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• (0820)

[*English*]

The Vice-Chair (Mr. John Barlow (Foothills, CPC)): Good morning, colleagues.

I'm sorry for the delay. We had a sound issue with one of our witnesses and wanted to make sure we had that resolved. Considering everybody rolled in a little late anyway, it worked out perfectly.

Mr. Francis Drouin (Glengarry—Prescott—Russell, Lib.): Warren and I were here early.

The Vice-Chair (Mr. John Barlow): I was here. I did not mention names, but apparently we're going to name and shame. I'm not going to do that.

Colleagues, we just have the two witnesses today, so we should get three rounds in. If you run out of questions, we'll deal with that when the time comes.

In the second hour, we have some committee business to address that may or may not take the full hour. That depends on us.

Colleagues, I call this meeting to order.

Welcome to meeting 114 of the House of Commons Standing Committee on Agriculture and Agri-Food.

Today's meeting is taking place in a hybrid format. These proceedings are available on the House of Commons website.

Just so that our witnesses are aware, the webcast will show the person speaking and not the whole committee. Again, screenshots are not permitted. Please refrain from doing that.

Colleagues, you know all the rules regarding the headsets for interpretation. Keep those away from the microphones.

To our witnesses, thank you for being here with us today. You may speak in the official language of your choice. We have interpretation services available. If we have a sound issue, I will put my hand up and ask you to pause, and we'll try to get it resolved. I'm hoping we can move on fairly easily for the rest of the day, now that our sound issues have been resolved.

I'd like to introduce the witnesses we have with us today for our study on the impact of border carbon adjustments and reciprocities.

From the Food and Agriculture Organization of the United Nations, we have Monika Tothova, senior economist, markets and trade division, social and economic development work stream. From the University of Saskatchewan, we have Angela Bedard-

Haughn, dean and professor, College of Agriculture and Biore-sources.

You will each have five minutes for an opening statement. When you have about 30 seconds left, I'll put my hand up so you will know that your time is running out. If you're a bit over, there's no panic. We have plenty of time for you today.

Perhaps I will start with Ms. Tothova.

If you want to go ahead with your five minutes, the time is yours.

Ms. Monika Tothova (Senior Economist, Markets and Trade Division, Social and Economic Development Work Stream, FAO, Food and Agriculture Organization of the United Nations): Thank you, Chair.

Good morning.

I will be a bit longer than five minutes, but since there are only two witnesses, I hope that's going to be okay.

[*Translation*]

My name is Monika Tothova, and I am a senior economist in the markets and trade division of the Food and Agriculture Organization, or FAO.

The United Nations'—

[*English*]

The Vice-Chair (Mr. John Barlow): Ms. Tothova, I'm sorry.

Do you mind raising your microphone boom a bit towards your mouth?

There you go. Thank you.

Go ahead.

Ms. Monika Tothova: Is it okay now? Can you hear me loud and clear?

The Vice-Chair (Mr. John Barlow): Yes, you're all good. Thanks.

Go ahead.

[Translation]

Ms. Monika Tothova: The Food and Agriculture Organization of the United Nations is the UN's specialized agency leading the global efforts to eliminate hunger and malnutrition.

[English]

Thank you for inviting the FAO to appear as part of a panel of witnesses. The FAO does not prescribe policy choices for countries. Rather, it provides an inventory of evidence-based policy options and their related trade-offs and impacts. Coming from a technical specialized agency, I will focus my remarks on the impacts of border carbon adjustments and reciprocity of standards on food and agriculture.

Climate change is a truly global environmental negative externality. Its impacts are indivisibly spread around the entire planet. It affects many economic activities, including agri-food systems, which are responsible for 28% of all greenhouse gas emissions. Its potential costs are not accounted for by markets and the benefits from mitigating its impact cannot be divided and claimed by one country. Several policy incentives can help improve emissions efficiency and lower greenhouse gas emissions per unit of output.

In my statement, as I discuss different policy instruments, I am not referring to any specific country.

Carbon taxes and other such instruments, such as emission trading systems, directly tackle the failure of the market to take the social costs of climate change into account. However, at the same time, a unilateral action to impose a carbon tax on food imports may put the country implementing it at a competitive disadvantage in global markets. A carbon tax may result in a carbon leakage, which is the displacement of lower carbon footprint domestically produced food by cheaper and higher carbon footprint imports from countries that do not take similar measures to reduce emissions. This could result in income losses for domestic producers and an increase in emissions globally. This is why global negative externalities such as climate change require global solutions.

Trade can expand the reach of climate change mitigation policies. There has been considerable interest in the potential use of border tax adjustments that could be based on the carbon footprint. Adjusting for the carbon tax means that the same rate applying to the carbon footprint of domestic products would be applied to imports. In this case, low-emitting suppliers would face a low tax and would be able to compete with domestic products, while high-emitting suppliers would face a higher tax, which would make them less competitive. In this way, trade will be shaped not only by comparative advantage, but also by the relative emissions efficiency.

