Mr. Atamanenko.

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

I just want to clarify in my own mind. I thought that in Canada, especially in western Canada, we had a quality of wheat and durum that's second to none, that's valued around the world. Our farmers are efficient. They produce high yields, and the reason they haven't really been making money is not because of them or the quality of their product; it's because of this situation in the world in regard to trade and subsidies.

Now the message I'm getting is that we need more variety, and the more variety we have the more money we can get to farmers. So I don't quite understand that. This is a serious question. I just don't quite understand. We have the quality. We have good wheat. We have the marketing. We can sell it. We're not making money because of certain forces. And yet the message I'm hearing from you folks, and Mr. Reid especially, is that we need more varieties.

How does that coincide with making more money for farmers in that whole area? That's my first question.

Mr. Jeff Reid: First of all, we definitely do have some of the best wheat in the world, no question about that, in Canadian western red spring and durum wheat, for example. So I guess the question is, at what cost do we develop and deliver that quality? I don't want to harp too much on KVD, but that's certainly been a big cost to the industry over time, because we've constrained all of these varieties into a very narrow slot so that they look similar.

We have developed, certainly, a reputation for a quality product, but at what cost to the farmer in terms of the agronomic trade-off. What we hear from various sources is that only about 7 million tonnes of the 15 million, 16 million, 17 million tonnes of CWRS wheat that's grown in western Canada are actually sold into the most premium markets that demand that level of quality.

The bigger demand that we're seeing evolve now is in these higher-yielding, different quality products. What we really need is a system that allows us to do a better job of segregating and channelling those products so that we can meet that demand for very high-quality, CWRS-type wheats, and do that in coexistence with producing high-yield, ethanol-type wheats, high-yielding, feed-type wheats, higher-yielding CPS-type wheats that are going into, let's say, things like pizza dough, which don't require the high-quality CWRS-type wheat.

So we do very definitely have that reputation for very high quality, but it's come at a very tremendous cost to the industry.

Mr. Alex Atamanenko: Do you feel, if we talk about wheat, that for the future we need to have wheat that is genetically engineered?

Mr. Jeff Reid: Well, I think that really needs to be based on the scientific evaluation. If there are products that come along that have merit and they're found to be safe, based on a science-based regulatory system, then I think there may be benefits there. I think probably the biggest thing that's going to drive that forward in the short term is to have some output traits that deliver benefits to consumers, such as better fusarium tolerance and so on.

● (1635)

Mr. Alex Atamanenko: Did you want to comment on this, Dr. Dennis?

Dr. David Dennis: We are dealing with climate change. There are going to be changes in heat and drought that we're going to have to face, and it's going to be major. Going from 1960 to around this time now, from corn, we went from 30 bushels per acre to 160, 170 bushels per acre, so it's a huge increase. We're going to have to do the same sort of thing.

Yes, the varieties we've developed in Canada are superb. But can we now improve them even further to give higher yields per acre and able to withstand some of the stresses that are going to be put on them as we go through things like heat and drought, and all these massive stresses we're going to be facing? If climate change really is taking place—actually, I think most people agree it is—then we're going to have to develop these new crops.

Mr. Alex Atamanenko: I'd just like to pursue the corn.

I think we have 16 different varieties of genetically engineered corn that are authorized in Canada, and one of these is Monsanto NK603. Studies in France—and I've talked with the research scientist involved in that particular study—have found evidence of toxicity in rats. I believe there is a type of genetically modified corn —and I'm not sure if it's this corn or another one—that France has banned because of perceived effects on health.

What I learned in talking with the scientist is that in order to approve a GM variety in Canada or in the world, it requires a study of three months, and after three months it's approved; whereas when we look at pharmaceuticals, for example, it's two years.

Are we sure that when we have these products as food for consumption by human beings we have made every effort to ensure they are safe? Peer review studies are coming up saying that some of these varieties are not.

I'd like some comments on that, please.

