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# **Standing Committee on Agriculture and Agri- Food**

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**EVIDENCE**

**Monday, February 25, 2008**

**Chair**

**Mr. James Bezan**

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## Standing Committee on Agriculture and Agri-Food

Monday, February 25, 2008

• (1535)

[English]

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

As we planned earlier, we're going to have two groups of witnesses this afternoon. In our first group, to present on Bill C-33, we have by video conference Dr. Esteban Chornet, who will be joining us at around four o'clock. The committee permitting, when Dr. Chornet is able to get away from his class—which I think is what he's tied up with—we'll let him bring his 10-minute opening remarks at that point in time.

Thank you very much.

From the Conseil québécois du biodiésel, we have Camil Lagacé—no, he's going to be at five o'clock.

From Ducks Unlimited Canada, we have Paul Thoroughgood; from the Fédération des producteurs de cultures commerciales du Québec, Benoit Legault and Stéphane Bisailon; and from Canadian Bioenergy Corporation, Ian Thomson.

I want to welcome all of you to committee. We're going to keep things moving fairly rapidly. I'd ask that you bring your opening comments in less than 10 minutes. We're going to go with five-minute question rounds for the members.

With that, I'm going to ask Mr. Thoroughgood to lead off with his opening comments, please.

**Mr. Paul Thoroughgood (Regional Agrologist, Ducks Unlimited Canada):** Thank you very much, Mr. Chairperson, and thank you for the opportunity to speak to you and hopefully broaden the discussion to include habitat as part of the impacts of biofuel strategy.

Ducks Unlimited Canada is a private non-profit organization dedicated to the conservation, restoration, and management of Canada's wetlands and associated habitats for the benefit of waterfowl, wildlife, and people. DU works with many industries, including agriculture and government, to develop and implement land management systems that are both economically and ecologically sound.

DU's first priority in all these efforts is to find land uses that provide improved habitat to grow and sustain continental waterfowl populations. However, DU recognizes that if waterfowl-friendly production systems are going to find their place on the landscape, they also have to make economic sense. In this context DU believes that if executed correctly, a Canadian biofuel strategy could make a

significant contribution to meeting North American waterfowl management plan population goals.

DU is the main delivery arm of the North American Waterfowl Management Plan, and this plan identifies species-specific population goals for various waterfowl species in North America. The Canadian Prairies are often referred to as the North American duck factory, as on average approximately 40% of the continental duck population breeds there. Lack of adequate quantity and quality of upland nesting habitat has been identified as the key limiting factor to waterfowl production on the Canadian Prairies.

Upland nesting habitat comes in many forms, including perennial grasses, managed wildlife habitat, native and tame pastures, hayfields, trees and forest areas, annual cropland, and remnant native areas.

Since our inception in 1938, DU has delivered science-guided conservation programs to meet the needs of North America's waterfowl while respecting other users of the land. We endeavour to evaluate and, where appropriate, support initiatives that are environmentally, economically, and ethically sound. Biofuels are a recent example of this. Depending on the feedstock used and the agricultural production system employed, an expanded ethanol production system could either be beneficial or detrimental to waterfowl habitat and to the environment overall.

On making ethanol greener, smarter, and better, increased biofuel production in Canada has the potential to impact waterfowl habitat directly and indirectly. Indirect habitats could include increased risk of contamination of wetlands through intensification of production systems; loss of wetlands, perennial grasslands, and existing native habitat to drainage and clearing to provide additional cultivated acres; and reduced conversion of marginal and annually cropped land to perennial cover.

Direct impacts to habitat could be made through the selection of feedstock for biofuel production. DU has conducted nest searches on thousands of acres of cropland and other habitats to evaluate their use by nesting waterfowl. Based on these analyses, not all land uses are equally valuable from a habitat perspective. Annually cropped land is generally viewed as the least productive nesting habitat for waterfowl. Winter cereals, such as winter wheat, have been found to be the exception to this rule in that they provide both attractive and successful habitats for upland nesting waterfowl. Perennial grasslands, including native prairie and hay, have been found to provide improved nesting habitat for upland nesting waterfowl. An additional benefit from perennial grasslands is also an associated increase in landscape level nest survival.

Among biofuels, ethanol has the greatest potential to provide improved waterfowl habitat in Canada. The following discussion will focus on the potential habitat impacts of grain- and cellulose-based ethanol production.

Corn is the dominant grain used in ethanol production in North America, and as many of you know, on the Canadian Prairies corn is not generally a viable cropping option. Currently spring wheat is the primary feedstock that is locally grown for ethanol plants in western Canada, and as mentioned earlier, spring-seeded cropland provides poor nesting habitat as spring seeding operations overlap with peak nesting initiation, leaving most nests vulnerable for destruction from tillage.

If grain-based ethanol production relies primarily on spring-seeded crops such as corn, wheat, or other cereals, wildlife habitat will remain, at best, status quo. However, if winter wheat and other winter cereals were utilized as the primary feedstock for ethanol production on the Canadian Prairies, there would be an increase in nesting cover available for waterfowl and other upland nesting bird species. These statements do presume that an expanded grain-based ethanol production system would not result in the conversion of existing upland and wetland habitats to annual cropland.

Cellulosic ethanol production could provide for favourable waterfowl habitat, depending on the feedstock that's utilized. If annual crop residue is the feedstock of choice, the waterfowl benefit or disbenefit would be similar to that of grain-based systems.

• (1540)

Perennial crop feedstock alternatives do have the potential to provide improved habitat. The key to the value of this habitat lies in the production system, the land use that would be displaced by that feedstock, and the harvest date and method.

Switchgrass and other perennial grasses hold the greatest promise for concurrently producing ethanol feedstock and waterfowl habitat on the Canadian Prairies. Perennial grasses that are hayed annually, as anticipated in an ethanol feedstock production system, provide the greatest waterfowl habitat value when cutting occurs after the nesting season, which is mid to late July.

Stubble height post-cutting is also important, as most grass species have not begun to grow in late April and early May, when waterfowl initiate their nest, which means the residual cover from the past crop is the nesting cover.

Production systems that include burning during the nesting season would, of course, be detrimental to waterfowl and other grassland nesting birds.

In landscapes where agriculture and forestry interface, there is a potential to use wood fibre as a feedstock. Ducks Unlimited works with many members of the forestry industry to develop best management practices to minimize harvest impacts on waterfowl habitat. If feedstock came from sawmill waste, we anticipate that the effect on waterfowl habitat would be minimal, as no additional lands would be harvested.

In cases where additional existing forested lands were harvested or new woodlots were established to provide feedstock, the waterfowl habitat could be significant. The type of impact is currently unknown, and Ducks Unlimited is undertaking research to understand the relationship between habitat impacts and waterfowl populations in areas such as the southern boreal forest.

Ducks Unlimited believes that, if implemented correctly, a Canadian biofuel strategy could truly provide multi-functional benefits. These benefits could include economic development in rural prairie Canada, reduction of greenhouse gases associated with fuel production and consumption, increase in and extension of Canada's energy reserves, and improvement in wildlife habitat. If feedstock is selected for more than just its ability to produce starch, government and industry can implement a biofuel strategy that provides these benefits.

Ducks Unlimited respectfully recommends that the government take steps to maximize these environmental benefits if overall environmental improvement is one of the government's goals in supporting the development of a biofuel industry.

Specific actions that could ensure multi-functional benefits include the following.

First is providing preferential incentives to those companies that select feedstock that results in additional environmental benefits. We believe sound science is available to support the habitat value of both winter cereals and perennial forage-based ethanol production.

Second is development of a science plan, involving government, industry, and academia, to study the values that accrue from expansion of the ethanol industry in Canada. Ducks Unlimited would be pleased to participate in this effort and provide leadership in areas where we have expertise.

In addition, we recommend that the government further examine the impact of various feedstock productions on net greenhouse gas and energy balances, and impacts on water quantity and quality.

In addition to our professional staff, Ducks Unlimited has nearly 1,000 volunteers committed to fulfilling our mission, along with more than 176,000 Canadians who support us. Development of an alliance between government, the biofuel industry, and Ducks Unlimited could make the industry greener, better, and smarter, and we look forward to pursuing these opportunities to make it a reality.

Ducks Unlimited Canada is grateful for the opportunity to present our thoughts to this committee and welcomes any and all questions.

Thank you.

• (1545)

**The Chair:** Thank you, Mr. Thoroughgood.

You did very well, and the time was only six minutes.

Next up, Monsieur Legault.

[Translation]

**Mr. Benoit Legault (Director General, Fédération des producteurs de cultures commerciales du Québec):** Mr. Chairman, members of the committee, good afternoon. Thank you for inviting us to appear before you.

The Fédération des producteurs de cultures commerciales du Québec has a keen interest in Bill C-33, an act to amend the Canadian Environmental Protection Act. It is clear that this legislative amendment required for the biofuel policy will have a substantial impact on the competitiveness of the grain sector in Canada and Quebec.

The federation has avoided taking part in the debate up to now on the energy and environmental issues associated with the biofuel industry. However, it remains convinced that the debate must be an objective one based only on scientific evidence. We feel that the citizens of Canada, and perhaps more particularly those in Quebec, have been very poorly informed by the media on these issues up to now.

Our organization is here today to highlight an aspect which it considers important and which seems to have been set aside when the biofuel policy and the legislative measures necessary for it were assessed. That aspect is the negative impact on the grain sector resulting from the lack of a policy or measures aimed at ensuring the sector's success. More generally speaking, our organization believes that it will be vital to develop the processing of commodities into industrial products in order for grain producers in Canada and Quebec to survive.

To begin with, agriculture in Canada and Quebec operates within the North American market context. The grain sectors in Canada and Quebec, which produce 70 and 5 million tonnes respectively, are subject to the realities and the dynamics of a larger market in the United States, our close neighbour.

[English]

**The Chair:** Monsieur Legault, can I ask you to speak a little bit slower for our interpreters, so they can keep up?

[Translation]

**Mr. Benoit Legault:** I apologize.

The grain sector in the United States is huge, producing 450 million tonnes or nearly 20% of the world's grain. Our experience over the past 33 years, which has been shaped by a series of farm bills that continually influence our day-to-day operations, clearly shows that it is difficult, if not impossible, to remain competitive if you are not given the same opportunities. This applies to market development, support for research and expertise, and income protection.

In a world economy faced with shortages of hydrocarbons for energy purposes, but also for industrial production, grains represent a very attractive alternative as a source of carbohydrates and lipids that can be used or processed into various industrial products, including fuel.

For that reason, a lower price can now be set for this natural, renewable raw material. Grain producers in Canada and Quebec can certainly not remain competitive without this kind of protection. Providing this protection and support for the industry will have even better results if producers have access to a share of the income generated by this industry. Having a share of the value added will also stabilize incomes.

The federation views the discussion about giving priority to the use of agricultural commodities for food purposes to be a false debate. The economy being what it is, the main problem surrounding the use of commodities for industrial purposes is simply that carbohydrates and lipids derived from grain are not priced at their proper value.

There will simply be competition between the production of essential goods and the production of less essential goods. In the latter case, the excessively low price for this source of carbohydrates and lipids make them attractive for industrial production and energy use. This is true not just for grain, but also for the resources used in growing grain, such as minerals, energy, farm land, water, financial resources and, of course, the human resources involved in research, know-how and entrepreneurship.

We think that humanity will have to choose and set priorities at some point. This problem is becoming increasingly evident because of economic growth in developing countries. As you know, world grain stocks have evaporated over the past 10 years, dropping from 600 million tonnes to 300 million tonnes, and this happened well before the latest developments in the biofuel industry in the United States.

The federation is of the view that farm families in Canada and Quebec should not have to pay the price for the refusal by multinationals and urban dwellers to place an adequate value on plant protein and calories for food, even though the available quantity of these nutrients today is limited.

Although cellulose may seem a more acceptable alternative to many people, the same issue arises since the competition between these resources is no longer about how the grain is used but rather how the increasingly limited agricultural land is used. Farmland will always be more productive, given that the most productive land has been cleared to grow food.

This bioeconomy based on farm commodity and farmland is a necessary and inevitable step. We believe that ignoring it will greatly weaken the competitiveness of the grain industry and Canadian agriculture. It is vital that this issue be considered along with the environmental and energy issues. The federation has often been questioned at this committee about why Canada should support its agricultural industry, when doing so seems to help other countries, according to some people.

Our answer has not changed. Support for agriculture through direct subsidies or structural policies like the one on biofuels is tied to a very simple reality. Grains, carbohydrates, lipids, proteins and plant calories that are produced and consumed here or exported have a beneficial impact on the agricultural community and Canadian society in general, but also on all societies in the world.

Whether we are talking about the 70 million tonnes of grain produced by Canada, the five million tonnes in Quebec or the hundreds of millions of tonnes produced in various rural regions of Quebec, this grain production makes a difference around the world. We may be naive about how the world works and the relations between its various peoples, but from our understanding, given that resources are increasingly limited, government support for the grain sector is probably the best opportunity for a humanitarian investment that Canada has had in recent years. That is basically how people see it who have lived off the land for generations.

It is also worth noting that the agricultural policy being proposed for the grain sector, which is based almost entirely on trying to develop industrial demand and sharing in value-added opportunities, will never be successful without adequate protection at the bottom of the chain. That is why the Quebec-Ontario Grain Coalition, of which we are a member, has been calling on the government for nearly 18 months to bring in flexible mechanisms and support to meet the particular needs of the various agrifood or agro-industrial chains of production in Canada.

This new mechanism is based on a so-called AgriFlex approach, which is designed to fit in perfectly with the various federal income support programs proposed by the Conservative government as part of its Growing Forward policy. AgriFlex is aimed at encouraging the provinces and producers to create companion programs to deal with regional disparities in protective measures to deal with the cyclical declines in farm income experienced in the grain sector.

● (1550)

Family farms would necessarily become more viable from a succession standpoint, since they would be able to count on long-term financial planning. Basically, AgriFlex would be funded from a federal envelope provided to provincial governments so that they could fund regional programs such as agricultural income support programs, including the Quebec Income Stabilization Program and Ontario's SRM, which are both aimed at the grain sector. AgriFlex would offer the flexibility required so that the federal funds could be

used to partner with these regional income support programs or other regional programs focused on market development or research.

After five years of disastrously low prices, grain prices have risen again recently but remain extremely volatile and vulnerable to a sharp decline at any time. Farm families would like to see less volatility and more predictability. Because the market cannot achieve that goal on its own, we feel that this type of partnership with the government is needed in order to increase predictability and protect the viability of family farms.

In conclusion, the Fédération des producteurs de cultures commerciales du Québec is convinced that the grain industry in Canada has no choice but to tap into the same opportunities as the huge grain industry to the south of us; that the use of grain for energy and industrial purposes and therefore the biofuel policy are part of a necessary and evolving process; and that to achieve this objective we need important regulatory amendments such as those found in Bill C-33.

Finally, the success of this biofuel policy and the development of industrial products in Canada absolutely requires adequate support for the grain sector, which is at the base of the value chain.

Thank you.

[English]

**The Chair:** *Merci beaucoup.*

Mr. Thomson, the floor is yours.

**Mr. Ian Thomson (President, Canadian Bioenergy Corporation):** Thank you very much, and good afternoon, Mr. Chairman and members of the committee. I am pleased to be before you today to speak on Bill C-33, An Act to amend the Canadian Environmental Protection Act, 1999.