A major technical challenge in determining and applying this border tax adjustment is to calculate the carbon footprint of domestic products and imports, and apply an appropriate tax on domestic products and corresponding tax adjustments on imports in order to level the playing field. Where an explicit carbon tax is applied on domestic products, it would seem relatively straightforward to apply a corresponding border tax adjustment on imports, provided that the carbon footprint that these emissions generated in producing and supplying the imports can be determined.

Problems arise in calculating these border tax adjustments when import suppliers have internalized emission costs or if the tax applied in the exporting country exceeds that applied by the importer, a case in which a tax rebate on imports would be made. In this case, it would be necessary to determine the per unit carbon tax equivalent of these measures.

The design and implementation of a carbon tax on food and agricultural products would face several challenges. There would be a need to agree on the carbon accounting mechanisms and on a carbon footprint for all food and agricultural products produced worldwide. There would also be a need to agree on a price of carbon to be able to set the tax and avoid international trade disputes.

Any approach to border tax adjustments presents the dual challenge of determining the carbon footprint in both domestic and imported products, while ensuring compliance with the rules of the international trading systems.

In closing, reducing greenhouse gas emissions in agriculture requires several actions across sectors, including the application not only of mitigation practices, but also of adaptation practices through climate-smart agriculture and policies.

Thank you, Mr. Chair, for the opportunity to comment on this topic and for your patience in allowing me a little more time. I welcome questions from the committee.

● (0825)

The Vice-Chair (Mr. John Barlow): Thank you very much for your expert analysis on this.

We will turn to Dr. Bedard-Haughn from the University of Saskatchewan.

Dr. Angela Bedard-Haughn (Dean and Professor, College of Agriculture and Bioresources, University of Saskatchewan): Good morning, Mr. Chair and everyone around the table there.

I speak to you today from Treaty No. 6 territory, the traditional homeland of the Métis and the centre of the Canadian prairies.

I grew up on a mixed farm in north-central Saskatchewan, and I did my first two degrees here at the University of Saskatchewan before moving to California for my Ph.D. I returned to the University of Saskatchewan as a professor of soil science in 2006. Since 2020, I have been serving as the dean of the College of Agriculture and Bioresources.

The prospect of border carbon adjustments in agriculture and food does seem to be relatively far off, which is a good thing because I would argue that we—and, in this sense, I'm using the global “we”, Canada included—are not ready in this space. I do think that we need to tread very carefully because we are potentially messing with global food security at a time when political unrest and protectionism are adding uncertainty to an already very complex global market.

To follow on Ms. Tothova's testimony, I think one of the first things this group needs to be thinking about is why border carbon adjustments are supposedly being developed. A lot of that underlying idea is to incentivize good behaviour that will further reduce global greenhouse gas emissions or, at a minimum, to put in place pricing mechanisms that require high emitters to pay. This is good in theory, but do we know at this point if these levers will actually work when it comes to food, when it comes to a basic human necessity? In short, I would argue “not yet”.

One of our senior researchers from the University of Saskatchewan in the agricultural and resource economics department, Dr. Richard Gray, is currently in Uppsala. He's working on an economic model of the world vegetable market to determine whether border carbon adjustment policies are effective or ineffective in preventing higher prices and global deforestation. Those results are in progress and should be out early next year, in 2025.

He's also looking at the potential effect of full net ecosystem exchange on carbon accounting, both domestically and globally. What this means is accounting that takes into consideration the carbon that is actually sequestered in some of these commodities that we produce, the carbon that is sequestered in grains, pulses and oilseeds, which is subsequently exported and consumed elsewhere and which is currently not incorporated.

I would argue that, before we go too far down the border carbon adjustment path, we need to make sure that we have all the data we need from experts like Dr. Gray and others who are looking at the net effects of border carbon adjustment on various markets and countries before heading down this path.

Even without the socio-economic analyses yet in hand, there are other pieces that we need to take care of here at home before moving forward with border carbon adjustment in agriculture and food.

As this committee has heard previously from Dr. Steve Webb and others, we do have data that supports Canadian agriculture as a world leader in terms of our low carbon intensity in the production of crops such as canola, wheat, peas and lentils. Perhaps this is a reason that we should be embracing the notion of border carbon adjustment. With Canada's relatively strong track record for sustainable production, we should, in theory, be beneficiaries of such a policy.

If we do implement border carbon adjustment, we also need to be sure that Canada first recognizes the value of our own practices so that any export rebates are appropriate and so that our projects are not subjected to unjust import targets in other countries because we are not giving adequate credit where due to producers and systems. If we don't appropriately value our own sustainability practices, why would we expect other countries to do so?

To do this, to get where we need to go, we do need to implement an appropriate MRV—measurement reporting and verification—framework to ensure that credit flows where credit is due. As Ms. Tothova was speaking, I was thinking about the variability not only around the world—a huge variability when we think about trying to develop a carbon footprint for different agricultural commodities—but also across Canada or even within individual provinces. Many farmers are indeed already doing incredible work on sustainability, while others still have room for improvement.