Dr. David Dennis: I don't know where the concept of three months is coming from, to be very truthful with you. It usually costs somewhere between $10 million and $20 million at least, per variety, to register a transgenic crop, so it's a huge number of studies. Transgenic crops are the most studied new varieties ever in the history of mankind. They've now been grown on 1.5 billion acres of land worldwide, and there's not been a serious problem reported anywhere, either environmentally or health-wise—or perhaps some minor problems. So they are incredibly well tested.

The crops that we are developing are different from some of the crops that you've been looking at. We're actually altering the plant's own genes, so we're not changing...we're not putting in protein from outside. We're actually modifying the plant's own genes and altering the way the plant grows. We're taking what would be done by normal breeding, which is looking for different...which is a genetic change in the plant. Now, once we find in one plant how to change it so we can produce it so that it's more drought tolerant, we can go to other crops and say that if we do the same thing there, we can produce them to make them drought tolerant as well. This is really quite a different phase of plant biotechnology that's coming in now to allow us to develop these new crops.

Mr. Alex Atamanenko: Thank you.

My third question, and probably my last—I guess I have a little bit of time—is the whole idea of innovation, other uses for what traditionally have been food crops—biofuels, carpets, insulin.

We are seeing that as a result of the tremendous impact of the cultivation of biofuels in the south and in the United States there is a drop in the food stock in the world.

You mention, Mr. Dennis, that because of the biofuel industry we have to improve the efficiency of the foods we grow. There is some research showing that what's happening in the biofuel industry may not be that efficient for climate change, may not be that efficient in putting money into farmers' pockets, and is displacing people from land in the south.

Could we possibly not be going in the right direction, and should we not slow down a bit, especially when we talk about the whole issue of feeding ourselves, feeding the planet, and our own national food security?

Dr. David Dennis: Yes. I think if we're going to use plants for making biofuels, they're going to have to be grown on marginal lands. You can't put them on first-grade land because that will have to be used for food crops. We have to be aware there are 842 million people in the world who are basically starving—which is 25 times the population of Canada—and this is a huge problem. We can't ignore that, and I think companies like Performance Plants have to make an effort and say yes, this is good for Canada, but can we help to solve that problem?

We have to not use first-class land for these crops; they're going to have to be grown on marginal land. That's why we're looking at these new types of crops that can grow on these lands. Something like poplar, of course, grows right across Canada and down quite a lot of stretches in the U.S.A., but this land would not normally be used for agriculture.

We have to be very careful about this, and I agree with you totally.

● (1640)

The Chair: Thank you.

Mr. Boshcoff, you're going to kick off our second round for five minutes.

Mr. Ken Boshcoff (Thunder Bay—Rainy River, Lib.): Thank you very much, Mr. Chairman.

There's an aggregate measure of support, which I believe you are all familiar with, and it indicates that for Canada we could spend approximately $4.3 billion in support for agriculture, but we only spend $2 billion. I want to plant the seed, so to speak, with respect to what you may think about that in view of today's *Washington Post* story entitled, "Congress studiously ignores the staggering waste in agricultural subsidies". The Senate is likely to pass the Farm Bill this Friday at $288 billion. The question that's indicated in the article is that this is notwithstanding the fact that crop prices are surging and farmers are doing very well. They go on to mention all sorts of things. For example, the U.S. sugar industry is getting a 10-year $1 billion program to prop up sugar prices in advance of NAFTA coming into full effect so they can bypass the Mexican market.

When we talk about an issue of this magnitude.... I'd really like to hear what you have to say, from your industry's perspective, on your ability to compete in product development, to get support, and to then export, in general, internationally in the weighted WTO system that allows this to proliferate.

The Chair: Who wants to go first?

Dr. Phil Schwab: From our standpoint, I might just toss out that spending on innovation and science would not be counted against that aggregate support. That would be a green-box kind of payment, so the more Canada can do to stimulate the development of technology that can then be exported worldwide, the more income we will have coming back into our innovative agricultural sector. Companies like Performance Plants and Okanagan Specialty Fruits are developing technologies and varieties that can be marketed and licensed around the world and can bring income back into the Canadian agricultural sector.