● (1555)

[Translation]

Thank you for this opportunity to tell you why we believe that this bill and biofuels need your support.

[English]

I represent Canadian Bioenergy Corporation, a Vancouver-based company currently distributing biodiesel across Canada, with advanced planning for a large-scale biodiesel plant near Edmonton, Alberta. I'm also the president of the Alberta Biodiesel Association, which represents the full value chain of biodiesel interests in Alberta and whose members have the potential to produce a significant portion of Canada's biodiesel supply, based on currently available feedstocks and those non-food feedstocks we are researching and hope to utilize as soon as they are viable.

My statements reflect the experience of five years of working with the leaders of the biodiesel industry in Canada, starting at a time when this smart biofuel was entirely unknown and extending to the situation today where biodiesel is a household word and in use in large fleets across the country. It has accomplished this status because it works; because its benefits are immediate, scientifically sound, and verifiable; and because the farmers, the economy, and the environment benefit when it is used.

During my remarks I would like to make three things clear.

Number one, Bill C-33 is the most direct means by which the government can support the most positive development in Canadian agriculture in the last three decades. Bill C-33 will launch a new industry that will improve our environment, provide market stability in the traditionally challenged agricultural sector, and incent research and development for even more advanced biofuels.

Secondly, timing is critical. Financial markets are looking for certainty of policy in order to step in. They will take the risk, but they will not be reckless.

Third and last, biodiesel produced in Canada is an excellent fuel in terms of operability. It works in the full range of conditions in Canada and in terms of sustainability. It has a clear positive benefit for the environment, which I will describe further.

In the case of Canadian-made biodiesel, Bill C-33 will support a smart, advanced biofuel that reduces greenhouse gases in excess of 75% over those of diesel and improves dirty urban air, reducing respiratory illness in our large cities. It is renewable. Its use will extend available reserves of petroleum for future high-value purposes. It creates a new market. Its use will help smooth out the commodity-driven market swings that have held agricultural producers captive for decades. And it will add value to the agriculture sector. We will do more than just grow and export grains if we have a Canadian biodiesel industry.

Our society runs on diesel engines. Biodiesel is the only currently available and approved biofuel for the diesel engines that move us and the goods we consume. We live side by side with diesel exhaust every day: on transit and school buses, on downtown streets, on trains, in harbours, and increasingly in passenger cars. Biodiesel is an excellent climate change tool, but it is also an excellent local air quality tool.

Agricultural producers are huge supporters of biodiesel. I am told by the members of the canola growers advisory council that assists our company that canola growers know high prices will not last, and when prices do drop, producers will have a new market—biodiesel—to fall back on. This is significant in the context of the billions of dollars spent every year for Canadian agricultural support payments, federally and provincially. In the United States, the USDA has calculated savings in the billions of dollars diverted from historical price support programs as a direct result of federal government incentives for the biofuels industry.

Programs that support direct ownership in biofuels manufacture, such as the ecoagriculture biofuels capital initiative, also known as ecoABC, will ensure that Canadian farmers will be owners in the industry. Our company is very clear that producers must benefit from this industry, and we have structured our company so that they will.

Actions are required now to ensure market demand. Canada will be in good company as it takes steps to ensure renewable content in its fuel pools. OECD countries, particularly the European member states, have had clear biofuels policies for years and continue to expand them. Canada is late to the game but is fast catching up. But time is of the essence. This industry can stand on its own feet only when it has fully established the production capacity to be competitive internationally.

The private capital required to build the biofuels production plants needs clear, long-term commitment to the industry from federal and provincial governments. Without the assured market demand coming from the blend level provisions of the renewable fuel standard, biofuel production plants and supporting infrastructure will not be built in Canada. Delay in passing this legislation risks losing the tremendous biofuels opportunity, especially for the Canadian farmers who stand ready to participate in this new and important industry.

● (1600)

Two decisions must be made to ensure there is sufficient demand to establish this nascent industry. The first decision you can make immediately: pass Bill C-33 without delay. The absence of specific regulations to define how renewable content will be achieved should not delay the passage of this critical bill.

In a few months' time, we will need the second decision you and your colleagues can make, namely, to get biodiesel on the same timetable as that for ethanol—January 1, 2010. What do I mean by this? The original renewable fuel standard timetable developed in the late summer of 2006 pushed biodiesel implementation to as late as 2012. Our industry needs an implementation date of January 1, 2010. Delaying a biodiesel mandate until almost four years from now will, simply stated, kill or significantly delay new plant construction and would be a wholly unnecessary delay, defensible on neither technical nor policy grounds.

We expect in the next few months to successfully complete the most important requirement for a 2010 RFS date, namely a pilot test to confirm full operability of biodiesel in extreme cold weather. In many years and in many millions of kilometres of road tests in Canada, across Europe, and throughout the United States, biodiesel use, when produced and handled to strict quality specifications and guidelines, has established its efficacy and safety so that we can support with confidence the adoption of biodiesel in the Canadian fuel marketplace.

There are no reasons to delay the timetable another two years. British Columbia, where I live, will have a 5% renewable mandate in diesel fuel by 2010, and if B.C. can do a 5% mandated blend, the federal government can most certainly implement a 2% renewable mandate in diesel fuels by 2010. Loopholes, such as renewable credit carryovers, market out measures, or adoption delays, will only harm the establishment of the renewable fuels production industry in Canada. Credible sustained market access for renewable fuels must be observed by the regulatory regime adopted pursuant to Bill C-33.

Canadian biodiesel is a sustainable smart fuel. Biodiesel made from Canadian canola provides an immediate carbon reduction strategy. Canola biodiesel makes the superior cold weather biodiesel required by Canadian climatic conditions, and it is grown in surplus and in abundance in a full life cycle, sustainable manner on non-irrigated, established arable lands across the Canadian Prairies, and in lesser amounts in Ontario and Quebec.

I wish to address suggestions that biofuels can cause environmental degradation and that feedstock cultivation methods in biofuel production processes release more carbon than they displace, through their use as transportation fuel. Canada's largest anticipated biodiesel feedstock, canola, has proven it has significant benefits environmentally. It has greenhouse gas reductions in excess of 75%. It returns three units of energy for every single unit of fossil fuel used to produce it, and it will bring only minimal new land area under cultivation. High biodiversity ecosystems and established carbon sink lands will not be harmed from crop production.

Canadian biodiesel will also not cause food shortages or drive up food prices. Canada grows more than enough canola to fill the federal renewable fuel mandate set out by Bill C-33. In addition, the Canadian Renderers Association has indicated that Canadian-produced fats and rendered recycled greases are also available in substantial volumes for biodiesel production in Canada.

At a 70:30 ratio of canola to fats and oils in feedstocks supplies for biodiesel production in Canada, the federal government's recently announced requirement that 2% of the volume of diesel fuels used in Canada be renewable fuel will require approximately 900,000 tonnes of canola seed. This compares with the carryover of canola seed—that portion of the crop unsold at the end of the year—which is well under that for future years, and has been for the last three years.

With the U.S. and European legislative and regulatory measures, it will be an important part of the regulatory process under Bill C-33 to ensure that biofuels adopted by the Canadian marketplace do not lead to unsustainable or harmful practices in biofuel production and use. The global biofuels industry is founded on the premise and promise of a better environmental fuel supply. Our biofuel regulations must ensure that biofuels credited toward to RFS

requirements do not contribute to more greenhouse gases or air pollutants. We must protect biodiversity, sensitive wetlands, watersheds, and endangered species. The biodiesel produced in Canada will meet the most rigorous international sustainability standards for biofuels, and we must act to ensure that any imported biofuels are certified to meet Canada's environmental standard.

• (1605)

We encourage this committee to support this legislation.

[Translation]

Thank you for giving me this opportunity to appear this afternoon before the committee. I will be pleased to answer all of your questions.

[English]

**The Chair:** Thank you, Mr. Thomson.

Dr. Chornet, welcome to the committee. First I want to ask you if you prefer receiving the audio from the floor or whether you want it in French or English.

**Dr. Esteban Chornet (Professor, Department of Chemical Engineering, University of Sherbrooke):** To be truthful, I would prefer the audio in Spanish.

**The Chair:** *No posibilidad, lo siento.*

[Translation]

**Dr. Esteban Chornet:** But I can function in both the country's official languages.

[English]

If it is appropriate, I would prefer to continue in English.

**The Chair:** That's not a problem.

With that, the floor is yours. If you can make your opening comments for ten minutes or less, we'd appreciate it.

**Dr. Esteban Chornet:** Yes.

I was asked to present my views in front of your committee. I'm not accustomed to hearings of this nature. I am a scientist. I am a professor at the university, and I hold the chair in cellulosic ethanol and second-generation biofuels. I also have a large number of activities in the real world outside of the university with the companies I have helped to restructure and function in the area of biofuels and bioenergy.

Since my predecessor made an eloquent pitch for biodiesel, I will skip comments on biodiesel and focus on comments on cellulosic ethanol, preceded by some comments on grain ethanol.



I think it's important that we understand there is a large consensus in Canada, at both the federal and provincial levels, on the need to move towards mandated targets. In the case of ethanol, it's 5% ethanol in gasoline by 2010. Some provinces, like Quebec, say 2012. This is a small argument between the province and the federal level, but I think the focus is to move towards this 5% as quickly as we can. This represents a market, in the case of ethanol, of two billion litres per year in Canada, of which 767 million litres today are produced from grain ethanol. An added capacity of 680 million litres will also come from grain ethanol in 2008 and 2009.

In Quebec, we have GreenField Ethanol, a Varennes plant that produces a little over 120 million litres per year. However, in Quebec there have been voices raised against grain ethanol. The voices indicate that grain ethanol should be capped at some number out of these two billion litres a year and that the next generation of ethanol should come from cellulosic residues. That seems to be not only a Canadian choice, but also a choice in America and Brazil, where gas is going to be used more and more for second-generation ethanol.

And why this second-generation ethanol? It's because there are some constraints in extending the use of grain for carbohydrate for ethanol. We think it will be advantageous if the same companies that are retiring grain ethanol are moving towards cellulosic ethanol progressively to meet the mandates of both the federal and provincial governments.

Cellulosic ethanol is important. It is focused on forest residues, agricultural residues such as corn stover, and on urban residues, which are the residues from municipal solid waste that cannot be recycled. Even with appropriate sorting, there is a limit to what you can recycle.

While we consider cellulosic ethanol as a sector or subsector of the entire ethanol industry, we think these three types of feedstocks will be present in the production of ethanol. You might ask what the technologies are for this. Are they ready? Are they close to ready? Cellulosic ethanol can be produced in two ways. Either you go into the production of sugars and fermentation, which is analogous to the grain ethanol, or you use all the carbon by gasification of the feedstock, producing a uniform gas. This gas is converted by catalytic synthesis into ethanol, by the way. We can also convert it into diesel, if we so wish.

Both routes are appropriate, and both routes are being investigated. Certainly the gasification route is something that is proven, because ethanol and hydrocarbons have been produced in South Africa for over one generation, using coal as raw material and gasification as the technology to convert this coal into a uniform SNG gas.

●(1610)

What we see happening—and I think the federal system has to understand it—is that the options for ethanol are grain and cellulosic. For the cellulosic, the most advanced systems are those that are looking into gasification, which I think can be implemented today. Certainly in the United States and Canada, we have companies that are moving in this direction.

So I'm looking very optimistically to the next few years, because I think we will be able—not necessarily by 2010 but certainly by

2012—to produce whatever is necessary to meet this 5% mandate at a cost that begins to make sense. The cellulosic ethanol produced by gasification will have a cost target that is very similar to today's ethanol from grain. Cellulosic ethanol produced by hydrolysis and fermentation may be a little more expensive, because they use more expensive raw materials than the first one does.

So I think we are committed to this. I see the market, and not only the technology market but the financial market. I think the bills that the federal government is ready to pass will be essential, will be good, and will be appropriate to move Canada a step forward into this international course for biofuels, and I think we are very well positioned to be in the driver's seat, as you say in the English language.

[Translation]

I do not know whether you have any questions to ask. That is the end of my remarks. I may have used less time than expected or than you would have wished, so I will be pleased to answer your questions.

[English]

**The Chair:** [*Chair speaks in Spanish*]

We're going to open it up to questions, to the members. We're going to stick to five-minute rounds. We'll try to get in as many as we can before five o'clock.

Mr. Steckle, could you kick us off?

**Mr. Paul Steckle (Huron—Bruce, Lib.):** This afternoon we've banded about a number of comments about competitiveness, about importation and finding feedstocks, whether it's in the ethanol creation business or in biodiesel. We know there are many products out there today, and without government intervention in either one of these two fuel industries, we're not going to see us continue. Neither will the Americans, for that matter. I'm just wondering at what point the price of grains is going to make it impossible for governments to continue to support it.

We look at the efficiencies. We know that all of us are aiming towards a goal of a greater, better, and greener environment. That's the ultimate goal. I think all of us would like to see us move into the cellulosic industries as quickly as possible, removing the need for protein-based products as a source of feedstock.

But I was reading a paper this morning about the E85 model. Using that as a model, if we were to go to that extent at some point in time in the future, to any great extent, as I understood it, we would be able to go a 30% shorter distance with the equivalent volume of fuel with an E85 base. Does that same rationale work through the system at the 5% level or 10% level? Or is that a complete fallacy? It created for me some doubt when I read that this morning. In other words, you go a 30% shorter distance with that tankful of E85 fuel than you would with gasoline.

●(1615)

**The Chair:** Who wants to answer that one first?

Paul, are you directing this to any particular witness?

**Mr. Paul Steckle:** Perhaps we could hear from Mr. Thomson first. Then I'd like to direct a question to the professor.

**The Chair:** Why don't we go to Mr. Thomson first and then Dr. Chornet?

**Mr. Ian Thomson:** I do not know ethanol well. I do know that there is a lower energy density and that there is a loss of fuel economy as a result, and I think for low-level blends you would just have to look at the particular chemistry. Biodiesel in its pure form has less energy density, but it has other properties that more than make up for that. So at the low-level blends that we are looking at for renewable fuel standard, there is no difference in fuel economy whatsoever.

**The Chair:** Dr. Chornet.

**Dr. Esteban Chornet:** Ethanol does have a lower density than gasoline. Hydrocarbons have the highest density of all the fuels known.

I would not recommend going immediately to E85. I think the main reason that the 5% and eventually the 10% ethanol in the gasoline is proposed is to have some environmental benefits. Certainly with a gas tank full of ethanol, you will go a lesser distance than a gas tank full of gasoline. So I think an increasing movement towards 5% and then 10% makes more sense to me, because it is built upon the existing hydrocarbon industry, which has served the country very well for over a hundred years. We just have to be moving progressively. And cellulosic ethanol will be transformed perhaps into bio-hydrocarbons as a third generation, so everything will be the same type of material pool within 20 years, or 10 years, or 15 years.

Moving prudently towards 5% and 10%, in my opinion, is the way to go.

**The Chair:** Monsieur Legault also wanted to comment.

*Stéphane, s'il vous plaît.*

[Translation]

**Mr. Stéphane Bisaillon (Second Vice-President, Fédération des producteurs de cultures commerciales du Québec):** Some people claim that the price of ethanol will be the same as that of gasoline and that it will be 30% less efficient, but we will have to see how much E85 costs for the same number of kilometres. Perhaps people will drive less to save money, but if they put less money in the gas tank it will be better for the environment. What we really need to know is the price of E85.