● (0830)

If we move towards border carbon adjustment, how do we leverage any import charges to reward sustainable practices? Equally importantly, how do we ensure that farmers who have been farming sustainably for years—those early adopters—reap the benefits of something like the border carbon adjustments, while still simultaneously encouraging them to be early adopters of new emerging technologies that we're working on?

Unfortunately, at this point, MRV—measurement, reporting and verification—in agriculture is very difficult, so coming up with that footprint is very difficult due to a high degree of variability across fields and across regions over time. This variability is associated with all aspects of measuring carbon intensity in a natural system.

This doesn't mean the challenges are insurmountable, but it does mean that we need to continue investing in the research that will help us overcome these challenges, and we need to invest in the data management frameworks that will allow us to integrate the research and come up with tools that can reduce the risk of measurement and verification error.

It's been said to this committee before that the ideal will be a harmonized approach with our major global trading partners. We need to be aligned as best we can to ensure this doesn't take us down a path to even greater trade protectionism. Yes, of course, we need to be paying attention to what's happening in the EU, the U.S. and Australia on this issue, but, at the same time, we do need to get our own house in order and get clarity on how we'll recognize our regional and sub-regional variation in sustainable management practices.

There are four main focus areas that I think we need to look at. The first is research that empowers our farmers and our producers to continue improving their sustainability, with a focus on solutions that are win-win, regardless of carbon pricing and carbon taxing. These are solutions that reduce input costs, enhance yield and improve soil health. Here in the prairies, this is why we saw widespread adoption of no-till and conservation tillage. It just made sense from all of those perspectives.

The second focus needs to be on developing baseline data sets and harmonized measurement reporting and verification protocols that enable regionally appropriate measures of carbon intensity.

Third, we need to ensure that carbon taxation and credit schemes are science-based and evidence-based, and that we understand how border carbon adjustment will affect various sectors within our overarching agriculture and food sector. This includes any risk of additional trade barriers for Canada, given that we are such an export-dependent country and already vulnerable to protectionism and trade tariffs.

Finally, I think it's important that we can use our learning to lead a better way forward for global agriculture. From a position of strength, backed by science, we can show other countries how to improve their sustainability. If border carbon adjustment does move into agriculture and food systems, we want to be sure that we are proactive versus reactive.

Thank you, and I look forward to the discussion.

● (0835)

The Vice-Chair (Mr. John Barlow): Thanks, Ms. Bedard-Haughn. It's very good to see you again, though unfortunately not in person this time, but thank you very much for being here.

I was remiss in not welcoming a few substitutes today.

We have Ms. McPherson here from the NDP. Thank you very much for joining us.

Mr. Epp is one of the Conservatives who is joining us today.

As well, Mr. Morrissey is joining us. Thank you very much for coming.

We will now move over to the question and answer portion, and I will go to the Conservatives first.

Mr. Epp, you have six minutes, please.

Mr. Dave Epp (Chatham-Kent—Leamington, CPC): Thank you, Mr. Chair.

Thank you to the witnesses for being here.

I'd like to start with two basic questions. On a scale of 0 to 10 or 0 to 100, tell me where we are at. Let's start in Canada and then also go more internationally. I'll ask both of you to comment.

Just on a simple agreement and understanding of how to measure the carbon footprint, in Ontario I think we produce something like 257 different primary agricultural products. Across that spectrum, just on a broad scale, where are we at in understanding what the actual carbon footprint of each of those is?

The second question, to follow up, is this: Where are we at with regard to the level of international agreement if we measure things differently—again, pick your scale of 0 to 10 or 0 to 100, or whatever—just as a baseline to even begin to think about international trading systems on carbon border adjustments?

I'll start with Ms. Bedard-Haughn, please.

Dr. Angela Bedard-Haughn: Great. Thank you for that question.

With respect to how to measure the footprint, to me, there are two layers to that question. One part is how to measure it, which we know how to do, but also how to measure it in a cost-efficient manner is perhaps the second, trickier piece.

In terms of how to measure it, we are aware of the various components that need to go into that calculation. When we think about an entire life-cycle analysis, that should ultimately go into a comprehensive assessment of the carbon intensity of a particular crop. I would argue that we're further along in some of the larger, more dominant commodities, and less so in the smaller, more niche ones.

However, in terms of where the challenge lies, it's in the pieces that I raised earlier: It's with respect to the variability that is inherent in that.

I'll use the example of the work that was put out by the Global Institute for Food Security. It was very nicely rolled up at a provincial level. We could look at the carbon intensity on average across Saskatchewan or across countries based on the typical set of practices.

Now, does it matter if we have a producer over here who is implementing those practices and another over here who is not? That's the trickier question to consider if we're actually trying to use this as a mechanism whereby we incentivize different practices.

● (0840)

Mr. Dave Epp: Take a shot at zero to 10.

I'm going to ask Ms. Tothova to also comment.

Ms. Monika Tothova: I would agree with that. We know in theory what we want to include. We have the theory for how to proceed and what should be accounted for. In many cases, particularly for smaller countries, let's say, we might not have all the data available to come up with a comprehensive number.