That would be my input.

Mr. Jeff Reid: Further to that, again, echoing the comment about research and development being green, that is a big part of what we see as being required in Canada: more innovation and more research and development.

A lot of what's happening, certainly in the U.S., is that they have this huge corn crop that's in large part going into ethanol, and they're taking acres out of wheat and other crops in general. So I think that's where we have a real opportunity in Canada to serve a lot of those markets that are demanding our wheat and things for exports. We really need to make sure that we can take full advantage of that by having research and development that will keep us at the forefront of development in those cereal crops, particularly in western Canada.

I would echo your concerns that we definitely can't compete with the U.S. on the basis of dollars. We have to be smarter and look for longer-term, systemic solutions.

Mr. Gordon Bacon: It was probably 25 years ago that U.S. farm support in the wheat sector really drove a lot of farmers in western Canada to look for alternative crops. At that time, pulse crops weren't under the Farm Bill, and this industry developed. This massive subsidization of agriculture has been a long-standing problem in our industry. We have to innovate, because we cannot compete with that level of support. One thing I would also add is that what we can do and need to do is ensure that we have ongoing market access.

We are facing two problems. One is that the U.S. industry is receiving support on a broad range of crops, but also, the U.S. has taken a very aggressive approach in negotiating bilateral trade agreements, and in the absence of a WTO agreement that does bring some discipline into this system, we've been advocating that Canada also pursue bilateral trade agreements. I'll just give Morocco as an example. A U.S. trade agreement is in place that gives them preferential access to a couple of important crops: durum wheat and lentils. We certainly have appreciated the action that has been taken to try to get more bilateral agreements in place so that we can at least maintain market access.

● (1645)

The Chair: Be very quick, Mr. Dennis. The time has expired.

Dr. David Dennis: One of the things that is really important to a company like ours is that we're commercially viable, so we look at the commercial viability of any product.

The only government support we've received is the R and D tax credit. This is incredibly important, and I hope people continue this because it's a way of stimulating research that will be viable. That's the only funding we receive from any government in Canada.

The Chair: Thank you.

Mr. Ken Boshcoff: May I ask the clerk to distribute this article at our next meeting? Would that be acceptable?

The Chair: If it's translated, it can be circulated.

Ms. Skelton is next for five minutes, please.

Oh, it's Mr. Lauzon.

Mr. Guy Lauzon (Stormont—Dundas—South Glengarry, CPC): I'm sorry about that. We changed our minds and didn't tell the chair.

The Chair: I always believe in ladies first, you know.

Mr. Guy Lauzon: It doesn't work that way in committees.

Thank you very much for being here, gentlemen.

I've been meeting with a lot of different agricultural groups—private individuals, farmers, different associations' representatives, etc. They all keep saying that the future is in research and innovation. You folks have been here about an hour and I've heard "research and innovation" repeatedly.

I guess what they've told me and what you're telling me is that the future of agriculture is critically dependent on research and innovation. I've also heard from you this afternoon that the non-BRM part of Growing Forward is very encouraging to you from a research and innovation perspective.

Can you elaborate as to why you're so positive about that?

The Chair: Mr. Schwab.

Dr. Phil Schwab: From the early drafts of the innovation and science chapter, there was a focus on taking new technologies from Ag Canada laboratories and our universities to early stage emerging companies and down to the farmer level. That was a key focus in that early chapter.

Another key focus was providing resources to help farmers and ranchers adopt that technology to help them learn and experience the benefits those technologies can bring to their farms and ranches across the country. Those were critical early pieces that have remained throughout.

The focus on a modern regulatory environment is also at the core for many of us here and the folks we represent. Seeing that commitment to a strong, science-based, modern regulatory environment within the innovation and science chapter is very important.

Not to be lost in this is the support for innovative organizations like Pulse Canada, Soy 20/20, the Ontario Agri-Food Technologies, and similar organizations that are searching out new technologies from our universities and helping to connect them with the small companies, the multinationals that are going to develop them.