[English]

**The Chair:** You have about 10 seconds left.

**Mr. Paul Steckle:** If switchgrass were to become a cellulosic product used in the creation of ethanol, is it harvested at a time when it would give Ducks Unlimited greater exposure to those ducks breeding, hatching, and removing themselves from that—

**Mr. Paul Thoroughgood:** It is my understanding, from talking to the folks from Iogen, that yes, the harvest is after the nesting, so it's September or October, when the ducks are well finished nesting in the grass.

**The Chair:** Thank you. Time has expired

*Monsieur Bellavance, cinq minutes.*

[Translation]

**Mr. André Bellavance (Richmond—Arthabaska, BQ):** Thank you for your testimony, Mr. Legault and Mr. Bisaillon. I also want to thank you for coming here today.

In your remarks, you raised questions about the United States. I will come back to that if I have time, but I want to begin with a few questions about the Varennes ethanol plant. The producers are partners in that plant and it is already operating. I would like you to give me a few details, if you have them, of course.

First of all, how are things going right now? Is the plant fully operational? Have producers benefited since the plant opened? Have they profited financially? Has the existence of the plant changed production? Has it been profitable only for a certain sector? I would like to have details on how things are going in that plant, which is Quebec's only ethanol plant.

● (1620)

**Mr. Benoit Legault:** I will give a general answer and let Mr. Bisaillon give the details, since he is familiar with the financial aspect and the spinoffs.

As a general remark, therefore, the 300,000 tonnes of corn for this new market has had quite a spectacular effect on prices in Quebec. Of course, the price floor in Quebec must be increased. The difference is huge, especially since the hog sector seems to be very hard hit in the market right now. If there is a decline in hog numbers, which would mean a reduction in demand from the livestock sector, the plant will have been built just in time, and it is already having an impact on local grain prices in Quebec.

**Mr. Stéphane Bisaillon:** The price was set in cooperation with Quebec producers. I do not have all the mechanics of that process here with me, but it is done on a quarterly basis. An average price is set, and it is the plant's current average price that dictates the local price for all grains. For Quebec producers, the Varennes ethanol plant is definitely advantageous.

**Mr. André Bellavance:** Can most corn producers in Quebec send corn to this plant right now?

**Mr. Stéphane Bisaillon:** Two-thirds of the supply comes from members of Pro-Ethanol, which represents approximately 500 producers, I think. The final third is supplied by other producers, who may be members of Pro-Ethanol or not.

**Mr. André Bellavance:** So there is no corn coming at this point from the United States to the plant. All the corn comes from Quebec producers.

**Mr. Stéphane Bisaillon:** I do not know the details with respect to liquor producers or Ethanol Greenfield Ethanol, but it would not make sense to import American grain. I know for sure that two-thirds of the supply comes from Quebec producers, but the final third is bought on the free market and, to my knowledge, it comes from Quebec producers.

**Dr. Esteban Chornet:** That is my understanding as well. I know the plant very well and it is producing 120 million litres of ethanol right now. It has the capacity to produce up to 140 million litres, using grain produced in Quebec. As far as I know, no corn is imported. The plant is fully operational. It is a great technological success, and farmers recover all the protein, which Greenfield Ethanol provides to them as part of the financial agreement between the producers and the company.

**Mr. André Bellavance:** Mr. Chornet, you are at the Université of Sherbrooke, which I believe is a partner in two cellulosic ethanol plants in the Eastern Townships. I would like you to give us some details about the technology. In fact, I would like to know whether it is as advanced right now for cellulosic ethanol as it is for corn ethanol. I think that is not the case, but I would like to know what the difference is in term of years. Will it soon be possible to produce cellulosic ethanol as easily as corn ethanol?

**Dr. Esteban Chornet:** Today, the grain ethanol industry is an industry without risk. There is corn. We know exactly what to do in order to make sugar, to ferment it and to get proteins. This industry has allowed the ethanol sector to develop in North America.

In Quebec, for various reasons, we decided to try and show that we could use two other means of making ethanol, as well as making the corn ethanol. I am involved, both as an academic but also outside of the university, in both of the projects you have mentioned.

One of these technologies uses essentially used wood, such as wood from demolitions or construction, or even wood from the forest. We process this wood and make it into gas which we then make into ethanol using what are called catalytic techniques. This technology, as I was explaining earlier on, already exists in South Africa, and is coal-based. No company in the world is doing this with wood. We have a project in Westbury, in the Eastern Townships, that will prove that it is possible to do so with wood residue.

The plant is already partly built. The equipment has been ordered, and we should begin production this summer. There are risks. It is not without risk as in the case of corn, but it is a very low risk for a certain number of stages that are happening elsewhere, and that will prove the feasibility of success with our raw material in the Eastern Townships.

There is another project under way using better quality waste biomass. We would be making both ethanol and paper fibre. It is a project intended to give paper mills the opportunity to broaden their horizons at an historic moment when the pulp and paper industry is suffering.

• (1625)

**The Chair:** Thank you very much.

**Dr. Esteban Chornet:** We are also—

[English]

**The Chair:** Sorry, the time has expired.

Mrs. Skelton, the floor is yours.

**Hon. Carol Skelton (Saskatoon—Rosetown—Biggar, CPC):** Mr. Thomson, a couple of times in your presentation you stated that timing is critical.

Do each of the other gentlemen around the table feel that it is critical too? Can you explain that a bit further? You mentioned that you were emphasizing it, and I'd like to hear why.

**Mr. Ian Thomson:** Thank you. That's a good question.

If we were to have a renewable fuel standard by 2010 in terms of much of the production capacity to meet the demand coming from that renewal fuel standard, if it is to be produced in Canada and not imported from the United States or abroad, we are right in that window where plants need to move on the plans that they have, to put the down payments on technology to finish off their first phase of construction. I know that intimately, being familiar with a number of large-scale plants' plans. You can build a plant in 18 months, but you cannot build a plant in six.

So if we don't get that signal, I think the capital markets will take that as an indication that the federal government is not clear on its policy support, and money will flow into other jurisdictions. It's fairly straightforward.

**Hon. Carol Skelton:** I would like the comments of the other gentlemen too.

**The Chair:** Who wants to go first?

Dr. Chornet.

**Dr. Esteban Chornet:** I think the answer has been provided by my colleague. It is critical to give the right signal to the financial markets that we mean what we say and that there would be an industry developing in Canada. The timing is now. If we begin waiting, others will do it for us.

**The Chair:** Monsieur Legault, do you have any comments?

[Translation]

**Mr. Benoit Legault:** We see the difficulty in the same way as Mr. Thomson. The urgency can be explained in this way. We already have projects in Quebec—we hear a lot about them—aimed at expanding an existing plant. The problems may be different in the rest of Canada, but in Quebec, it is a problem of public perception to do with using grain for the production of biofuels. I do not know if you follow the news in Quebec, but if we did not have that perception, we would already be producing something like 250 million tonnes of ethanol now. This is why time is of the essence. The more we wait, the more this perception will shift the wrong way, if I can put it that way.

• (1630)

[English]

**The Chair:** Mr. Thoroughgood.

**Mr. Paul Thoroughgood:** I guess from a habitat perspective there are probably two things to bring up. One is that it's important to act now to protect habitats so that expanding the ethanol industry doesn't come at the expense of remnant wetlands and habitat.

On the feedstock side, early ethanol plants on the Canadian Prairies did use winter wheat as a preferred feedstock. More recently, spring wheat varieties have come along that have gained favour because farmers were more comfortable growing them, and winter wheat has kind of fallen by the wayside. So I think the time to act is now, as the industry is growing, rather than waiting until the industry has matured and then having to stop.

**The Chair:** You have about a minute and a half left.

**Hon. Carol Skelton:** The Canadian Cattlemen's Association has concerns about the livestock industry and the use of their feedstocks to go into production of biodiesel and bioethanol and everything. Would you gentlemen support a biofuel policy that is based on market signals? That's what they're suggesting, rather than the content mandate that we've proposed now. Would you agree?

**The Chair:** Who wants to go first?

Mr. Thomson.

**Mr. Ian Thomson:** If I interpreted the question correctly, you're asking whether we would move ahead on the blend levels that we're proposing right now.

**Hon. Carol Skelton:** Yes.

**Mr. Ian Thomson:** We would, and I would actually, in the case of biodiesel, take the blend level up to 5% by 2015.

[Translation]

**The Chair:** Mr. Bisaillon.

**Mr. Stéphane Bisaillon:** In my opinion, as the ethanol industry is not yet fully developed in Canada, there are many fewer by-products for animal feed. There is a scarcity. If we increase the rate of production, we will have more spent grain, which would reduce the cost of animal food. One of the reasons why the construction is not progressing quickly is that the by-products are not there in sufficient quantity to feed all the marketplace. In Quebec, we see that. There is a shortage of spent grain, and consumers want more. The plant is working at capacity and cannot provide all the spent grain that is needed. One of the most important elements when we look at ethanol, particularly grain-based ethanol, would be the by-products, including spent grain, and there is currently a shortage of it in Quebec.

[English]

**The Chair:** Thank you very much. Time has expired.

Mr. Atamanenko.

**Mr. Alex Atamanenko (British Columbia Southern Interior, NDP):** Thank you.

We have tackled this from the point of view of the Canadian farmer. I think the consensus is there that in general it's supportive of supporting farmers.

Mr. Thomson, you mentioned that this could be an insurance against a drop in prices in the future. The first thing that comes to my mind is that apparently not a lot of farmers are buying into the co-ops now because they have all these prices in the food aspect. The minister was worried about that.

I'm wondering, if you don't have people coming on board, does that mean we have to import? That's the first thing.

The other thing I'd like to raise is a concern that I and many other people in Canada have. We mentioned that it's a critical time, and we have to do it right, and the financial markets are there. I understand all of that. At the same time, we're getting a message from Europe and the United States—and you mentioned OECD countries—that perhaps we should slow down a bit and see exactly which direction we're going in.

For example, on January 21, 2008, the United Kingdom called for a five-year moratorium on biofuels. The environmental audit committee concluded that:

The Government and EU should not have pursued targets to increase the use of biofuels in the absence of robust sustainability standards and mechanisms to prevent damaging land use change.

In February of this year, a dozen U.S. biofuel scientists are petitioning U.S. legislators to revise biofuel mandates. I'll quote the following for you:

The study said that after taking into account expected worldwide land-use changes, corn-based ethanol, instead of reducing greenhouse gases by 20 per cent, will increase it by 93 per cent compared to using gasoline over a 30-year period. Biofuels from switchgrass, if they replace croplands and other carbon-absorbing lands, would result in 50 per cent more greenhouse gas emissions, the researchers concluded.

They go on further to say:

We should be focusing on our use of biofuels from waste products...such as garbage, which would not result in changes in agricultural land use.... And you have to be careful how much you require. Use the right biofuels, but don't require too much too fast. Right now we're making almost exclusively the wrong biofuels.

So I think maybe the debate should be centred around the right versus the wrong. As someone observing this, I see that there's a lot of potential to use the right biofuels. We've talked about that with the biomass from waste. We've talked about that with especially the two types of research going on with regard to the biomass residue, the *bois usagé*.

I'd like to have some comments on that. I'll stop here, but overshadowing this whole debate we have food, and food versus fuel.

Mr. Thomson.

● (1635)

**Mr. Ian Thomson:** Thank you.

That is an elegant summary of the challenges we face.

I have three points. On your reference to the European Commission's biofuels directive that was released in January, we studied that closely and we studied it quickly. It has obviously substantial implications for Canadian biodiesel, in the case of our industry, to the extent that a fair bit of biodiesel and biodiesel feedstocks, namely canola, are shipped from Canada to Europe right now. The Europeans were really targeting a very specific set of criteria they would consider to be unsustainable. They would target palm from recently deforested areas and places of high biodiversity. They would target soybean that was grown in Brazil or Argentina from lands that really are grassland and are fallow and would be taken into production, hence you would lose the carbon sinks in those.

I think you need to look very carefully. I concur with you. I don't think very many people in this industry got into it to see the result of their work be a destruction of habitat. Canadian-produced feedstocks on the biodiesel side will more than match the criteria the EU is setting up. We will not be taking grassland under cultivation to expand that. If you look at the Canola Council of Canada's website and information they put out, there are advances in agronomy, in yield science, in crop science, that will be able to deliver the increase in oil that's required for a biodiesel mandate. We produce 9 million to 10 million tonnes of oilseed, of canola, a year and we're going to be requiring about 900,000 tonnes, about 10% of that, to do the kind of crop we need for the renewable fuel standard.

We really do need to consider Canada. I am aware of this all the time. We get the broad international signals about going slowly on biofuels and we broadbrush Canada. We would be bringing about a very unfortunate situation if we were not to consider what Canada has. Canada's crops will favour very well under international sustainability criteria. We know that from participating in it.

I have one last comment on the topic. As I sit beside this high-definition television with its flat-screen panel, I don't think we said 20 years ago we were going to hold on cathode ray tubes because something better is down the road. Everybody who has studied the adoption of new technologies or, in the case of new biofuels, new fuels has said you have to have an industry on whose shoulders to stand. If we hold off on the first generation, it will deter the adoption of the really smart biofuels that we all agree are not going to compete with food and won't compromise agricultural areas, as an example.

**The Chair:** Thank you.

Time has, unfortunately, expired.

Mr. Boshcoff, the floor is yours.

**Mr. Ken Boshcoff (Thunder Bay—Rainy River, Lib.):** To the speakers who presented thus far, do you see any parts of the bill that have to have some major amendments, and at which stage of concurrence would you say you are at, reading the bill as presented?

Perhaps, Monsieur....

[Translation]

**Mr. Benoît Legault:** I can tell you quite honestly that the Fédération des producteurs de cultures commerciales du Québec has a rather general understanding of Bill C-33, which is intended to amend the Canadian Environmental Protection Act.

Our interest is more directly tied to everything that affects biofuels policy and that could promote the development of biofuels policy. As far as the specifics of the bill and the proposed amendment are concerned, they suit us overall and we do not really have any amendments or changes to propose.

• (1640)

[English]

**The Chair:** Mr. Thoroughgood.

**Mr. Paul Thoroughgood:** I'm afraid we haven't had a chance to fully review it and I can't offer you a well-informed comment right now. I apologize for that.

**Mr. Ken Boshcoff:** Could I ask you as a representative of Ducks Unlimited? We're speaking specifically to the bill, and—I'm trying to be polite here—if you came to us to talk about the bill and didn't quite know about it....You are a witness, so....

**Mr. Paul Thoroughgood:** I realize that and I apologize. I haven't read the bill thoroughly enough to be able to comment.

In coming to provide testimony, we were trying to broaden the debate to include some discussion about habitat and bring that into the discussion about biofuels, because it does have a direct impact.

**Mr. Ken Boshcoff:** Okay, thank you.

**Mr. Ian Thomson:** I fully support the bill as it stands, and I support it because I'm a pragmatist on such matters. The specific legislation and mechanisms that will govern percentages and compliances, etc., will be written into law under the auspices of the act. We are looking more at seeing movement rather than further amendment to it. We've been looking to either the Clean Air Act or CEPA as the mechanism by which the federal government can have the authority to legislate climate change gases. We, for the most part, are supportive of this.