However, I would argue that, in fact, it is good that we are having this conversation about the carbon adjustment, about the content of the carbon and about environmental policies in general. This is one of the steps that improves framing and thinking about the topic.

Mr. Dave Epp: To conclude my time, I want to talk pickles, only because I think it illustrates the complexity and, potentially, the administrative nightmare.

I live near the U.S. in southwestern Ontario. Obviously, you don't plant pickles; you plant cucumbers that are pickled. However, we don't have a pickling industry left in Ontario, so pickles are grown, shipped to local green shipping yards, where they're sized and distributed to Ohio, Michigan and New York, pickled, put into jars and shipped back into Canada into our retail markets.

I'm also aware that in the EU, there's trade in cucurbits between non-EU eastern European countries and European countries, so some of the same dynamics would apply in both situations.

How would you go about administering a CBAM program on cross-border trade as it goes through the transformation process, whereby you have transportation involved along with the initial growing systems?

Dr. Bedard-Haughn can start, and then I'll go to Ms. Tothova.

Dr. Angela Bedard-Haughn: That's basically what I was getting at up front when I mentioned that we're not ready for this. When I was talking to Dr. Gray about this in advance of my testimony here today, we were talking about that very complexity and the fact that it is such a global marketplace. I could give you the exact same example when it comes to lentils and some of the things we export out of Saskatchewan, only to have them processed on the other side of the world and then come back to us in some sort of value-added product.

I'm acutely aware of those challenges.

When we start putting that in, who covers the cost? You incorporated that into the carbon intensity of that end-pickle product in the example you gave. There's the transportation to move those cucumbers from Ontario to wherever they're processed and then again for them to come back. At what point is that adjustment applied? Is it applied twice? At what point does this no longer make sense in terms of the economic cost of administering such a program relative to the actual benefits of it?

That would ultimately be one of my biggest concerns if part of this is meant to be incentivizing—

Mr. Dave Epp: Thank you. I want to save a bit of time for for Ms. Tothova as well. I'm sorry.

Ms. Monika Tothova: I like your example of the cucumbers, because I realize there is this active pickle trade between Canada and the United States. When we think conceptually, it's a fine example, talking about the products that are further processed down the value chain, but I would urge that thinking about this start from the commodities. If Canada is shipping lentils from Saskatchewan to somewhere else to be processed, what happens and what is the carbon footprint of this shipping? Ultimately, as you go along all the way to the retail level, there are many steps along the way, each of them

coming with its separate set of transportation issues, etc. Therefore, perhaps it's good to start thinking about the pictures that cut off, for example. So the pickles go to Michigan, and then they are shipped back, and we stop right there, right? We are not going to consider additional distribution levels.

Again, it is something that is good to start thinking about, but I would urge we start thinking about the commodity shipments before we start talking about the specific products at the consumer level.

• (0845)

The Vice-Chair (Mr. John Barlow): Thank you.

Thank you for your time.

Now we'll move to Ms. Murray for six minutes, please.

Hon. Joyce Murray (Vancouver Quadra, Lib.): Thank you very much for that very interesting testimony. I think we all agree that we don't want higher carbon products to have an advantage over those of producers who have invested in lower carbon alternative processes.

Canada is not inviting border carbon adjustment, but I have two questions off the bat.

One, what's in the boundaries of what would be counted? I'm thinking about the issue of food waste. In Canada about 32% of food is lost or wasted, which could be redirected to feed people. That's based on a research project by Value Chain Management International and Second Harvest. How is food waste accounted for in this, and how can Canada's preparation, should there be a border carbon adjustment, help us incentivize practices that reduce that 30% of food that's wasted and could be redirected to feed people. In fact, 58% of all food in Canada is lost or wasted. How do we reduce that in how we set up our way of thinking about this?

I would like to get a thought about that from both of our witnesses, and thank you for your testimony.

Dr. Angela Bedard-Haughn: I think we were in a bit of a starting match here to see who was going to take that one up first.

I would suggest that, again, this is an area where we are not yet ready. But if we were to think about that from the perspective of how best to apply that—and I'm thinking out loud here—I suspect, then, we would have different levels we would need to be thinking about in terms of the relative risk of waste or loss. Some food products are at much greater risk of loss or wastage than others. Some store and transport easier and more readily. Others are much more vulnerable to waste. That's typically reflected in the value of those in the first place, but that would need to be accounted for in setting this up.

It does highlight one of the additional complexities that is unique to the food systems, though, as opposed to other areas where the border carbon adjustments are being contemplated. That's an excellent point.

Ms. Monika Tothova: Thank you for going first.

I will add to it that there is a difference between food loss and waste. One is at the producer level, the other one is more at the consumer level. That would be for a separate hearing. But when we talk about the food loss and waste, the issue is part of what we call agri-systems, agri-food systems transformation, right? It is important. By lowering the amount of food loss and waste, as you mentioned, we are improving the availability of food for additional processing for consumers, etc. It is the cross-border adjustments and the policies that are accounting for the externalities, and they are also part of the food systems transformation but from a slightly different angle. Nevertheless, the goal of both of them is to improve the functioning and the efficiency of the agri-food systems.