That's a key component in taking that investment at Ag Canada to our universities, scientists, technicians, and researchers who are working so hard to bring new innovations to our marketplace.

The Chair: Mr. Bacon.

Mr. Gordon Bacon: In our production industry we need to have an R and D strategy to create new products. But one thing this committee might want to consider is looking at the level of public research investment in agriculture and benchmarking Canada versus some of our competitors like the U.S. The numbers are quite startling when you see that the level of public investment in agricultural research in Canada has fallen quite substantially.

Growing Forward is more of a policy framework. That's an important thing to have in place, but some sound arguments can be made that all Canadians would benefit by substantially increasing public research investment to go along with the investment that farmers are now making, where growers in the pulse industry are contributing up to 1% of farm gate receipts to research.

We probably need a good policy framework, but I would encourage you to look at some arguments as to why agricultural research is a good public investment.

● (1650)

The Chair: Mr. Dennis wants in on this too, Mr. Lauzon.

Mr. Guy Lauzon: Okay. I should have said that before we go on to Mr. Dennis, the other word I heard repeatedly was "partnership". I think what you're saying is that it's a partnership among the agricultural producers, the government, and the innovative people in science.

Mr. Dennis.

Dr. David Dennis: Yes. Our drought technology came out of the University of Toronto. We've established a chair of plant biotechnology there. We have a very close link between our research laboratory in Kingston and the University of Toronto.

We're also establishing a very close link with Queen's University. We started out with Queen's, but we're now going back and developing a very close relationship.

We'll take genes from any university. At the moment, we're also looking at genes from the University of North Carolina. With some of the money the Americans are putting in, maybe we can get some benefit from it here in Canada.

The Chair: Mr. Reid.

Mr. Jeff Reid: On behalf of the seed industry, I'd definitely like to echo your comments that we're very encouraged about the focus on innovation and research. Regulatory reform is obviously an important part of that.

We would also note that the Canadian private sector invests heavily where there is an opportunity to recoup that investment. One of our concerns, though, is that we don't see many references to intellectual property protection in the Growing Forward document. It's something that we really feel is going to be key in going forward, particularly, as Mr. Bellavance pointed out, when private sector investment is lacking in certain areas. We really need to see some improvements in intellectual property protection.

The Chair: You have 20 seconds left.

Mr. Guy Lauzon: Brian, do you have a question?

The Chair: We can come back.

Monsieur Roy.

[*Translation*]

Mr. Jean-Yves Roy (Haute-Gaspésie—La Mitis—Matane—Matapédia, BQ): Thank you, Mr. Chair.

My question is for you, Mr. Dennis.

I was surprised by what you told me. Among other things, you said that the best farmland should not be used in ethanol production. I would like to know how you would manage to ensure that the best farmland is not used for ethanol production, because the decision to grow certain crops is made by the farmer who owns the land.

Basically, farmers are looking for profitability. When farmers have very good farmland—like farmland in Quebec—and they know that they can make more money growing corn for ethanol production, that is what they will do. You can't stop them. There is no law, currently, to stop that from happening.

Basically, as long as there is demand, people will tend to use the best land to grow corn to make ethanol. At this point in time, nobody can stop that. You cannot stop farmers from making that decision.

[*English*]

Dr. David Dennis: I think that's right. Some of the most intelligent people I've ever met are farmers. If they're not very intelligent and don't have good business savvy, then they don't stay in business. You're absolutely correct.

The question is this. The growing of food crops is probably always going to be more valuable than the growing of ethanol crops. It will depend on the market.

Of course, one of the things that's driving ethanol production at the moment is the subsidies for ethanol. Certainly, there are tremendous subsidies on producing ethanol in the U.S.A. If you remove those subsidies, most farmers will go back to growing grain for food.

Yes, there is a problem. I think food crops will always be more economically viable than crops that are grown for ethanol. They will have to be pushed to the sidelines of agriculture. I agree with you that it's a problem.

I think the competition between food and ethanol, certainly in the U.S.A., is a problem that people are now talking about. It has to be resolved in some way.