It will never be perfect, but we look at this and say we can work with it. And if we can work with Environment Canada and NRCan and those who will write this legislation, we support it on that basis.

**The Chair:** Dr. Chornet, do you have any comments?

**Dr. Esteban Chornet:** I think it's a good step in the right direction, and we will see. We never know. When projects of law go into effect, it's their application that brings the nitty gritty. I think that will be the case, but I'm convinced that Canada is moving in the right direction.

**The Chair:** You have a minute and a half left, Mr. Boshcoff.

**Mr. Ken Boshcoff:** I think the next presenters are in the audience, and perhaps they can prepare for that same question eventually.

Thank you.

**The Chair:** Thank you.

Next on our list is Mr. Lauzon.

**Mr. Guy Lauzon (Stormont—Dundas—South Glengarry, CPC):** Thank you very much, Mr. Chair.

I'd like to direct my first question to Mr. Thoroughgood.

My memory is not as good as it used to be, but I think you mentioned something to the effect that if it's implemented responsibly, Ducks Unlimited believes an increase in biofuels will be a good thing. You also said that it will be "greener, smarter, and better", and I wonder if you can expand on that.

**Mr. Paul Thoroughgood:** My comments were specifically to which types of feedstock were utilized in the biofuel industry. So an expanded biofuel industry that continued habitat types such as spring wheat wouldn't be good from a habitat perspective. But a biofuel industry that promoted crops that provided improved habitat value, like winter wheat or perennial grasses where annually cropped land currently exists, would be greener, better, and smarter than what's currently on the landscape.

**Mr. Guy Lauzon:** So you're saying that if it were implemented responsibly it would be a good thing.

Mr. Thomson, I was very interested in some of the comments you made. I think you said it is the most positive thing that has happened in agriculture in 30 years. I'd like to hear a little more about that. It's good news for the farmer, obviously.

**Mr. Ian Thomson:** Yes. Let me share by way of an anecdote.

In January 2006 I was a speaker at a forum in Saskatoon. It was Canola Days—the primary gathering of canola growers. It would not be an understatement to say that the mood was despondent. The average age of canola growers was 59 years, and they were looking to sell out of the business. At a \$5,000-an-acre loss per year, it was hardly an incentive for canola growers to get excited about the industry. The panel's full focus for that year was on canola.

Fast forward to today, and we are looking at four contracts for next year in the range of \$13 a bushel—and at the time it was about \$5.75. If you phoned the Canola Council of Canada and asked them if biodiesel was a good thing, I think they would speak for farmers as a whole in saying...I think any grains across the board coming up. They know it's a commodity and it will come and go, so I think there's that enthusiasm.

• (1645)

**Mr. Guy Lauzon:** One of our previous witnesses mentioned that it's a saving grace, not only for farmers but for rural Canada. If we can get this industry up and running vibrantly, I think there will be a lot of spinoffs.

You also mentioned that we should pass this bill as quickly as possible without delay, because private investors need to see some action on this very quickly. Are private investors there willing to buy into this?

**Mr. Ian Thomson:** There are two parts to a successful industry in a country. One is to create the assurance of demand. If we were not a new industry in the presence of another conventional industry that

was reluctant to adopt this, it would be reasonable to let the market take care of that. But the market simply does not allow room, the way it's structured right now, to put in a new fuel unless somebody is saying you really need to do this. That would be the federal government, by way of a mandate.

The second part is the financial piece. This committee isn't looking at that piece, but that part allows us to not only use biodiesel or ethanol, but to use the biofuel we produce in Canada. The production incentives are also a critical part of it.

**Mr. Guy Lauzon:** You mentioned that you would like to see biodiesel moved up from 2012 to 2010.

**Mr. Ian Thomson:** Yes.

**Mr. Guy Lauzon:** Could you give a quick explanation of why?

**Mr. Ian Thomson:** You have to go into the horse trading that was done two summers ago on getting biodiesel included as a specific renewable fuel. The concern at the time was that because ethanol was better developed and there were two petrochemical companies actively producing and selling bioethanol, biodiesel really needed a place for the benefits I've talked about today. For Canadian growers, it was very much the agricultural sector that showed up and said, you can't just make this wide open, ethanol will have the whole thing. That was the presumption. So the federal government said, okay, we'll have a 2% set-aside for biodiesel, but because there are technical uncertainties surrounding this fuel, we will give it two more years at the latest, and it could be as early as 2010.

Well, we have, for the most part, satisfied the technical requirements necessary to satisfy ourselves that we will not be putting biofuel into the distillate pool, in this case, that will compromise operability, leave trucks by the side of the road, and that kind of thing. I'm on the steering committee of a large-scale pilot right now that has very successfully run in Alberta this winter. If you know anything about what it's been like in Alberta this winter, it's an extremely good case for demonstrating that we can use a low-level blend of biodiesel, up to 5%, which is commonly supported in many countries. In fact, a number of people in more temperate places will go to 20% without any difficulty.

**Mr. Guy Lauzon:** Thank you very much.

[Translation]

**The Chair:** Thank you very much.

Mr. Gaudet, you have five minutes.

**Mr. Roger Gaudet (Montcalm, BQ):** Thank you, Mr. Chairman.

In your reports, you say that the ethanol plant in Varennes could be producing more. Do you support ethanol production by small businesses?

**Mr. Benoit Legault:** The agricultural community would love to see that happen, but experience and information over the last few years on ethanol and biodiesel show that profitability is a matter of scale. This is particularly true for ethanol, but even in the case of biodiesel, we have realized that you have to have a very big business in order for this to be profitable.

There had been research projects in Quebec to determine whether it would be feasible to do this on a small scale or perhaps even on the farm, but there are all sorts of factors that have to be taken into account. I am not just talking about profitability, but also about the quality of the product. All of this means that it may not be possible to do it on a small scale.

Our association, along with producers from the Pro-Ethanol group and the Ethanol GreenField company, has grown over the years. The project started in 1992. We started talking about ethanol in Quebec in 1992, and the project started up in 2007. We are talking about a two-to-three-year period to implement the project. It is clear that this was beginning to develop. We would very much like to be able to turn to small businesses that are managed by agricultural producers. Furthermore, in future developments, we would like to see greater involvement of producers in terms of value added for their grain, therefore financial involvement in the development of biodiesel. That is what we are seeking. We have not yet found the ideal solution.

• (1650)

**Mr. Roger Gaudet:** I would like Mr. Chornet to tell me what he thinks of the small businesses that could supply the industry. We want to protect the environment, but what about transportation? If you are leaving from Abitibi, for example, to supply the ethanol plant in Varennes, you are using a lot of fuel.

**Dr. Esteban Chornet:** There is also, sir, an underlying problem in the fuel industry, not only in biofuels. The fuel industry is regulated. You cannot sell just anything to people at the pump. That requires a certain control over how the mix was made. This discourages small producers because they do not have the technical know-how, the equipment or the necessary investments to be able to produce a final product. The idea of having regional production is fantastic. Everyone supports it. However, regional production still must be on a scale that will reassure the general public as to the compatibility of the product with the needs of their cars, the regulations, etc.

**Mr. Roger Gaudet:** I more or less agree.

I was born on a farm. At that time, that is in 1957, there were 127 dairy producers in my hometown. Today, there are only two left. I imagine that in 1957, my milk was as good as today's. At that time, you could drink the milk directly from the farm, whereas that is no longer possible today. Today you don't even have the right to sell it. I have a problem with that.

In 1992, I was mayor and reeve. Ethanol production had started up on the North Shore, in the riding of Berthier. Following that, it was transferred to Varennes. I am well aware of these developments.

Do you support small businesses producing ethanol? It worries me that we are only talking about big businesses. We may find ourselves with multinationals.

**Dr. Esteban Chornet:** Make no mistake, in the fuel business, GreenField Ethanol is a small producer. It is no Shell or Texaco. I believe that the biofuels sector, whether it be biodiesel, ethanol or new fuels of the future, will be fantastic in terms of the creation of wealth, and that we are discussing a level that the big multinationals cannot get into for the moment.

The idea that a producer who owns 100 acres of feedstock would be able to manufacture his own fuel seems overly romantic to me.

**Mr. Roger Gaudet:** One hundred acres...

[English]

**The Chair:** Your time has expired.

[Translation]

**Mr. Roger Gaudet:** ...is perhaps not enough. I was thinking rather of 2,000 acres.

**The Chair:** Mr. Gaudet.

**Mr. Roger Gaudet:** I am not talking about farms as they were 20 years ago.

Thank you.

[English]

**The Chair:** *Merci beaucoup.*

Mr. Storseth, you have the last five minutes, and that will give us a couple of minutes between groups to clean up the table.

Five minutes or less, Mr. Storseth.

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

I want to thank everybody for coming today. This is a very interesting debate we've been having at this committee. I believe this is a great piece of legislation that's going to bring a lot of benefits, not only to our farm families and our small farm families but also to our environment.

I'd like to talk a little bit about the fact that this is a new industry in Canada. Any time you have a new industry you start out with a base, but inevitably it always gets better. Your technology always advances to far more than what it was when you first started. Oftentimes the advances that you end up with at the end of the day are things that you couldn't even conceive of at the beginning.

So I understand if you don't have all the answers to my question, but a perfect example of this is the oil sands. What we started with in northern Alberta, where I'm from, almost looks archaic compared with what we have today, the advances that we have.

I would like to start out, Mr. Thomson, by asking about some of the research and development that you see coming out of this and some of the advantages that you see coming out of these initiatives.

• (1655)

**Mr. Ian Thomson:** There are two levels. One is technology and one is feedstock. There are different types of technologies that it can employ. One is a lipid, which is an oil or a fat, and then there is a more advanced type of technology by which it can take a cellulosic material or a bio-oil that can be made from a broader range of cellulosic carbohydrate materials.

Then on feedstocks—and I can talk specifically about what's going on in Canada right now—we have rendered fats, so recycled greases from restaurants, and we have tallow from rendering plants and packing plants. Those form about 200 million litres of supply right now, and the balance of maybe 1.3 million litres, going out to 2015, would come from oils.

Of those oils, right now vegetable oils, canola, would be it, but people are doing research on camelina sativa, which is more drought resistant. It requires less pesticide, less nitrogen. It has yields that are comparable to canola if grown well.

People are looking also at different kinds of oilseeds. They're looking at micro-algae as a source that would not compete for arable land as a lipid feedstock. There's mustard seed, again, and there's another one that's a relative of canola seed.

Some of them are closer than others, but it all comes down to the economics. Your colleague was asking about the economics of a production plant. Well, if you have expensive feedstocks, they become the majority cost of production, and the focus becomes on feedstock.

So we see a great deal of potential coming out of future research. But you don't jump to those future feedstocks. You have to have a base of industry in which to test them, to support them, to build them.

Then there's a whole other conversation about future technologies and renewable diesel. In Canada, in the British Columbia government, in the federal government, the support is for renewable diesel. It doesn't pick winners or losers. It simply says, we want to have it be renewable; you pick the technology and you find the feedstock that is most suitable.

**Mr. Brian Storseth:** It's really quite exciting when you start talking about it.

I assume you would agree that it's critically important that we not only pass this legislation but continue to enhance the funding for research and development in all of these fields. Does that apply to you as well?

[Translation]

**Mr. Benoit Legault:** In Quebec, we concentrate more on starch and carbohydrates rather than on oil, even though we do produce soya. We are interested in biodiesel. A lot of research has been done in cooperation with Ontario. Corn works very well in terms of water and energy use. Corn grain produces seven times the crude energy that it consumes. Currently, we are trying to use fermentable sugars that are found not only in corn grain but in the entire plant. Given the productivity of a field of corn, the recovery of fermentable sugars from the entire plant is a project that has a great deal of potential.

In Ontario, we are trying to develop varieties with a high sugar percentage in the overall plant, that is in the stem, the leaves and the cob. The idea is to have ethanol production from an acre of corn that one day will be as efficient as if it was made using only the cob or the corn grain starch. There is a lot of research being done on that at this time. We are also testing other plants, like sweet sorghum for example, a grain plant that produces a lot of sugar. We would use the entire plant in order to achieve a high rate of sugar production per cultivated acre.

[English]

**The Chair:** Thank you. Your time has expired, Mr. Storseth.

I want to thank all the witnesses for coming in today and for your presentations and input on Bill C-33. I'm going to ask that you leave the table as quickly as possible, and we'll suspend.

I want to call all the witnesses for five o'clock to come to the table as quickly as they can as well.

Thank you. We are suspended.

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\_\_\_\_\_ (Pause) \_\_\_\_\_

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• (1705)

**The Chair:** I call this meeting back to order.

We welcome to the table now, from the Conseil québécois du biodiésel, Monsieur Camil Lagacé; from EcoNovo Consulting Experts, Dr. Simon Barnabé; from Canadian Biotechnology Action Network, Lucy Sharratt; from the Western Canadian Wheat Growers Association, Blair Rutter and Kevin Bender. We also have, from Centre de formation en entreprise et récupération de Victoriaville, Yves Couture.

Welcome, all of you.

Opening comments will be 10 minutes or less. We're going to kick it off with you, Mr. Lagacé.

[Translation]

**Mr. Camil Lagacé (President and Chief Executive Officer, Conseil québécois du biodiésel):** Good afternoon. My name is Camil Lagacé and I am the President and Chief Executive Officer of the Conseil québécois du biodiésel.

First of all, I would like to thank you for inviting us here today to comment on Bill C-33.

Generally speaking, we support the proposed amendments to the act. We support the overarching principle. In that regard, we are not here to challenge the exercise that is underway. However, we would like to make a few points that, in our opinion, could be beneficial when the time comes to provide guidance for the actions that will come from making these changes to the act.

As far as establishing a minimum average biofuel content, it is not enough to create a biofuel market that is real, that can quickly and easily be integrated into the existing distribution infrastructure of petroleum products and that will readily convince users to choose biofuels.



In the case of biodiesel, the proposal for minimum average content is contingent on its being proven feasible. This being the case, it is important that this be demonstrated as quickly as possible, for every segment of the market in which biofuels might be used, whether it be in the transport sector, for roads, and for other applications such as rail, shipping, agriculture and heating. Moreover, this demonstration must be made with the participation of a greater number of partners representing various potential users. Current conditions and regional differences must also be taken into account.

The use of petroleum products and the logistics regarding their distribution vary considerably from region to region in Canada. As far as introducing a national biofuels strategy is concerned, such a uniform approach could run into problems at the regional level that would slow down deployment. Market conditions must be promoted that would truly contribute to the sustainable development of the biofuels industry or the renewable fuels industry, that is to say that rules must be put into effect that will allow the Canadian industry to compete with products from elsewhere.

I will give you an example. Currently, the mechanisms in place in the United States ensure that all of the Canadian biodiesel production goes through that country, in order to take advantage of tax incentives, such as the blender's credit, which allows those making blends to bring a subsidized product to market, which is therefore cheaper and more attractive to the customer. Parameters must be defined for the development of biofuels production subsidiaries between the first, second and third generations using quotas for suppliers and feedstock, as the Americans are currently doing, and as are some European countries including England, France and the European Union.