Hon. Joyce Murray: I think this is a question that's been asked of all of our witnesses.

I'll frame it as, what are the top three things that Canada could and should do to be as prepared as possible should border carbon adjustments come into play internationally?

• (0850)

Dr. Angela Bedard-Haughn: I can speak to that first.

As highlighted in my testimony, I think getting at some of these key questions is going to be essential.

The first way to get at that is continuing to look at the research that allows us to continue to advance our sustainability practices at every level of the value chain. In my testimony, I emphasize the importance of practices for farmers, but as was highlighted with the earlier question, this needs to be looked at all the way through the value chain. These are the win-win practices that allow us to enhance our sustainability with or without the border carbon adjustment, so that we're coming from a position of strength.

Second is making sure we have the data that we need to actually participate in this. We need to have the footprinting that Ms. Tothova was referring to, as well as the datasets and a data framework that allow us to keep track of that information.

Finally, have that understanding of the potential effects of such policies all the way through our systems, so that we're not taken aback when we get to a different stage in our food production systems and saying, "Well, we didn't quite see that one coming, did we?", whether that's at the producer level or at the grocery level.

Those would be the three areas I think we need to make sure we are looking at carefully in advance of implementing anything in Canada.

The Vice-Chair (Mr. John Barlow): You have about 30 seconds left, if you don't mind, please.

Ms. Monika Tothova: I would like to add one point to it, which is to strive to discuss these issues in the context of global institutions. You don't want to be part of a discussion when one country sets up a certain system and then another country needs to fit into it. It's a global externality. As I mentioned in my testimony, a global externality requires a global solution.

We need to discuss common methodologies on how to arrive there and then, once there is a common understanding, it will be easier to arrive at solutions that will fit more people or more countries.

The Vice-Chair (Mr. John Barlow): Thank you very much.

Mr. Perron, go ahead for six minutes, please.

[*Translation*]

Mr. Yves Perron (Berthier—Maskinongé, BQ): Thank you very much, Mr. Chair.

I thank the witnesses for being here.

Personally, I'm very interested in reciprocity of standards. One of the major problems that local producers are constantly pointing out is that Canada is letting foreign products into the country. The exporting countries don't have the same standards and use products that are banned in Canada for phytosanitary reasons. In addition, the products sell at a lower cost, which puts our local producers at a disadvantage. Unfair competition has been established for a long time, and it is not easy to adjust that.

Ms. Bedard-Haughn, how do we go about implementing that? In your opinion, am I right in saying that a problem currently exists? How can we make an adjustment without increasing the cost of food?

[*English*]

Ms. Monika Tothova: If there were a bit more of an international setting.... I will go first, Angela, if you agree.

I would hope that all of the imports that are entering Canada are satisfying the SPS requirements. Those are the minimum standards or parameters that have to be satisfied to ensure that the imports are not dangerous for health, or other things. There is a set of SPS standards, sanitary and phytosanitary measures, that the imports coming to Canada have to satisfy.

I am not sure there would be a problem. It is possible that there is a perceived problem where the farmers might perceive that the quality, for example, of environmental standards incorporated... The environment is not part of an SPS measure, but it is possible that the farmers perceive that the environment in which those products are produced is in fact entering into the SPS measure.

This is a discussion on how products are produced, which might or might not impact the quality. That's for a different hearing. That would require additional discussion on how those standards are actually created.

• (0855)

[Translation]

Mr. Yves Perron: What do you think, Ms. Bedard-Haughn?

[English]

Dr. Angela Bedard-Haughn: I would echo much of that in terms of the need for further discussion around making sure those standards are implemented. I know that's a conversation that you've been having around this table with regard to that particular concern.

It is also important as part of those discussions that it's coming from a place of evidence-based decision-making. Whatever those standards are that are being implemented, they should be looking at the latest in science, and we should be making those comparisons.

I do think that, as we continue to improve and enhance our capabilities with respect to digital agriculture data management, there are going to be more and more tools for that type of accountability and measurement, which can be one of the bigger challenges you might be hearing about from your producers.

[Translation]

Mr. Yves Perron: Thank you very much. I'm sorry to interrupt you, but I don't have much time left.

We agree on the importance of evidence. Let's take the example of carrots, which is very easy to understand. The formulation for linuron was altered, and that new formulation was not yet registered for use in Canada, but it was in the United States. Our producers couldn't use it. So we almost ended up in a situation where we would have imported carrots grown using a product that was not registered here, which would have put our producers at a disadvantage. Again last summer, an overwhelming quantity of carrots from China entered Canada, whereas they were banned in the United States, to protect farmland. There are a lot of examples, and I agree with what both of you are saying. Evidence is needed.