● (1655)

[*Translation*]

Mr. Jean-Yves Roy: Thank you for providing a partial answer to my question.

I would now like to address Mr. Reid.

Since the beginning, you have talked a lot about intellectual property rights as they relate to patented seeds. I have no problem with a company that develops new seeds benefiting from intellectual property rights. I feel the same way about pharmaceuticals. We could have a similar discussion about companies that develop drugs and then, a few years later, someone else copies the drug and makes it generic and so on.

I would like to talk abut what intellectual property rights have done for companies in the United States like Monsanto, for example. I am sure you know all about this. These companies have taken over certain regions. Take corn, for example. These companies have used their patented seeds to take over certain regions by suing farmers who were not using the seeds sold by the companies, based on the claim that these seeds could contaminate the neighbour's seeds and so on.

Here is what happened. Contrary to what you have stated, the cost of seeds rose significantly for farmers. Many of them could no longer buy seeds from the companies that patented them and that won the right from the Supreme Court to protect their seeds, even on land that does not belong to them, that is, farmers' land.

The opposite occurred. The cost of seed did not drop, but rose significantly, forcing some farmers into bankruptcy because they could no longer buy seed. The rising cost of seed does not necessarily mean that farmers can sell their crops for higher prices. Farmers pay more for their seed, but in the end, they cannot get more money for their crops. If memory serves me, that is what happened in Minnesota. A lot of farmers went bankrupt because Monsanto won its case in the Supreme Court and was able to force farmers in several regions to buy its seed or stop producing.

This kind of monopoly lasts a year or two or three until a new kind of seed becomes available. That is U.S. intellectual property rights in a nutshell.

[*English*]

The Chair: Mr. Reid.

Mr. Jeff Reid: Thanks for your question.

First of all, I believe that farmers will only adopt, and should only adopt, new technology if it either decreases their cost of production or increases their profitability. I think everyone in the seed industry in Canada would agree with that. Really, I think the only reason some of those technologies have become so popular with producers is because they have a significant impact on reducing their costs of production. Thus we're seeing a lot more technology being delivered through seed, because it is more economical for the farmer to use and has quite a number of environmental benefits and other spinoffs that are quite beneficial to society as a whole.

I think we have to remember throughout the whole discussion that the status quo is certainly always an option for farmers, in terms of not adopting new technology, but I think what we've seen time and time again is that these new technologies, again, are very beneficial to the farmers' bottom line and that's why they become adopted so quickly.

Again, the CSTA has gone on record saying that we support farmers' ability to save seed in terms of farm-saved seed under the Plant Breeders' Rights Act. It's only when you get into a patented technology where producers have the choice whether to buy that or not. It's certainly under their own free will, and we don't believe they're going to invest unless it's in their best interest.

The Chair: Time has expired.

Ms. Skelton, you're on.

Hon. Carol Skelton (Saskatoon—Rosetown—Biggar, CPC): It's really interesting, sitting here today, hearing about the different parts of Canada and the crops we grow and what we're doing.

I can go back to the pulse growers and talk about no till, reduced herbicide, reduced pesticides, and I look at Mr. Easter and this wonderful picture about Africa. And look at the red soil. I saw erosion last year in Prince Edward Island and I said to my agriculture husband, how can this be happening? We have to change our growing practices.

In Saskatchewan 20 years ago we had tremendous erosion problems, and since the introduction of the pulse industry in western Canada we've stopped that. I think it's been so beneficial to all of Canada.

I'm so impressed and so happy that you came here today and spoke to us, because this is what agriculture needs. Farmers need to change their agriculture practices, they need to be innovative, they have to participate, and they have to work with it. So thank you very much, gentlemen, for all your work and for coming here today and telling the committee about this.

Gordon, could I get you to talk about some of the things we have in the non-BRM program under Growing Forward? What suggestions do you have for the non-BRM programs?

● (1700)

Mr. Gordon Bacon: I think the programs that are in place have worked very well. I don't think we have to start from scratch. We have some programs that work very well.