I will give you an example. We want to implement regulations in Canada. If we are discussing corn ethanol versus cellulosic ethanol, it must be decided which regulations will deal with the biofuel production subsidiaries. In the case of biodiesel, it will be a question of determining what proportion of the biofuel will be produced from dedicated crops, on the one hand, and residual feedstock on the other.

As far as non-compliant products are concerned, it is critical that within the framework of the implementation of biofuels regulations, we ensure that only products that meet quality standards will be used, and not product substitutes that do not meet any standard.

I will now address the issue of aid programs for biofuels, whether they are aimed at developing markets or creating demand. In the United States, biofuel plants are currently working at only 40% capacity because they are having difficulty getting a foothold in the distribution system and connecting with users. In this context, the Conseil québécois du biodiésel wants to organize a project called BioRoute-BioHighway next spring in the Quebec-Windsor corridor. The objective is to actively work on creating a market for biodiesel by connecting users to producers and to biodiesel distributors in Quebec and in Ontario. We are running into obstacles in terms of funding the project because it does not fit into programs set up by the federal government under regulations intended to impose a minimum average content for biodiesel by 2012.

• (1710)

In other words, we like the idea of the project, which closes the production and product-use loop, except that there is no program to help make this a reality. Today, several departments believe that imposing a minimum content will be sufficient to automatically create demand.

Following a study on the distribution of biodiesel in Canada, it will be important to adapt in an intensive way the biodiesel distribution network throughout the industry. To achieve this, we will need different types of support. The U.S. Biodiesel Blender Federal Excise Tax Credit is an eloquent example. It combines products, but it also benefits from accelerated depreciation to help absorb the costs to adapt infrastructure.

The two last points deal with regional development and the production of biofuels. Though seemingly interesting at first glance, small-scale production of biofuels with a production capacity of less than 5 million litres per year is risky, because production plants may not be viable. This is partly due to the cost of quality assurance, as well as the minimum amount of biofuel which the distributors of oil products would want to purchase. A smaller production plant will not necessarily be profitable in the long term.

Lastly, with regard to the providers of raw materials, particularly in regions where volumes are generally smaller, such as canola production in Quebec, we should not rush any decision to invest in the production of biodiesel because it is a hot issue or because it can benefit from government support, especially if we are talking about small-scale production. It would be much wiser to wait and consider the use of this biomass in combination with other available biomasses in the region which could potentially be processed into value-added materials at the biorefinery.

Thank you.

**The Chair:** Thank you very much.

Dr. Barnabé, you have the floor.

**Mr. Simon Barnabé (Scientific researcher, Added value production from waste materials, EcoNovo Consulting Experts):** Thank you, Mr. Chair.

Dear committee members, you have invited me today to speak to Bill C-33. As a young researcher, I believe I represent the new generation of scientists and professionals, particularly those working in the vast areas of the environment and biotechnology.

First, I noted that under Bill C-33, there will be new regulations on biofuel production; these regulations have not yet been drafted or passed. If the bill encourages the Canadian production of biofuels from green biomass rather than from other sources, there might be serious environmental and socio-economic repercussions, the possibility of which have already been raised by the scientific community, or played down by certain governments, but which strike fear in the heart of environmentalists. Here then are my positions with regard to your bill.

First, the production of biofuels calls for the use of tons of biomass, and one can easily justify using abundant and diversified raw materials such as waste materials. Bill C-33 should be presented to Canadians as encouraging the use of waste materials, and not of green biomass.

Second, the production of biofuels must not supersede the production of other bioproducts. Bill C-33 is currently being presented as supporting the production of biofuel, but what about other bioproducts for which there are potential and growing markets? Does the future of producers only lie with biofuels, or with a greater diversification of agricultural bioproducts?

Third, Bill C-33 is being presented to Canadians as a solution for agricultural producers looking for new markets. However, in my view, the bill is also a solution for the diversification of bioproducts for other industries, and even for municipalities, which have at their disposal a vast variety of waste materials which can be bioprocessed with or without being treated first.

As for my first position, many of us strongly believe that the production of biofuels and other bioproducts must be based, whenever possible, on waste, pretreated or non pretreated biomass which is available locally. Each region, municipality, town or village generates its own diversified waste, such as straw, wood residue, used oils, subproducts or agrifood waste waters. All these waste materials could be potentially biotransformed into biofuels and other bioproducts, including even enzyme cocktails, for instance, which can be used to pretreat lignocellulosic materials to biotransform them.

By making the right technological choices, you can considerably reduce your production costs and the price of bioproducts. You can even save on the treatment and management of waste by using it in value added production. The combination of waste and/or local residues, and the application of mechanical, physical-chemical or enzymatic pretreatments are two great examples of technological choices which widen the scope of possibilities for bioprocessing and increase production performance.

It is even possible to use the scrubbing sludge of waste water. Waste water treatment plants generate a fantastic raw material which the public and some governments still perceive as waste because of its origin and smell. The nutritional potential of sludge is under estimated, but it can support the growth of industrial microorganisms, and the formation of these microbioproducts has potential commercial applications. Scientific research has also shown that it is cost effective to produce biopesticides and enzymes, and eventually bioplastics. The production of biofuels, or of enzymes for the production of biofuels, certainly holds a lot of potential.

As for my second position, I believe that the Canadian government wants Bill C-33 to help agricultural producers. Indeed, the bill in part addresses the need to diversify agricultural bioproducts in Canada. But it is important that future regulations, and any investment made under Bill C-33, not draw our attention away from the production of other bioproducts, such as microbial enzymes and biochemical products for which there are potentials and promising markets. There are so many niches which can be developed, especially giving the diversity of fermentable residues which can be transformed into economic raw materials.

As for my third position, Bill C-33 is presented as a solution to agricultural producers looking for new markets. However, Bill C-33 should also be presented as a solution for every producer of waste wanting to transform it into bioproducts and to benefit from this process. Future regulations and investments made under Bill C-33 will also have to apply to the forest industry, the agrifood industry, and even to municipalities. In my opinion, it is important to encourage the production of first, second or third generation biofuels which are made entirely from agricultural, forest or municipal residues, or even based on materials which are not grown from the soil.

• (1715)

I would like to underscore the fact that Bill C-33 reflects the government's willingness to create biorefineries, and that plants to produce biofuels, bioenergy and other biochemical products would be located in a rural environment. However, I think that we should go further than to simply build biorefineries; we should also build eco-refineries, which would be located in different regions and which would meet the particular needs in biofuels and other bioproducts of that region, based on the availability of waste materials.

Eco-refineries are in fact the logical extension of biorefineries and eco-parks. We will be able to build eco-refineries if we decide to diversify the production of waste-generated bioproducts. Farmers, beef, pork and chicken producers, various industries, recycling centres, municipal dumps and water treatment stations could foster bioproduction in their respective regions. Manufactured bioproducts, such as biofuels, should ideally meet the needs of citizens, farmers, and whatever industries are located in the region. Each town or village could manufacture and distribute to its citizens and to local industries a variety of cheap ecological bioproducts. These eco-refineries would be comprised of various "value added" subsidiaries, which would attract biotech companies to their respective areas and create high-tech jobs.

If you wish, I can provide you with the scientific literature to support what I am saying. I have a few concrete examples. In Quebec, the town of Victoriaville is currently doing a feasibility study on the implementation of a pretreatment and bioprocessing process of sludge into commercial bioproducts. You can also take a look at what my company, EcoNovo, is doing. Its mission is to turn waste into value-added production, and, in particular, to diversify the products we produce. In fact, my company did the feasibility study for the town of Victoriaville.

Lastly, there is the Institut national de la recherche scientifique, which is based in Quebec City, and which has received a grant from the Canadian Foundation for Innovation and the Government of Quebec to build the very first research and development laboratory in the area of bioconversion of urban, industrial and agricultural waste into value-added products. This is a research platform which will provide Canadian researchers and business startups state-of-the-art equipment to pre-commercialize bioconversion technologies.

In conclusion, I believe that Bill C-33 will promote the production of biofuels generated from waste and the enzyme cocktails which are necessary for the pretreatment process, while also maintaining the main objective, which is to diversify the bioproducts generated by all industries—recycling centres, municipal dumps and waste water treatment plants—across Canada. We have access to a vast variety of waste, the advantages of which are still being counted. That is why we must build bio-refineries and eco-refineries in Canada to add value to waste materials.

● (1720)

[English]

**The Chair:** *Merci beaucoup.*

Ms. Sharratt, go ahead.

**Ms. Lucy Sharratt (Coordinator, Canadian Biotechnology Action Network):** Thank you very much.

I work in Ottawa as the coordinator of the Canadian Biotechnology Action Network. The network is a collaborative of 16 organizations across Canada, including international development organizations like InterPares and USC, farm associations and grassroots coalitions like the Society for a GE Free B.C., and the P.E.I. Coalition for a GMO-Free Province.

Our network is a testimony to the ongoing concerns of Canadians about the introduction of genetically engineered crops and foods. Our network is also highly concerned about the livelihoods of farmers in Canada. We want to make sure that consumer choices and government regulations support the ability of farmers to see a return on their investments and labour.

We are also, as are you, deeply concerned about finding a way to stop dangerous climate change. For example, we know that climate change already puts farmers at risk and threatens farmers' yields.

Finally, the Canadian Biotechnology Action Network is concerned about the welfare of farmers in other countries, particularly those small-scale farmers in the global south. We're also concerned about the impact of rising food prices on global hunger and malnutrition.

So it is that we come to the issue of biofuels. The same debate we're having here this evening is currently happening in countries the world over. In the rush to see the creation of a biofuels industry, many of the true consequences have not been anticipated, and we're only now beginning to understand how dramatic some of these are.

Mandating the use of biofuels opens the possibility that we may be committing in the long term to support feedstocks and technologies that are not carbon neutral, but will in fact increase greenhouse gas emissions. A major problem is that in the biofuels equation agriculture itself is a major contributor to greenhouse gases. The hope was that biofuels could be a win-win scenario for farmers and for the climate. Unfortunately, this mandate could in fact be a lose-lose investment, one that will dramatically change land use across the globe and jeopardize the biodiversity that we in fact need to face climate change.

In the United States and Europe, civil society organizations are calling for a moratorium on incentives for agrifuels—biofuels—including a suspension of all targets. In Quebec, we understand there is a suspension to the construction of new corn ethanol plants. The

U.K. government announced last week that its Renewable Fuels Agency will study the so-called indirect effects of biofuels, which are a grave concern for countries that will rely on importing biofuels from developing countries. These effects include human rights concerns, labour rights abuses on plantations, and the displacement of indigenous peoples and farmers from their land. For example, there are already documented cases of forceable removal in Colombia for oil palm plantations; destruction of forests, including critical habitat; increased pesticide use; and overuse of water. These concerns are also our concerns.

We're greatly concerned that government regulation to make biofuel content in fuels mandatory in Canada will have a number of immediate, but also long-term, effects and unintended consequences. A priority for the Canadian Biotechnology Action Network is our concern that biofuels will increase the acreage of genetically engineered crops. We're also concerned that the biofuels rush will be used to push open the door to new genetically engineered crops, including genetically engineered wheat and genetically engineered trees.

Increased acreage of genetically engineered canola, corn, soy, and now even possibly genetically engineered sugar beet will increase the contamination risk to organic and non-GE crops, as well as other environmental risks. Serious consequences for Canadian farmers have already been seen. For example, farmers have given up growing canola organically, except in very isolated geographical locations.

We're also concerned that the rush to establish a biofuels industry will be used to push through the introduction of genetically engineered wheat, despite the fact that Canadian consumers and our export markets have already rejected this product outright. And we do see that the Canadian Food Inspection Agency is preparing the way for faster approvals of genetically engineered crops through proposals to change seed regulations, the seed program modernization.

● (1725)

Already corporate power in the seed sector will only grow stronger as crops are dedicated for biofuel production. This corporate concentration will, as always, translate into higher input prices for farmers and less choice in the marketplace.

There is a new case that illustrates very clearly the way in which biofuels are being used to open up markets to otherwise unattractive or irrelevant genetically engineered crops. In Prince Edward Island there's a company seeking provincial government subsidies to set up a biofuels plant that would rely on sugar beet, and in this case the biofuels plant is expected to be fuelled by Monsanto's new genetically engineered sugar beet—entirely by this sugar beet.

Finally, the Canadian Biotechnology Action Network is extremely concerned about false promises for second- and third-generation biofuels that we see are propelling the industry forward. Like the unfulfilled promises for genetically engineered crops, the launch of government supports for the biofuels industry is predicated on faith and assumptions that new genetic engineering and synthetic biology technologies can make up for current shortcomings in feedstocks and the technologies to process them.

What we see is a pie-in-the-sky picture for a future that relies on technological fixes that do not yet exist. This is not a sound basis for moving ahead with expensive policy. These justifications are, we believe, dangerous because they rely on a promise that is unlikely to ever come to fruition. Instead, and more importantly, this reliance may actually lead to the release of genetically engineered crops and trees despite their extreme dangers.

This false and dangerous promise for the next generation, whatever generation that is, is why we now see a massive investment in the United States to genetically engineer poplar trees for cellulosic ethanol. In the U.S., universities and corporations and the United States Department of Energy are investing millions to genetically engineer poplar for biomass. Field tests in the United States of genetically engineered poplar, in particular, already pose a clear and urgent threat to Canada's precious forest ecosystems.

There are already field tests in the United States of fast-growing trees genetically engineered to be low in lignin. These are engineered expressly to make the production of cellulosic ethanol cheaper and more efficient. Lignin is an important structural polymer. It's what holds the tree up. Lignin is significant in defending the tree from insects and disease. So while these genetically engineered trees may make processing wood for ethanol cheaper and easier, the environmental impacts of such a trait spreading through forests could be severe and would be irreversible.

The Canadian Forest Service is also conducting field tests of genetically engineered trees in Quebec. These Canadian government tests may feed directly into this project of genetically engineered trees for ethanol and they again pose immediately contamination threats.

Just last week a global protest of agrifuels, or biofuels, and genetically engineered trees was launched at a meeting of the United Nations Convention on Biological Diversity. The Canadian Biotechnology Action Network stands with these communities, and we hope that the desperate need to stop dangerous climate change does not translate into a dramatic misstep that would not only fail to stop climate change but would actually worsen various environmental problems, especially by opening the door to dangerous technologies, a door that should remain shut.

Thank you.

• (1730)

**The Chair:** Thank you.

Mr. Rutter or Mr. Bender, who is making the presentation?

**Mr. Kevin Bender (Director, Western Canadian Wheat Growers Association):** Thank you, Mr. Chairman.

The Western Canadian Wheat Growers Association welcomes this opportunity to appear before you all today.

I'm a director of the association, and I farm near Red Deer, Alberta. I also sit on the board of directors of the Alberta Canola Producers Commission, and I recently completed a term in the Canadian Canola Growers Association. However, my views here today will be primarily from the wheat growers' perspective.

Joining me today is Blair Rutter, our executive director from Winnipeg.

The Western Canadian Wheat Growers are a prairie-wide voluntary farm organization. For 38 years we've been advocating forward-looking farm policies to improve the profitability and sustainability of our farms. Our board of directors consists of 12 farmers who have a passion for agriculture and the determination to make farming more profitable. It is our optimism about the future of our industry that keeps us energized.