Then there is a sub-question related to authorization for use. Since Canada's market is smaller than the markets of our trading partners, international companies don't come and invest here, first and foremost, to get their products approved in Canada. Instead, they will have them authorized for use in Europe or the United States. This is a problem for Canada.

Do you think it is possible to establish international collaboration, without reducing quality standards, in order to share the authorization steps with a number of partners?

The question is for both of you.

[English]

Ms. Monika Tothova: Thank you for the questions.

They are international certification bodies, right? They are international standard-setting bodies. For example, we have the Codex Alimentarius that sets up the standards for the food products.

I am not particularly aware.... I will admit that I don't follow the current Canadian markets in great detail, so I cannot comment on this particular case, but they are international standard-setting bodies that are of assistance, and I'm sure that Canada participates—

[Translation]

Mr. Yves Perron: Thank you very much, Ms. Tothova. I'm sorry to interrupt.

Ms. Bedard-Haughn, can you answer in a few seconds?

[English]

Dr. Angela Bedard-Haughn: Yes, I think that some of the issues I'm hearing about here today probably reflect more strongly the issues of how things are being measured and looked at as they come into the country, as opposed to a border carbon adjustment piece.

It's the existing framework that needs to be looked at in terms of how those standards are being applied.

The Vice-Chair (Mr. John Barlow): Thank you very much, Mr. Perron.

Now we'll go to Ms. McPherson for six minutes, please.

Ms. Heather McPherson (Edmonton Strathcona, NDP): Thank you very much, Mr. Chair.

Thank you very much to the witnesses for this testimony today. It's been very interesting to me. I have to admit that I'm not a regular member of this committee, and this is all very new to me, so forgive me if my questions are a little simple, I guess.

My first question is for Dr. Bedard-Haughn. I was surprised to hear that there hasn't been sufficient research done. We know trade and trade relationships are complex—they are in many different settings, but your testimony was a lot about how there wasn't enough research. We didn't have the information. We didn't have the data to make informed decisions.

Why don't we have that data yet? Why has this taken so long? Obviously, carbon pricing has been in place for a long time. Are there adequate resources for researchers in Canada from the federal and provincial governments to accomplish this?

• (0900)

Dr. Angela Bedard-Haughn: That's an excellent question and a suitable interpretation, I think, of my testimony in this context.

If we look at the research landscape across Canada, we've done a lot of research on different regions. That's how I can say with a high degree of confidence that there is huge regional variability. One of my concerns, then, is if we start to look at something that has federal implications, how do we roll that up?

If I were to ask what the similarities and differences are between potatoes produced in Lethbridge, Alberta versus on Prince Edward Island, or if I look at crop production on the Prairies versus southern Ontario, those are some of the challenges that I would say we have.

The other challenge we have in terms of collecting and bringing all of this data together is the sheer size of our country and actually capturing some of that variability across space and time. The cost of getting data that we can be very confident in is very high, because in this context.... Compared to other markets or industries where we might be looking at such a thing, like a product or an industry where there's maybe a factory, there are walls around it and, yes, there are lots of things flowing in and out, it's a bit more defined. We have more control over it.

There are all these other climate variables that influence what the carbon cost of a particular commodity in a year might be if the carbon intensity were to vary. How much drying had to be done on that grain? What fertilizer was necessary in a particular year? What other kinds of considerations had to go into that?

It's that complexity, and at a national level, it's very hard to bring all those data sets together if we want to roll this up into a single federal framework.

Ms. Heather McPherson: When I hear you say that it is costly and that it is complex, I understand that.

I just returned from Ireland, and, of course, their trade relationships are very complex too, because Brexit means that they're part of the European Union, but the U.K. is not. There are complexities around the world. Ours is different because of our size and our federated system.

Are there examples where this work is being done and it is working very well, or where they have done the research and have some lessons we can learn?

Dr. Angela Bedard-Haughn: With respect to other countries, perhaps in the EU, I would defer to Ms. Tothova.

I would argue that it would be much more straightforward in a smaller geographic region, because even though you have the complex diversity of the markets or what's being exported, you don't have to layer on the geographic complexity that means that carbon intensity looks very different for the same commodity in different parts of the country.

The U.S. would be facing the same issues we are, as would, most likely, Australia. If we look across the EU as a whole, it would be different versus an individual country within the EU.

Ms. Heather McPherson: Ms. Tothova, could I ask for your input as well?

Ms. Monika Tothova: Yes, indeed.

In the EU, let me start by saying that looking at the carbon intensity in this setting is something that's relatively new. We have spoken a lot about trade, and we have a lot of trade data. Trying to detect the carbon content in specific products, taking into account how those products or commodities—if you wish, if it's easier to think in terms of commodities—are produced and what steps should be included, is a relatively new undertaking.

There are ways to do it. There are methodologies that are being developed. Those methodologies could differ between the countries, but there has been progress.

In the EU, for example, if you look at Ireland, the conditions there will be very different from conditions in Italy. You are producing different products. There is the diversification element. There is the question of irrigation. There are many factors, but I remain optimistic that there is quite a bit of thinking going on along these lines.