What I tried to illustrate in my presentation was that Agriculture Canada has some good programs where they've facilitated industry to take a leadership role in some high-risk areas that also have some high reward. One of them is the science and innovation program, which allowed us to start working with the health community and food industry. It makes sense. We should have been doing it 25 years ago, but we didn't. Now that we've started, this is the kind of approach we need to focus on.

The two big drivers from the consumption side are, and will continue to be, environment and health and wellness. Agriculture has to engage itself in both of those areas. I was speaking only partly in jest when I said this committee really needs to be part of health and part of environment. This is the area in which agriculture can play a role for all Canadians.

So I'm hoping that in Growing Forward we see some strong programs in the environment area. As you mentioned, we have a very good story to tell. We have a story to tell that I don't think could be matched by the Europeans or by the Americans. We have an advantage that we need to focus on.

In the past, our environmental programs have focused on risk mitigation. I think we need to turn 180 degrees and say, “Let's start marketing the advantage we have.” I think we'll find willing buyers in the human food market, in the animal feed market, and in bio-products.

Of course, I work for the pulse industry, but I think crops that fix nitrogen, that take an essential nutrient out of the air, are going to play a big part—not only in Canada but around the world—in terms of sustainable agricultural production that will feed a doubling of the population by 2050.

Hon. Carol Skelton: My concern, too, was that we have to protect our soil in this country. Every agriculturalist protects the environment the best they can, but we have to remember that the soil will grow only so much.

Please, Mr. Dennis.

Dr. David Dennis: I think the impact of something like no-till farming has been huge. Certainly it has been down in the States, where around 18 million acres are now grown by no-till farming. People don't realize just how much carbon dioxide is released into the atmosphere by farming in this country. Something like all the carbon dioxide released from farming until 1985 was more than all the carbon dioxide released by burning fossil fuels—a huge amount. What we can do now is start reversing this by no-till farming, which is really effective.

It also goes to the question you were talking about, and that is erosion. The cost of erosion is huge in terms of losing topsoil. Until recently in Iowa, 50% of the topsoil had been lost through erosion since the time of agriculture.

You can't carry on doing this. You have to start building up new soil. The way to do that is to plough in the remains of one crop and then seed directly into it.

The advantage is simply huge. And not only is there a huge environmental advantage with the carbons in the soil, but there's advantage for a lot of the small animals that live in these areas as well.

Dr. Phil Schwab: To just briefly address your question about non-BRM programs, it's not a program so much as ensuring that this committee looks at the regulatory capacity we have to adopt these new technologies we're talking about. We're talking about new types of crops, perennial crops, grasses—things that we haven't seen before in our regulatory system. We need to make sure they have the human and intellectual capacity to regulate those products safely, including the new advances in animal health and biotechnology that Mr. Easter was talking about.

So as much as this committee can do to support the dedication of those resources in our regulatory agencies will go a long way toward ensuring smooth and safe adoption of these technologies.

The Chair: Thank you.

Your time has expired.

Mr. Steckle.

Mr. Paul Steckle (Huron—Bruce, Lib.): I want to thank you for coming. I missed part of your presentation due to a late flight.

I want to centre on two questions I have for you today.

We're talking a lot about the future. We know that research and innovation is not something that bears results within 24 hours, or within 24 years sometimes, but it is there for us in the future. I think we need to encourage that, and I totally support that. But we have to think about the here and now.

We have sectors in our agricultural community that are in serious trouble, and if we don't protect them now, then we won't have them for that future that we're all talking about. I heard Mr. Reid say, and I agree to a point, that we can't follow the Americans down that subsidy road. I agree that none of us should be in that business of subsidization in agriculture, but we're in that way of thinking. We're going to continue that. Europe is going to continue it whether we think so or not. They're going to continue, and so will the Americans.

I did some math, and I calculate that the $4.3 billion we're talking about here as the level we could support at is doable. We just recently announced the reduction of GST by 1%, which is $5.5 billion. It's far more than the total aggregate amount of money that we could spend in agriculture. We just gave that away to Canadians who could perhaps afford to pay that 1%.