Grain prices are currently strong in western Canada, so that's helping to fuel our optimism. We know, however, that good grain prices can be fleeting, so that's why we're always seeking policy solutions that will help make farming more profitable on a long-term basis. We see biofuels as an excellent opportunity in helping us to achieve that goal.

Bill C-33 makes provision for regulations that would require gasoline to contain a 5% average renewable content by 2010 and diesel and heating oil to contain 2% average renewable content by 2012. The wheat growers support this legislation and urge committee members to give it their full support as well.

Currently, there are five commercial ethanol plants in operation in western Canada and two more that will be opening soon this year. Combined capacity of these plants will be 500 million litres, which would, in total, consume about 1.4 million tonnes of wheat, or approximately 7% of the average wheat production in western Canada. Of course, these wouldn't use wheat exclusively; corn and other cereal grains would be part of that as well.

While ethanol has been produced on the Prairies for more than 25 years, we really are in the infancy stages of a large-scale biofuels industry in western Canada, so it's difficult to predict the full impact. In our view, biofuels and bioproducts represent a great opportunity to create a more sustainable future for our industry. Over the next few minutes, I'll talk to you more about the value of biofuels to prairie grain farmers.

First of all, increased ethanol production will help reduce our dependency on foreign grain markets. There are always a number of risks when you're exporting grain offshore. We're vulnerable to tariff and trade barriers, labour disputes, railway service disruptions, and high ocean freight rates. In the past year, the prairie grain business has been disrupted by two railway strikes and a trucker walkout at the Vancouver port. Having more grain processed domestically helps mitigate the impact of such disruptions.

Another benefit of the ethanol industry is that it would provide farmers with another local outlet for marketing their grain. As we've discovered in the canola, oats, and pulse sectors, local users of grain improve competition and help support local prices. The value of ethanol and biodiesel plants will be particularly evident when grain downgraded by weather or disease is able to be used for biofuel production.

Increased local processing also reduces our dependency on shipping grain by rail. In western Canada, our industry continues to be constrained by service and performance issues in the rail sector. In this regard, the wheat growers were very pleased to see transportation legislation, Bill C-8, passed by Parliament, and we thank all parties for their support of this legislation. It's my understanding that it has been passed by the Senate and is just awaiting royal assent.

The fact remains, however, that in western Canada the two main railways haul about 65% of the grain we produce. In our view, one way to improve rail service and increase competition in grain handling is to increase the amount of grain that is processed locally. Wheat varieties that are well suited to the ethanol industry often have agronomic advantages and so they represent a good rotational fit on many farms. Promoting a biofuel industry also creates more jobs and economic activity in rural areas. For those farmers who invest in these facilities, it also gives them an opportunity to capture a greater share of the value chain.

Finally, processing more of our grain locally helps ease the growing congestion on the rail lines and at ports. Rather than shipping our grain long distances, we think it makes more economic and environmental sense to process it closer to home.

In our view, there's no question biofuel plants provide tremendous value to grain farmers and communities across western Canada. We note that the renewable fuel standards contemplated in this legislation include provision for next-generation feedstocks, including straw and other biomass material. The wheat growers also support these forward-looking provisions.

● (1735)

We recognize and appreciate the concerns raised by the livestock sector with respect to the possible increase in feed grain prices resulting from the development of a biofuels industry. Many of our members also have livestock operations, so we take these concerns very seriously.

We note that studies in the U.S. have shown that livestock operations have flourished around ethanol plants. This is also the case in Canada. In fact, the oldest ethanol plant in western Canada—the Pound-Maker facility in Lanigan, Saskatchewan—is a fully

integrated ethanol and feedlot operation. Other ethanol projects under development have a strong livestock component.

We think it's worth noting that many of the wheat varieties that are well suited for ethanol plants are much higher yielding than varieties used in the milling industries. Often, yield per acre is substantially higher than that of milling varieties. If the ethanol industry expands significantly in western Canada, we could see higher production of wheat, corn, and other feed grains. The resulting distiller dried grains, or DDGs, produced from these plants will provide the livestock industry with a relatively lower-cost feed grain supply.

Admittedly, we don't know what the full impact of biofuels on the livestock industry will be. However, we believe that it's too early to assume that the growth of the biofuel industry will be negative for the livestock sector.

The wheat growers want to see the development of a biofuels industry that is sustainable, without the need for mandates or subsidies of any kind. We recognize that some argue that the biofuel industry will not be viable without government intervention or support. We do not share this view. Of course, economic viability will ultimately depend on the price of the oil and the feedstocks. However, we believe that technological improvements in processing and in variety development will be such that biofuel production will one day be economical and sustainable without government intervention.

Regarding wheat variety development, our association would be remiss if we did not comment on this committee's work in recommending the removal of kernel visual distinguishability, known as KVD, as a criterion for the registration of new wheat in western Canada. The removal of this constraint will lead to the development of wheat varieties that have yield and starch profiles that are well suited to the ethanol industry. We applaud your committee and the federal government for your foresight in bringing about this policy change.

Bill C-33 will also help spur the development of new markets and new uses for our crops. For example, the fractionation of wheat, barley, and other grains offers significant opportunity for the development of healthier food, pharmaceuticals, and industrial products.

In summary, the wheat growers support Bill C-33. The legislation will provide Canadian farmers with greater marketing opportunities and will lessen our dependence on export markets. The development of a biofuels industry will lead to greater investment in crop research and development and in processing technology. It also offers an excellent opportunity to create jobs and economic activity in many rural communities. We ask your committee to endorse this legislation and ensure that it is passed in the parliamentary session.

Thank you again for this opportunity to address you. We look forward to any questions you may have.

**The Chair:** Thank you.

We'll go to Monsieur Couture.

[Translation]

**Mr. Yves Couture (Director, Centre de formation en entreprise et récupération de Victoriaville):** Thank you, Mr. Chairman.

I am pleased to be here today to present a rather modest project to you. But in Victoriaville it's a big project, of which we have many.

I represent a training centre which teaches recycling. We teach young people who don't do well in the regular school system. Since 1990, we have trained between 50 and 70 students who cannot follow the regular curriculum. We decided to provide these kids with a different learning environment, namely one which operates in the area of recycling, and innovation in recycling; we also create sectors which did not exist before.

Victoriaville began recycling at the source thanks to Mr. Normand Maurice, now deceased, who believed that this was very a very important thing. He also believed that underprivileged youth with learning disabilities could play a meaningful role in society. So the training centre focused on the areas I just mentioned and began by creating modest research incubators. The first one dealt mainly with the identification of the papers and cartons we received. Then, with the help of the students, we started to involve the community and began the selective removal process in Victoriaville. The removal process is very efficient and respects the objectives of the waste materials management plan. We are currently engaged in a five-pronged removal process.

We have also begun to collect paint. The removal of paint began in Victoriaville. It is the training centre of which I am the director today which first became involved with filtration on a small scale and with a small budget. Our objective was to create something we could demonstrate to others. Our initial project was to demonstrate that unused paint could be recycled. We began to operate a plant which collects nearly 5 million kilos of paint and dangerous domestic waste every year. We upgrade the paint, which is then sold.

We have also worked with Peintures Récupérées du Québec, which already has the know-how and technical data to filter paint. We decided to create a pilot project involving the filtration of used vegetable oils. The cooking oils which we receive at the plant come from within a network of 550 municipalities which have set up a process to collect paint and dangerous household waste. These oils arrive in bulk and we developed a very dynamic and modest research protocol. Our objective was to show that if Germany could do it, we could too. So we bought a vehicle which we adapted. We worked with young students who were in an applied program to improve the

vehicle's combustion logistics and the way the vehicle runs in very cold temperatures, given our winter climate. We also tried to find solutions while working in a very cold environment. The vehicle was tested with a dynamometer, and with the help of our students and chemists, we were able to verify our filtration product.

I can tell you today that Victoriaville has demonstrated that reused vegetable oil can, when correctly treated with a good filtration method, become a resource which performs better in terms of consumption and torque, as demonstrated by the dynamometer. I can provide you with the supporting statistics.

● (1740)

One year ago, I was in Tianjin, China, which is covered by smog 310 days a year. The use of pure vegetable oil eliminates odour and soot. This means that residues lose their fine particles.

We had questions about torque. When you use pure vegetable oil, it is 5.5% more effective, which represents a torque increase of 4%.

I like the idea that a network of 550 municipalities, which care about environmental recycling, recycle materials on an experimental basis. If the use of oil became widespread, it could be used to make some vehicles run more efficiently.

Our target is to develop vehicles which run on waste materials. We will create a vehicle prototype which runs on vegetable oil. Our objective is to exceed the threshold of 45% to 80%. Depending on the type of vehicle, we could use our vegetable oil at a threshold of over 80%. Our objective is not to commercialize this application, but rather to test it to see whether it is doable and mechanically possible. With the help of our mechanics, we are focusing on preventative maintenance to prevent mechanical breakdowns, and to reassure vehicle manufacturers. We then would be able to claim that our fuel can work at a threshold of 45%, 50% or 60%, and that it is very efficient and performs well.

My presentation was short, but I simply wanted to show you that getting young people, cities or municipalities involved, is the first step towards change. Studying a bill and amendments, as you are doing, can create a movement. The only way to provide security for our young people is to do little things on a daily basis and to give them hope that their lives have meaning. The more this is recognized by a community, the more it is fulfilling.

Thank you, Mr. Chairman.

● (1745)

**The Chair:** Thank you very much.

[English]

Dr. Barnabé, you mentioned a couple of studies in your presentation. I don't expect you to have them with you, but if you could submit those to the committee, we would appreciate that very much. Since you referenced them, we would like to have them on file.

**Mr. Simon Barnabé:** Yes.

**The Chair:** With that, we're going to stick with five-minute rounds.

Mr. Boshcoff.

**Mr. Ken Boshcoff:** Thank you very much.

Earlier, with the first group, I asked them what they thought of the bill as presented, and what constructive criticism they, as delegates, may have to either improve it or amend it. I would like you all to answer that first. I would ask that Ms. Sharratt answer last, please, because I have some additional questions for her.

**Mr. Kevin Bender:** The wheat growers fully support the bill as it is, without amendment.

**The Chair:** Monsieur Couture.

[Translation]

**Mr. Yves Couture:** We believe it is very important to take concrete action. What I find particularly important is removing toxic and polluting substances. The bill clearly identifies which pollutants should be eliminated from the air.

**The Chair:** Mr. Lagacé.

**Mr. Camil Lagacé:** As I said at the beginning, the Conseil québécois du biodiésel does not really have any problems with regard to the proposed amendments to the bill. What is important, however, is what we actually do to help every biofuel producer and to ensure there is sustainable development. In that regard, the bill is merely the beginning. But we will only succeed in developing renewable sources of fuel through technology if there is a will to do so.

**Mr. Simon Barnabé:** I believe that Bill C-33 is an excellent initiative to trigger the development of biofuels on the condition that waste materials be used as the base for production.

• (1750)

[English]

**Ms. Lucy Sharratt:** Generally we have the concerns that in setting up the mandate itself there's a support for an immature industry—or there are very many scenarios for what the industry will look like, and we don't yet know what the shape of the industry will be, even what feedstocks we will use and ultimately the impact on greenhouse gas emissions—and that the facts are contested at every point.

However, if we're then to look at the details of the bill, we would certainly be very happy to take a look. When it's time for the regulations to be set up and made, we'd be very interested to see what that looks like and, looking at Bill C-33, certainly to see if there was a way to incorporate, too, a stress not only on the adverse effects on the environment from the use of fuel or additives contained in the fuel—health effects, and so on—but that the feedstock also be considered and that this be integrated into those concerns.

Additionally, certainly we would want to see an outright prohibition on the use of genetically engineered trees as a feedstock. Also, of course, our concern is with other genetically engineered crops, but certainly the use of genetically engineered trees for cellulosic ethanol is a very serious concern for us.

**Mr. Ken Boshcoff:** We seem to have some other nods from other presenters.

Mr. Rudge, in the Yukon, wants to make the Yukon a GMO-free zone until the results are better known. Do you know of any other provinces or territories suggesting similar GMO-free zones?

**Ms. Lucy Sharratt:** I do know, as you referred to, that in the Yukon there has been this petition presented to ask for a GE-free zone. We work with coalitions on the ground in British Columbia, quite a wide coalition, the Society for a G.E. Free B.C., which is working towards that goal of a GE-free province and certainly implementing, municipality by municipality, GE-free zones. It's a goal that had been taken up in Prince Edward Island as well. It's something that communities dotted across the country are choosing as a way to really look at how they could implement sustainable farming that could restrain the contamination risks from genetically engineered crops.

**Mr. Ken Boshcoff:** So you agree with the initiative, then?

**Ms. Lucy Sharratt:** Yes, absolutely.

**Mr. Ken Boshcoff:** Thank you.

**The Chair:** Thank you, Mr. Boshcoff.

Monsieur Bellavance.

[Translation]

**Mr. André Bellavance:** Thank you, Mr. Chairman. I don't say this every day, but I am particularly proud to have heard witnesses this evening talk about initiatives which were taken in my native town of Victoriaville. Mr. Barnabé talked about a study regarding waste water treatment plant sludge, which was done by the Institut national de la recherche scientifique. In fact, Mr. Barnabé works there too. It seems that our plant treats quality sludge! It's interesting that Mr. Lagacé was in attendance in Victoriaville when the town announced that its fleet of 35 trucks would run on biodiesel. It must be said that the Victoriaville fleet runs on ethanol. They also have hybrid vehicles, in addition to trucks which run on biofuel. We are leaders in that area.

Lastly, there is Mr. Couture, whom I know well and who comes from my region. I would like to congratulate him for being a worthy successor to Normand Maurice, and for doing such a good job helping our troubled young people. Mr. Couture, I would like to hear more about the project involving vehicles which run on French fry oil.

**Mr. Yves Couture:** Yes, that's right.

**Mr. André Bellavance:** Unless I'm mistaken, it's a drugstore delivery vehicle. There is a drugstore in Victoriaville which does deliveries and it runs on vegetable oil. I would like to know more about how that vehicle was adapted.

You also talked about temperatures. Winters are harsh in Quebec and Canada. Does that make a difference? At one time, when people used diesel, they sometimes let their motors run all night to be sure their vehicles would operate in winter. There have been some improvements in that area, but is it sometimes difficult to operate a vehicle running on vegetable oil in winter?

**Mr. Yves Couture:** The pharmacist did indeed have a problem with overheating. To solve the problem with vegetable oil, it must be heated to at least 90 degrees Celsius. The problem was that it overheated. We worked on the problem with the auto mechanics department, and with young refrigerationist students who also worked on the circuit. We fixed it. We came up with other sequences, other ways of working, and as a result we no longer have problems with overheating or filtration. We were able to solve the pharmacist's problems. We went farther, because it was a problem with supply.

The difficulty, when you want to use vegetable oil, is obtaining it and finding a place to pick it up. We worked with our distribution network, and we industrialized the process. We believed in this process, because we know that we are not sending 90% CO<sub>2</sub> into the atmosphere, because it is a biomass system. That means it is very important to take this material and to burn it. We believed in it because we saw that the residue had become a resource. We wanted to use it and for the vehicle we adapted to use it. Having adapted the vehicle, we were able to conduct what we call zero tests. We go back from scratch, we start over, we work on our product and we have it verified by the chemists at Thetford Mines—it's called Oleotek—who have also helped us process our oils.