• (0905)

Ms. Heather McPherson: That's probably my time.

The Vice-Chair (Mr. John Barlow): You have 10 seconds.

Ms. Heather McPherson: You can have it back. It's all yours.

The Vice-Chair (Mr. John Barlow): Thanks, Ms. McPherson.

We'll go back to the Conservatives.

Ms. Rood, you have the floor for five minutes, please.

Ms. Lianne Rood (Lambton—Kent—Middlesex, CPC): Thank you to our witnesses for being here today.

I want to ask Ms. Bedard-Haughn how the introduction of the CBAM might conflict with Canada's broader efforts to promote agricultural innovation and sustainability, undermining the economic viability of the sector?

Dr. Angela Bedard-Haughn: That is a fantastic question, and I would say that it's one of the big concerns that we have here in Canada. We tend to be very innovative and relatively early adopters of a lot of technology that is driving agriculture forward, so the concern is that we develop approaches that are tested and validated through evidence as being more sustainable and less carbon intense. I'm referring to crop breeding or other types of novel crop inputs that then, in turn, are not recognized globally as providing the advantages that they do.

It's probably one of my bigger concerns that, if we let this be driven elsewhere in perhaps less innovative areas, more innovation-averse areas, we would end up undermining our potential. Given the changes that are happening globally and the food security challenges that we have, I think we need to be using everything that's in our tool kit.

That's an important question and part of why I think that Canada needs to take a leadership role in these early discussions and be proactive rather than reactive.

Ms. Lianne Rood: Thank you very much. I have a follow-up question.

Are you concerned that the universities' own innovation research could be disincentivized?

Dr. Angela Bedard-Haughn: I think that innovation research will still need to continue, and it will need to be a top priority.

It would become disincentivized insofar as it might limit our tool kit, right? The hope would be that it wouldn't happen, and that, if it did, there would be that opportunity for us to pivot and work elsewhere, but universities tend to pursue those paths. That's one of the advantages of university research as opposed to work that's happening solely within an industry context.

Ms. Lianne Rood: Thank you so much.

I'm going to cede my time to Mr. Steinley.

Mr. Warren Steinley (Regina—Lewvan, CPC): Thank you very much.

I have a few quick questions to ask in the time I have.

Ms. Bedard-Haughn, do you know how many soil types there are in Saskatchewan, let alone Canada?

Dr. Angela Bedard-Haughn: It depends how you define soil type.

As a soil scientist, I could spend hours going through that. Very broadly, even within our one dominant soil type that we have, there's a whole lot of variability in the soil texture and the amount of organic matter that's associated with it. Each of those would affect how those soils function or behave in terms of carbon intensity.

Mr. Warren Steinley: As you well know, different soil types also require different fertilizer.

Dr. Angela Bedard-Haughn: That's a hundred per cent true.

Mr. Warren Steinley: That's why it's very hard to compare them.

One question and concern that I have about some of this is that our producers in Canada and western Canada specifically are still

trying to understand what kind of credit they will get and how we're going to give them the credit for the sequestration part. Everyone talks about the emissions part but not the sequestration part. I feel that's a big part of this conversation that we're missing.

Do you have any comments on how we can give the credit to our producers that they deserve? I've talked about it in committee many times, the innovations, zero till, crop rotation and all the good things we've done for which our producers just continue to not get credit from this government.

Dr. Angela Bedard-Haughn: Referring back to the work that looked at the carbon intensity of some of the commodities that we're producing in Saskatchewan, the work done by the Global Institute of Food Security comparing that to other parts of the world did take into account the sequestration piece. That's part of what gives it such an advantage, and when I'm talking about the importance, for example, of measurement reporting and verification, that's where we need to be accounting for that.

The other piece we need to be talking about is that, when we're talking about emissions as part of this, we need to recognize that part of what our producers are doing, even those early adopters, is avoiding further emissions by continuing to do those practices, because, if they were to revert to more intensive tillage, for example, we would be right back where we were in the 1940s and 1950s with large amounts of emissions associated with agriculture that we've managed to avert in the years since.

• (0910)

Mr. Warren Steinley: I have one more quick comment. We should look at some of the emissions per tonnage, too, for what you're producing as well. I think that's a conversation that also needs to be had in this discussion.

Dr. Angela Bedard-Haughn: That's in that GIFS study as well.

The Vice-Chair (Mr. John Barlow): Thanks, Mr. Steinley.

We go now to Ms. Taylor Roy for five minutes, please.

Ms. Leah Taylor Roy (Aurora—Oak Ridges—Richmond Hill, Lib.): Thank you, Chair.

Thank you to Ms. Bedard-Haughn and Ms. Tothova for being here.

Your testimony was very interesting and very insightful. It really highlights the complexity of reducing carbon emissions and measuring that, especially in the context of global trade.

My colleague across the way has just talked about how difficult it is to really estimate the amount of net emissions. We know hard things are hard, and that's why we have brilliant people like yourselves both looking at this because it's something we need to do.