But we have a sector, a community of people who are going bankrupt. If they fail to get the money from the treasury, where else are farmers going to get that money? It's not going to come from the marketplace. If they can't go to the treasury and we can't, as farmers, as agriculturalists in this country, go to government and expect some help at least in the near term, then where can we go?

Mr. Reid, back in 1965 when I put my first crop of corn in—I farmed before that, but that was my first crop of corn—I paid $14 a bushel for seed. Today we have varieties that are costing farmers upwards of $200 a unit, which is 80,000 seeds, which is less than 56 pounds. When you look at that, it's 14 times the price of that seed. I got $1.75 for corn then. Today it's $3.75. We maybe took 100 bushels then. Today we're getting 200, and that's at the top end. Some crops don't produce 200 bushels.

Where are we coming out at with this? Where are farmers benefiting from all this research that's being done? Where are the dollars filtering back? There's money in the industry, but it's not filtering back to the farm gate. Those are my two concerns. If we can't deal with the farmers here and now, we won't have them for the future. I hope you can give me some understanding of where we're going, because I'm afraid we're in some serious trouble.

● (1705)

The Chair: Mr. Reid.

Mr. Jeff Reid: In terms of your first question on where the money is going to come from and so on, I think what we have before us right now is maybe an opportunity in that we have seen significant appreciation in commodity prices, largely because of this fuel—ethanol—situation pulling acres out of agricultural food production as a whole. Thus we've seen a tremendous increase in the value of our food products in recent months.

I think we have a window of opportunity here to make some transitions in terms of how we approach this market and get some innovation going. I think we really have an opportunity to make some very rapid progress here in terms of, for example, registering new types of varieties for western Canada that will yield significantly more and allow farmers to take advantage of those high prices.

So, again, I think we have a real opportunity to make some changes in the short term like never before, which will have fairly short-term payoffs, really, relative to prices and advancements we've seen over the last 20 years.

In terms of production costs and the cost of seed and so on, again, I think farmers are very rational and they look at their overall production costs when they make purchases. I would say that now we are seeing delivered in that bag of seed not just seed as it was a number of years ago but with that the technology—for instance, if it's a Roundup Ready crop, that's allowing them to maybe not have to till the land. So they can avoid the costs of tillage and equipment and soil erosion and so on.

If it's a Bt crop that can avoid corn borer, they're avoiding having to spray insecticides in the environment and so on, not to mention the huge yield advantages I referred to earlier.

I think it's a case of seed becoming just that much more important because it's now the vehicle to deliver that technology that previously required far greater expenditures in other ways by the producer.

● (1710)

The Chair: Your time has expired, unfortunately, Mr. Steckle.

Mr. Storseth is next.

Mr. Brian Storseth (Westlock—St. Paul, CPC): Thank you very much, Mr. Chair.

I do want to ask you some very specific questions, but I have to make one comment. The fact of the matter is this government has put more money into agriculture than any government in the history of this country, and the tax relief being offered through Bill C-28 is going to affect farmers and benefit farmers as well. It benefits all Canadians.

Mr. Reid, in your submission you talked about KVD. This was something about which you seemed very adamant and very strong. Could you expand a little bit about the importance to you of changes to this system, and how that would benefit our producers as well?

Mr. Jeff Reid: Sure.

To my knowledge, Canada has been the only jurisdiction in the world that has used KVD, or kernel visual distinguishability; for a variety to be registered and fit into a certain class, it has to look a certain way. As time has gone on, that's had the effect of essentially narrowing the gene pool from which we could cross, and thus has had a very negative impact on our ability to register higher-yielding varieties over time. Even varieties that have been an improvement in terms of quality, disease tolerance, and so on haven't been able to reach the marketplace because of that constraint of kernel visual distinguishability.