• (1755)

**Mr. André Bellavance:** The vehicle is currently working well, even in winter. I know you are not an expert in mechanics, but I would like to know if, realistically, we could eventually foresee adapting other vehicles and whether the average person could adapt his own vehicle someday. I understand that you still do not have a supplier of french fry oil. I don't imagine you go to a restaurant and ask for the used oil to put in your car. That would be too good to be true, especially since it normally doesn't cost anything, as the oil is thrown away.

**Mr. Yves Couture:** Yes, it is waste oil. We work with waste oil. We are currently looking at how we can work with this product, and the approach in itself is promising. We feel we should take on the large transport trucks, trucks using 1.6 million litres of diesel per year. We must aim for a reduction of 35%, 40% or 45%. Biodiesel has its streams and does rather well with 5%. Ethanol is successful in the case of gas.

We wondered why not try and break through with this type of vehicle, with vehicles for public transportation. We think we could convert one tank out of two to vegetable oil in the school board's transportation fleet. The next experiment will be to convert a heavy vehicle.

**The Chair:** Thank you very much.

[English]

Your time has expired.

Mr. Miller.

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

Thank you to all the witnesses today.

Just to carry on, Mr. Couture, I have a facility very similar to yours in Owen Sound, Ontario. I should also mention that the local county there has two or three snowplows that they've been testing

with this fuel source, or a mixture of them. They had some complications, but I think they're getting a lot of them ironed out. The one problem they seem to have is getting enough of the product locally, like the waste and what have you. It almost limits where you can go.

If you're going to stay local and not truck that stuff hundreds of miles, do you have any ideas on how you can overcome that with maybe another product? I know this gentleman here was also in the fish manufacturing business, so he was using some, I guess, waste out of the fish, or whatever, but somehow he was getting oil out of there.

So maybe you could comment on this side of it.

[Translation]

**Mr. Yves Couture:** We worked in a specific way, relying on awareness. Each student is responsible for meeting with other students and sharing information on recycling. The recycled paint is part of this approach. We go to the schools. In Quebec, there are currently 21 schools like ours, which is located in Victoriaville. For us, information is what helps feed the process. Thanks to information alone, in one day in Victoriaville, we recycle household hazardous wastes, paint, batteries, and so on. This mobilization is thanks to the commitment of young people in the community.

If the average citizen must get rid of used french fry oil, we must find out if there is a way of recycling it. It is a matter of looking at how much used vegetable oil can be collected in our 550 municipalities. That is the next test bed, and it is precisely the fragile link. You are absolutely right. We tested the product on one vehicle, and we are now on the threshold of a large-scale project. We are reluctant to place this order with the 550 municipalities for the time being.

• (1800)

[English]

**Mr. Larry Miller:** Thank you.

I'm going to move over to Mr. Lagacé and Mr. Barnabé. Both of you said something very similar, going back to using other products in the region. My question on that is, are you a combination on that? Do you have this belief that it shouldn't be solely from agricultural products? Is that the reason behind your thinking? Is it to help alleviate some of the obstacles in the forestry industry right now?

Maybe you could expand a little bit more on what your meaning is there.

[Translation]

**Mr. Simon Barnabé:** We have talked about combining waste matter and producing bioethanol using wastes that are difficult to convert into fuel. I was referring particularly to the mixture of green waste and municipal sewer sludge, for example. We have already investigated this option at the research institute where I used to work. We are also considering combining waste water from the starch industry, with waste matter such as municipal sewage sludge.



**Mr. Camil Lagacé:** We are talking about producing biofuels using agricultural biomass, but we can also do this using forest biomass and municipal biomass. Clearly, in the case of first generation technologies, we use mainly, if not solely, agricultural biomass. With the development of second- and third-generation technologies, we will start diversifying the sources of the biomass. The most valuable part of this process will be the carbon component of the biomass that we will manage to convert into a unit of energy or a biofuel. What will become increasingly interesting and important will be to do this, using the least expensive biomass. The common denominator that will mean that converting biomass will have a future will be a low cost for purchasing and converting it.

At the moment, making biodiesel from vegetable oil is too expensive in light of what the market will pay. Only biodiesel production using waste matter such as oil used for frying or animal fats is currently competitive compared to the prices of oil products in Canada. That fact must always be taken into consideration. Even if we want to use biomass to produce bioenergy and biofuels, what actually happens will be determined by the user and the intermediaries involved in this market.

Given this, it is true that regional conversion projects do offer some opportunities, such as the concept of biorefineries or eco-refineries. For each region, we need to consider all the sources of biomass available—agricultural, forest or municipal, and try to find the best processes for converting them into fuel.

• (1805)

**The Chair:** Thank you very much.

[English]

Your time has expired, Mr. Miller.

Mr. Atamanenko.

**Mr. Alex Atamanenko:** I wish I had 15 minutes to spend with each one of you. There's so much interesting information here.

[Translation]

First of all, I would like to congratulate you, Mr. Couture. What you're doing is very important, and I particularly want to congratulate the young people for their efforts.

[English]

I'm going to ask my questions and I'll try to get some answers.

Lucy, probably the first will be addressed to you.

The latest research shows that we have to be careful. Studies are coming out from the European Union and the United States that maybe we have to be careful about what we're doing, especially in regard to food versus fuel. If I understand correctly, your major concern is greenhouse gases. Some scientists, whom I quoted earlier on today, are saying that instead of reducing greenhouse gases—this is corn-based ethanol—by 20%, it will actually increase it by 93%. So I'd like a comment on that.

The southern hemisphere.... You mentioned human rights, labour rights, displacement of farmers, destruction of forests. These are grave concerns. My question would be, if we had a biofuel policy that clearly stated that we will not import any feedstock for the biofuel industry, would you see it as a viable industry, because then

we wouldn't have any direct push for the industry in the southern hemisphere?

And the other one, of course, is genetically modified contamination. I've read about it and I understand the concerns of wheat and the very possible contamination of fuels. I really wasn't aware what's happening with trees, but I see it as a really frightening possibility that actually our forests could be contaminated.

Then I'm going to move on to Mr. Bender.

In regard to rural development, we mentioned and you mentioned that this is a way of stimulating rural development, and yet we had Dr. Klein here from Alberta a couple of weeks ago who had some concerns. He said, "However, there has been some tendency... among proponents of the biofuel industry to overstate the economic activity linked to biofuels. Research shows that only a small number of permanent jobs are created...". His point was that maybe there are more jobs lost in other agricultural sectors than those actually directly created with biofuels.

Also I'd like a comment from you on the whole idea of GM wheat contamination. As we know, our wheat is valued throughout the world. If there's a small possibility that this export of high-food-quality wheat is contaminated, folks like you could be in trouble.

Would you feel comfortable with a bill that says no to any GM kind of feedstock for the biofuel industry?

I'll stop and get some answers.

**Ms. Lucy Sharratt:** Thank you.

The Canadian Biotechnology Action Network is concerned with greenhouse gas emissions and the life cycle of various feedstocks, but that's not our expertise and so perhaps we would refer you to other witnesses. I think tomorrow there's another group that has an expertise in that area.

What we've seen is these questions being raised. Our major concern, then, is actually the impact on global biodiversity, and then Canadian biodiversity, particularly when we see that an increased mandate for biofuels would mean increased industrial agriculture or monocropping, the use of genetically engineered crops. Even if Canada were not to be importing feedstocks for fuel, which still seems to be an open question, would we then instead be importing more feed for animals or more food? There still seems to be this question of a competition of land use for food or fuel or feed. Even given Canada's particular arable land and our particular conditions here, I think this is still a really important question for our position globally, and then for what it means for Canadian farmers and consumers.

Additionally, you asked about contamination. I think when we see Monsanto and other corporations like Syngenta promising to create new genetically engineered crops specifically for ethanol or for biofuel production, these are not necessarily crops that we want to see in the food system, and yet we know they will contaminate the food system. Even just two days ago the United States Department of Agriculture announced yet another contamination of corn that is not approved. So this is inevitable, and that's certainly a major concern as well.

• (1810)

**Mr. Alex Atamanenko:** Could you talk about contamination, Mr. Bender? I'm sure we're running out of time.

**Mr. Kevin Bender:** I can first address the issue of GM wheat. Currently we don't have genetically engineered wheat in Canada. The GM crop that we grow in western Canada is canola, and most canola right now is genetically engineered. I don't know the figure exactly; I'm guessing it's around 85%, because the economics have driven it there. The conventionals just did not provide that economic return. Pesticide use has dropped significantly with the genetically engineered canola.

With wheat, the door is open for that with the ethanol industry because breeding can take place for specific traits for ethanol, such as high-starch wheats, but we have those right now without genetic modification.

**Mr. Alex Atamanenko:** Can we keep it that way, because of this high risk of contaminating our really high-quality wheat?

**Mr. Kevin Bender:** One thing I look at now is the wheat market in the U.S. There are rumours that North America is going to run out of wheat before the new crop comes in, and if there's a way to grow more wheat on the acres that we have currently, perhaps that is the way to do it.

I'm not a scientist; I don't know the repercussions of that, but it is certainly something we need to consider. If the world gets hungry, we've got to find a way to feed it.

**The Chair:** Thank you. Time has expired.

Mr. Steckle is next.

**Mr. Paul Steckle:** I'm going to put my questions primarily to Ms. Sharratt.

I believe I heard you use the term "extremely dangerous" when you were referring to some of the genetics and some of the modifications that we find. You mentioned poplar. Now, I probably have planted more trees than everyone combined around this table, and I happen to know a little bit about that poplar you're talking about, or at least something similar to it.

Given that we're talking about fuel—we're not talking about ingesting this as a human food source—where can you come up with the term "extremely dangerous" when you refer to some of these things? You talk about genetically modified feedstocks. Where in the world is there an example, or can you give us an example, of someone who has been harmed? Are the emissions coming from genetically modified crops disposed of differently? There's very little you can find in agriculture today, whether it's oats, barley, wheat, or even watermelons—whatever it is—that isn't genetically modified.

Your peaches, your raisins, your seedless grapes are all genetically modified.

Where are we coming up with this? We hear all these extreme statements being made, but no one in my 15 years here has ever supported the argument that a single person in the world has gotten sick from anything that has been genetically modified, unless of course there's an animal or a plant gene transferred from one to the other.

I understand we have to be careful, but how can you use terms like that? I think those are fear-mongering terms.

**Ms. Lucy Sharratt:** Thank you.

Yes, I do see that there's a major problem in tracking health effects, because there's no mandatory labelling or post-market surveillance of foods. But even outside of that, we see already, as I mentioned, some contamination events. Crops that were not approved for human consumption, through cross-pollination and even just human error and mixing, have made their way into the food system. We've seen this in the United States a number of times.

In the particular case of genetically engineered trees, we are looking at what we have called extreme dangers. Those are trees that are engineered to be low in lignin; as a result, they do not have defences against disease and insects, and if we see the transfer of genes into native Canadian forests, we see a huge disruption to an ecosystem that we need in climate change. In that particular case, we'd be talking about the environmental impacts of genetic contamination from genetically engineered trees. They are being field-tested in the United States with these low-lignin characteristics.

In addition, there are other social impacts across the world with that type of technology.

**Mr. Paul Steckle:** If we could breed a pine tree that would be resistant to the pine beetle, would you agree it would be a good move?

**Ms. Lucy Sharratt:** I would, except the tree would then have to exist in plantation form.

What we want to see is the protection of our forests from climate change, which is certainly where the pine beetle is finding its home. In that respect, when we refer to dangerous climate change, the pine beetle and how to deal with it are the types of impacts we would be looking at. Certainly we wouldn't think that genetically engineering trees and trying to integrate those trees into our native old-growth forests would at all be feasible.

• (1815)

**Mr. Paul Steckle:** Even with cross-pollination, no one becomes sick because a plant has cross-pollinated and that product has been eaten by humans. Has anyone ever become sick or died from it?

We're buying prescribed medications over the counter that are killing people by the thousands every year, and yet we're concerned about something as minute as this. I think we're mixing things up here in a way I find difficult to understand.

**Ms. Lucy Sharratt:** To conclude, in response, we have at least two very distinct concerns in relation to genetically engineered crops. One is the adequacy of the regulation to determine the health impacts and then the problem of contamination of the environment, which is ending up with these unsuitable crops and seeds.

Canadian farmers are growing only four crops that are genetically engineered: corn, canola, soy, and now sugar beet. We don't see genetically engineered food in our system yet, except through processed food, and of course that's quite a lot. There are very new cases in which, if we were to start eating produce that's not processed, we might see that these questions of health effects need to be re-examined.

**Mr. Paul Steckle:** I could go on and argue. Seedless grapes are a good example. All of us in this room have eaten seedless grapes. We keep buying them, they keep selling them, they keep growing them. No one has become sick from them that I know of, and I like them better than the others.

**Ms. Lucy Sharratt:** Those are not a product of genetic modification.

**Mr. Paul Steckle:** Sure they are.

**Ms. Lucy Sharratt:** We define genetic engineering as the exchange of genes from one organism to another.

**The Chair:** Okay. Your time has expired.

Mr. Lauzon.

[Translation]

**Mr. Guy Lauzon:** Thank you very much, Mr. Chair.

I would like to thank our witnesses for the important information they have provided to us. It is too bad that we have so little time to discuss this issue.

[English]

I would like to address my comments to Mr. Bender. There are a couple of things, Mr. Bender, that I am really glad to hear from you.

You describe this as an excellent opportunity for farmers. As you know, this is the agriculture committee, this is about farmers. We're about putting farmers first in this government, and maybe you can tell us how you see this helping. You say it's another opportunity for farmers, especially for grains and oilseeds, which have really been going through a rough patch. How do you see this turning their fortunes around?

**Mr. Kevin Bender:** A few reasons. And going back to a little bit of background on the KVD issue, this committee has put an end to that, so that lends itself to—

**Mr. Guy Lauzon:** We haven't quite yet, but it's certainly—

**Mr. Kevin Bender:** It's coming, yes.

**Mr. Guy Lauzon:** Some of us would really love to, and your information is most helpful to that cause.

**Mr. Kevin Bender:** That opens a door to new varieties that are more specific to different things like ethanol, so it creates more options for us to sell our crops on the Prairies. We are somewhat limited, and there are restrictions on what we can do with our grain at this point, but this opens up another avenue for some larger opportunities.

**Mr. Guy Lauzon:** Another very interesting comment was made about the lower quality of the grain. If you were lucky enough to market it, I'm sure you were losing money on some of this lower-quality grain you were having difficulty marketing. Do you think this opportunity will give you a market for that lower-quality grain?

**Mr. Kevin Bender:** Yes, certainly.

It will, I think, bring up the bottom of the market a little bit. For example, in 2002 we had canola that was graded sample because of high green content, whereas the biodiesel industry still was able to use it to create biodiesel. So there's a value to that product that the food market could not recognize.

**Mr. Guy Lauzon:** The other thing in your comments I was very interested in...and unfortunately I'm steering my comments to you because you're on the ground and you're living the hardships and the challenges. But one of the things you mentioned about the livestock industry was that there was some concern. We talked with some livestock people, and most of them are happy to see another market for the grains and maybe a better price, but from the livestock perspective, as you said with the distillers and everything, there can be a win-win situation. I'd like to hear that enunciated a little more clearly than I did.

• (1820)

**Mr. Kevin Bender:** I'm not really qualified to comment on that in any detail, but I do see some benefit there because DDG is a byproduct of ethanol, and the ethanol is what they're going after from the grains. This is essentially a waste product, but it has some excellent feed qualities to it, so that can fill a void that is being left by the feed grains that are taken out of the market. It's the same thing with canola. Canola meal is also a livestock feed that is a byproduct of the oil that makes biodiesel.

**Mr. Guy Lauzon:** Thank you very much.

[Translation]

In closing, I would like to say that I support your work with students, Mr. Couture. Surely this is working out very well.

I congratulate you on your fine work.

**Mr. Yves Couture:** Thank you.

[English]

**The Chair:** Thank you.

Just wrap up quickly, Mr. Gaudet.

[Translation]

**Mr. Roger Gaudet:** Thank you very much.

I have a question for Mr. Barnabé, Mr. Couture and Mr. Lagacé. Other witnesses may also respond to it.

Have you ever done any research on hog manure?

**Mr. Simon Barnabé:** Yes.

**Mr. Roger Gaudet:** Were the results positive or negative?

**Mr. Simon Barnabé:** It is difficult to convert hog manure. I worked with hog manure in my early days, but we did not get good results in producing biopesticides or enzymes for detergents. That is one of the reasons we focused our research on municipal sewage sludge and biosolids from paper plants.

**Mr. Roger Gaudet:** Mr. Couture?

**Mr. Yves Couture:** There is a company in Victoriaville that specializes in converting hog manure into methane. I do not know whether you are familiar with this. The company has a pilot project on this. I don't have any further information at the moment, but I do know they are investigating this at the moment.

**Mr. Camil Lagacé:** A group of Quebec business people got the world rights to a new technology for the direct conversion of hog manure and liquid manure into biodiesel. The project is supposed to get under way in May or June of this year to do what is known as testing the concept in technological development. This would mean we would be able to process all the liquid manure in a manure pit on location and convert it directly into biodiesel.

**Mr. Simon Barnabé:** I would like to add, however, that when we work with organic sludge from manure processing, we get some very interesting results. It is possible to make many commercial bioproducts using the organic sludge from manure processing.

**Mr. Camil Lagacé:** I would just like to add that this points to the fact that there will be increasing competition for access to all of the biomass for conversion purposes. The competition will become very intense at that time. Biomass and waste matter that have little or no value today will become extremely valuable over time.

**Mr. Roger Gaudet:** Have you ever heard about processing hog manure, Ms. Sharratt?

[English]

**Ms. Lucy Sharratt:** I'm sorry, the question didn't come through.

[Translation]

I am sorry.

**Mr. Roger Gaudet:** Has your institute done any research on hog manure?

[English]

**Ms. Lucy Sharratt:** We haven't. No.

[Translation]

**Mr. Roger Gaudet:** And you, Mr. Bender?

[English]

**Mr. Kevin Bender:** A good friend of mine currently has a hog operation right near me. Actually, I rent some of his land. He has a proposal for a biodigester to come in to convert some of his manure into methane. I don't know the process yet, but it's in the works of getting set up. I can't comment on the production or how that's going to work, but initially it sounds like a very good alternative.

[Translation]

**Mr. Roger Gaudet:** Thank you, Mr. Chair.

**The Chair:** Thank you, Mr. Gaudet.

[English]

We have some housekeeping we need to take care of, a few motions we need to deal with.

Witnesses, I want to thank all of you for coming in and providing us with your comments. It will help us form our debate as we go forward on clause-by-clause tomorrow, later in the morning, on Bill C-33 after we hear from another group of witnesses first thing in the morning. You are free to leave the table.

Members, we have some work.

First of all, I want to remind all members that tomorrow at 12:30 the Young Farmers are having a luncheon for us. We only heard back from a couple of you. It's at 12:30 at 131 Queen Street, Room 853.

Also, tomorrow the committee starts at 9:30, not 9 o'clock.

Yes, it's at 12:30, 131 Queen Street. It's one of the new buildings that we've taken on. When we shut down La Promenade, a lot of the offices moved over there.

• (1825)

**Mr. Lloyd St. Amand (Brant, Lib.):** Is it 307 West?

**The Chair:** Room 307 West Block is for the committee tomorrow morning, at 9:30. We'll be there until we get this done.

**Hon. Wayne Easter (Malpeque, Lib.):** I have a question, too, Mr. Chair.

We're going to start at 9:30 and go until 2 p.m. with the committee. What's happening when we're all at lunch with the Young Farmers?

**Hon. Carol Skelton:** I said I couldn't go.

**Mr. Bev Shipley (Lambton—Kent—Middlesex, CPC):** I'll go in your spot.

**Hon. Wayne Easter:** I have to go to that. The Young Farmers—

**The Chair:** I do encourage you to keep your day open right until 2 o'clock. Hopefully we can suspend to be able to join the Young Farmers' Association for lunch and come back and finish off the clause-by-clause.

**Mr. Larry Miller:** What's the thing about the committee going until 2 o'clock?

**The Chair:** We booked the room till then, just in case we needed it.

**Mr. Larry Miller:** But I don't remember any consensus on that.

**Hon. Carol Skelton:** We gave it to the chair.

**Mr. Guy Lauzon:** You weren't here, Larry, but I voted for you.

**The Chair:** Before we leave Bill C-33 for the day, we have a motion on expenses that we need somebody to move: that the budget of the committee in the amount of \$35,700 for the study on Bill C-33 be adopted.

I need somebody to move that. Paul moves it.

Is there any debate?

**Mr. Ken Boshcoff:** With all good manners, when the witnesses came here, they didn't quite seem.... I don't know how the witnesses were chosen, but they didn't really seem to know what they were doing here.

**The Chair:** Witnesses are called based upon the lists submitted by members. We've asked them to come forward to testify, and we cover their expenses in doing so.

(Motion agreed to)

**The Chair:** We also have a motion by Mr. Bellavance.

Do you want to read it into the record?

[Translation]

**Mr. André Bellavance:** I will be brief, Mr. Chair. I believe everyone has a copy of the motion. I would just like to mention that there was recently an emergency debate on this issue. I am very proud to have raised it on the floor of the House. I am also pleased that the minister reacted quickly. I spoke with him on Friday, and today he came forward with a bill.

However, I would like to explain why I am still moving this motion. The committee unanimously recommended some long-term solutions, and I would like us to let the minister know that it is important to move forward with these unanimous recommendations.

I do not think the bill deals with the entire matter, and I know the government has a deadline for responding to us. Through you, Mr. Chair, I would like to keep this issue alive by telling the minister that we would like a response quickly. We would like to have longer-term solutions to the problems facing the livestock industry.

[English]

**The Chair:** We have Mr. Miller, and then Mr. Lauzon.

**Mr. Larry Miller:** This is not so much for debate, but to note that in the English translation the last line just doesn't read right. It reads, "in order to contribute reduce the problems".

**Mr. Ken Boshcoff:** It works well in the French.

**Mr. Larry Miller:** It works very well in French.

[Translation]

**Mr. André Bellavance:** This is not my translation.

[English]

**Mr. Larry Miller:** No, I know it is not. How should that read then?

**The Chair:** I have Mr. Lauzon first.

It probably means "in order to contribute to reducing the problems". That is probably the correct translation.

**Mr. Paul Steckle:** What about adding "to".

**Mr. Larry Miller:** Just take the word "contribute" out of there.

**The Chair:** So it would read, "in order to reduce the problems". Well, it says "contribute" in the French version.

Alex.

**Mr. Alex Atamanenko:** You just have to say, "in order to contribute to reducing the problems".

**The Chair:** "To reducing" is what I thought it meant as well. It's just a matter of cleaning up the English version.

I have Mr. Lauzon, Mr. Steckle, and Mr. Atamanenko.

[Translation]

**Mr. Guy Lauzon:** I spoke with André before the meeting. You may not agree, but I would like to repeat that I think that this is what the minister decided today... Most of the recommendations are contained in the bill. If we pass a motion, it will run counter to what the bill is trying to do. I have looked at the recommendations, and I think that most of them are reflected quite well in the bill that has been tabled today.

• (1830)

[English]

I would like to suggest that the recommendations in the report have been addressed, by and large, and I just think we should consider that.... We're here to try to help the farmers, and I think this goes a long way toward helping the farmers. I think the minister has shown great faith and removed this from the budget, so that we can get it through.

Those are my comments, Mr. Chair. Thank you.

**The Chair:** Paul, you said yours was answered.

Mr. Atamanenko.

[Translation]

**Mr. Alex Atamanenko:** I agree with you to some extent, but I see this as a form of insurance. I think that is André's view as well. We agree on this. I have also spoken to the minister, and I am very pleased with what he has done. What we need is some assurance to check that everything we recommended is contained in the bill, and that is all we need. This does not run counter to the bill. We will be supporting it and voting for it. We just want to make sure that there are no points that we have failed to cover.

Those are my views. I don't know whether that was your intention, André.

[English]

**The Chair:** Mr. Easter.

**Hon. Wayne Easter:** Mr. Chair, I want to disagree very strongly with what the parliamentary secretary said. This bill does not cover everything within the report of this committee, and that's a matter for discussion on another day. But as for making the statement that the minister is doing great and wonderful things, the fact of the matter is....

And, Mr. Parliamentary Secretary, I believe on January 29 you said something along the lines that the money is flowing to the beef and hog sectors as we speak. It's clear by the meat of this legislation that the money wasn't flowing. We've now lost five or six months. If you think that's performance on the part of the government, I certainly don't. We'll be talking about that when we deal with the bill at 10 o'clock tonight.

We want to do what we can for producers. But here we are with a bill in the House tonight and we're getting a briefing on the bill tomorrow. Where has the government been for the last five or six months? And where have you been, Mr. Parliamentary Secretary, in terms of some of your responses in the House that money is flowing? It hasn't been.

Mr. Chair, I support the motion, and I want it to go forward.

**Mr. Larry Miller:** On a point of order, Mr. Chair, Mr. Easter may not be happy with the amount of money that's flowed or whatever, but the money has been flowing. Lots of individuals have contacted me. Some are happy; some aren't so happy. But to say that the money isn't flowing is just not true, and I think that needs to be pointed out.

**The Chair:** Unless I get a debate on that particular item, we have a motion on the table asking for a letter from the committee to go to the minister. It's just a matter of reinforcing our comments.

Mr. Bellavance.

[Translation]

**Mr. André Bellavance:** I would request a recorded vote, please.

[English]

**The Chair:** You have asked for a recorded vote. It shall be.

(Motion agreed to: yeas 7; nays 4)

**The Chair:** We have a second motion by Mr. Miller.

Mr. Miller, do you want to move it on the floor?

• (1835)

**Mr. Larry Miller:** Yes, I'll move that, Mr. Chairman, and I'll speak briefly to it whenever it's appropriate.

**The Chair:** Right now.

**Mr. Larry Miller:** I think this is fairly self-explanatory.

There have been a number of concerns raised to me and, I'm sure, to other members of committee about the Americans' proposal to COOL, country of origin labelling, as it's known in their Farm Bill. I think this spells out that Canada basically puts the power, and especially has the support of this committee, to enact measures to deal with that, should that be the case. I think that's all that needs to be said.

**The Chair:** Mr. Atamanenko.

**Mr. Alex Atamanenko:** Larry, I think I understand what you're saying. I'm just not sure how clear it is to say that if it's not achieved in the U.S. Farm Bill, "Canada will consider the necessary measures to achieve compliance". I'm not sure exactly what you're saying here. Could you explain?

**Mr. Larry Miller:** Should what they're doing prove to be in contravention of NAFTA or the WTO, it's basically putting the Americans on notice. That's the way I see it.

**Mr. Alex Atamanenko:** Okay.

**The Chair:** I think what you're suggesting is that they can request panels under NAFTA or WTO to take it up.

Mr. Steckle, and then Mr. Bellavance.

**Mr. Paul Steckle:** I know what you want to do, Larry, and I support the intent, but I think you'd be about as effective as trying to change the date of the next lunar eclipse.

I mean, we know what happened with beef imports and exports. We know what happened with all the kinds of things they want to do. They do what they want to do. We already have in place.... And if there should be a challenge, it will go before an international panel, regardless. We're not going to change the way they do COOL, regardless of how many letters we send or to whom we send them.

While I want to be supportive, I know where this is going to go: this is going to go in file 13. They couldn't give one continental about us. They will do exactly what they want to do. I think you'd probably change the date of the lunar eclipse about as easily as you'd change this.

**Mr. Larry Miller:** My only comment is that I've never, ever gotten anything done by not trying. But your point is well taken.

**The Chair:** If you'll recall, when we were down there as a committee we met with Collin Peterson, chair of the House Committee on Agriculture. We had already taken some trade action with them on their U.S. Farm Bill—basis corn—and he made the comment, "We hear you, we know what you guys are saying." So it's not bad to send a message.

Mr. Bellavance.

[Translation]

**Mr. André Bellavance:** James, without wanting to take anything away from you as chairman of the committee, I have a question. Perhaps the clerk can provide some clarification. In the second paragraph, it says that you, the chairman of the committee, will inform the Americans if they are not doing what they are being asked to do. It says: "[...] Canada will consider the necessary measures to achieve compliance." So it is the chairman of our committee who will inform a country like the United States that Canada, as a country, will take some kind of measure.

Do you have the authority to do that? Do you speak on behalf of Canada? I would understand the minister doing that, but I wonder if you can do that as chairman of the committee. This is a technicality, but it is important to clarify it before writing the letter.

[English]

**The Chair:** The translation is correct to the English version, right?

**Mr. Larry Miller:** The motion is saying that the chair—

**The Chair:** We're asking the ministers of agriculture and trade to write those letters on behalf of Parliament. So Minister Ritz and Minister Emerson would send a letter. It wouldn't be coming from us as a committee; we'd be requesting them to write that letter to the executive branch.

Mr. Atamanenko.

**Mr. Alex Atamanenko:** I just want to back up what Larry was saying about doing anything we can. You don't win a lottery if you don't buy a ticket, right?

**Mr. Larry Miller:** That's why I never win.

**The Chair:** Are there any other questions or comments?

I will call the question.

Mr. Miller is asking for a recorded vote.

(Motion agreed to: yeas 10; nays 1 [See *Minutes of Proceedings*])

**The Chair:** There being no other business, we're going to adjourn. See you guys tomorrow—

● (1840)

**Mr. Ken Boshcoff:** How long is tomorrow going to go, James?

**The Chair:** We have five amendments that we're going to have to deal with tomorrow on the clause-by-clause. We're going to circulate them right now, or else you can pick them up at the table.

These are brand new, three from the Bloc and two from the NDP.

**Hon. Wayne Easter:** I have just one other point, Mr. Chair.

**The Chair:** Yes, Mr. Easter.

**Hon. Wayne Easter:** Maybe you announced it at committee, but I think there is agreement that Bill C-44 will be talked about at 10 o'clock tonight.

**The Chair:** And then, at the end of discussion, moved at all stages and deemed to be....

We don't even have to vote on it, do we, once accepted?

**Hon. Wayne Easter:** No, I think it's accepted—

**The Chair:** And sent to the Senate.

With that, I would ask that you all pick up your amendments so that you have them ready for tomorrow morning. We'll see you then.

The meeting is adjourned.

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