I think this has really come to a head in the last couple of years because of the new opportunities with ethanol and the need for more feed, and so on, in western Canada, in recognizing that the west needs to have the same opportunities we've been enjoying for close to the last 20 years in the east, where we have been able to make some really substantial increases in yield. It's certainly a very critical issue I think for the seed industry and for all of the downstream sector as well, particularly the feed industry and the ethanol industry, to meet that need for more production overall.

Mr. Brian Storseth: How long has this issue been on the table for you? How long have you been advocating for this?

Mr. Jeff Reid: It's certainly been a burden for western Canada for many decades, I think. As I say, we had the fortune of eliminating that in eastern Canada in 1989, and within a very short period of time we saw substantial increases in yield. As we indicated in our submission, in the last 15 years we've seen a 62% increase in wheat yields in Ontario, largely because we didn't have that burden of having to meet kernel visual distinguishability.

Mr. Brian Storseth: It seems like a no-brainer to me, from what you're saying.

What's holding it back? Have there been any organizations or groups?

The Chair: I think Mr. Schwab wanted to get in on this as well.

Dr. Phil Schwab: I'll let you finish, and then I have a comment to make.

Mr. Jeff Reid: The rationale for kernel visual distinguishability was to facilitate grain segregation and thus make it easy to recognize a Canadian western red spring versus a CPS type, for example, at the elevator. It was really driven by the desire to have something very easy to segregate in a short period of time.

What we're looking at going forward are a number of options, including affidavit-type systems. On behalf of the seed industry, we think we have a perfect system in Canada to help facilitate segregation. It is the use of our certified seed system. Our certified seed system is really the envy of most other jurisdictions in the world, which don't have such a well-integrated public-private certification system for seed. There's that, and we're also getting to the point of having new technology coming that will help to identify varieties in a relatively short period of time upon delivery.

The Chair: Go ahead, Mr. Schwab.

Dr. Phil Schwab: I was just going to mention that a small biotechnology company in London, Ontario, called NeoVentures BioTechnology Inc. is using advanced genetic fingerprinting techniques to help solve this problem as well. I think that's probably the advanced technology Mr. Reid was talking about.

Mr. Brian Storseth: From your knowledge, are there any organizations, groups, or aspects of government that have been holding this back or challenging this all these years?

Mr. Jeff Reid: I think there has just been a general reluctance to change, but over time I think most organizations are recognizing that the cost is just too great, particularly when we can now see the benefit of high-yielding ethanol- and feed-type wheats. I would say there has been a general reluctance from the grain side of the seed industry, but I think they are gradually moving past that.

● (1715)

Mr. Brian Storseth: Do you have—

The Chair: Time has expired, Mr. Storseth. I'm so sorry. I know you have so many questions to ask, but there's no time left.

Mr. St. Amand, do you have any questions?

Mr. Lloyd St. Amand (Brant, Lib.): I do not.

The Chair: I said we had other business we wanted to move on to.

Before you leave the table, though, we don't expect an answer back today as you respond to the committee on these specific issues. Mr. Reid, you talked about the 155% tax credit to help offset the costs of producers having certified seed. If you can put that into a more detailed document for the committee to consider, we'd appreciate it, and also to back up how—you were talking about KVD—using more certified seed would help with this whole producer affidavit issue and identity preserve to ensure that the varieties are what they are claimed to be.

All of you talked about using some of the new science technologies to produce new varieties and said that these varieties should be marketed. Part of the non-BRM under Growing Forward is this whole market development initiative. Mr. Bacon, you mentioned the bilateral trade agreements, but you also suggested that there might be other programs we should be using or should be producing to help with the marketing of these new commodities, and specifically to market them as a Cadillac rather than a Chevette. If you can go down that path in providing the information to the committee, it would be greatly appreciated.

With that, I think we shall suspend. I'd ask that all people who aren't tied to a member of the committee exit the room so that we can go in camera and consider our next order of business.

[*Proceedings continue in camera*]

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

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

Also available on the Parliament of Canada Web Site at the following address:
Aussi disponible sur le site Web du Parlement du Canada à l'adresse suivante :
http://www.parl.gc.ca