You mentioned that Canada needs to take a leadership role in this. Do you feel that undertaking a study such as this and starting to look at it now, in advance of the imposition of CBAMs by our trading partners, is important? If so, why?

Perhaps we can start with you, Ms. Bedard-Haughn.

Dr. Angela Bedard-Haughn: As much as I said at the outset that thank goodness we're not there yet, I'm also grateful that we are starting the conversation now for that very reason. We can acknowledge the question that we were asked on what those three things are that we need to be looking at now. Those three things are not things that we can get done by the end of 2024. These are big asks.

By making this a priority—a research priority, a government priority—and making sure we have our heads around it, we're going to be in a much stronger position to set the stage for others if we end up in this space down the road.

Ms. Leah Taylor Roy: That's great. Thank you.

Ms. Tothova, do you also have a comment on that?

Ms. Monika Tothova: Yes, I'm very much in agreement with that.

If you look at the CBAM-related measures elsewhere, they are looking really at iron, steel, cement and fertilizers that are in very energy-intensive sectors. Now, if we look at agriculture, there is not as much discussion. There is some discussion about extending the border adjustment measures to agriculture.

You are getting this, let's say, early start to think about it. I would like to compliment, indeed, the committee that you have embarked on this study at this point.

Ms. Leah Taylor Roy: Thank you very much.

We talked about the complexity and the administrative burden of measuring and accounting for specific carbon footprints. We do want to ensure, in any measurement of the net ecosystem, as you were talking about, that we would be measuring not only the sequestration but also the emissions and any changes. Obviously, on a per tonne basis, all of that would be part of it.

Even with that, it seems very complex to do it farm by farm and product by product. Has there been any discussion about other ways that we can incentivize farmers to adopt these practices and also ensure that our farmers who have better sustainable practices are benefiting in the global market without doing it on a product and farm basis?

Answer briefly, if you can, because I know my time is running out. Are there other ways to do this?

Dr. Angela Bedard-Haughn: This is the advantage of our starting early. There are tools that we have. If I were to use the example of soil measurement, we can combine local measurements with machine learning tools. Basically, we're building up our tool kit and our ability to do more of that work without farm by farm measurements.

We need to build up that data set to empower us to use those other tools down the road. That's part of the innovation space. Yes, there's the innovation in developing new varieties and things like

that. The other innovation is actually in the measurement space, and how we can combine remote sensing and machine learning technologies with a smaller number of local measurements to move forward in this space.

Ms. Leah Taylor Roy: That's fantastic.

Ms. Tothova, do you have anything to add?

Ms. Monika Tothova: I'm very much in agreement with that.

Ms. Leah Taylor Roy: Chair, do I have more time?

• (0915)

The Vice-Chair (Mr. John Barlow): You have 45 seconds.

Ms. Leah Taylor Roy: I'm also wondering about the concept that was raised with regard to pickles, as an example. I was going to talk about the pickles as well.

We also have to look at ways that we can incentivize the whole chain to be more carbon neutral, including transportation. I would hope that some of this would actually encourage more food processing in Canada because of the emissions component of shipping things out and shipping things back. If that is actually incorporated into these measurements, we may see more incentives and more investment in Canada for food processing.

Do you agree? How would you see our doing that?

Dr. Angela Bedard-Haughn: I am nodding vigorously here. Yes, I absolutely agree that it's an essential piece. It needs to look at incentivizing value-added processing closer to the source while also looking at ways to improve our transportation pathways.

Ms. Leah Taylor Roy: Thank you.

The Vice-Chair (Mr. John Barlow): Thanks, Ms. Taylor Roy.

Monsieur Perron, you have two and a half minutes, please.

[*Translation*]

Mr. Yves Perron: Thank you, Mr. Chair.

Ms. Tothova, in your presentation, you said that 25% of greenhouse gas emissions came from the agricultural sector and that those emissions had to be reduced. I agree. However, I also think we need to consider the beneficial impacts of agriculture, as you've mentioned in your comments. I'm talking, for example, about maintaining a grassland or carbon capture in the soil when zero tillage is applied.

Ms. Bedard-Haughn, you talked a lot about the importance of recognizing the value of our own practices, measuring that in a sustainable way and rewarding our early adopters. I've been advocating for this for a very long time. How can we measure the positive effects of agricultural practices and decently reward people who, for 20 or 25 years, struggled, barely making ends meet because they were protecting the environment? Now that we want everyone to protect the environment, we're going to reward the person who polluted the environment for 20 years because they changed their practices, but we're not going to take early adopters into account. We have to find a better way.

I'd like to hear your thoughts on that.

[English]

Dr. Angela Bedard-Haughn: That's certainly an important topic for me, Monsieur Perron. Here in Saskatchewan, we have so many early adopters of practices like conservation tillage. I spend a lot of my own research time trying to get an effective quantification of the historic benefits we've accrued to date from those early adopters. I also think one of the opportunities we have before us now is to look at how we can incentivize those individuals to continue doing those important practices in the face of other types of pressures.

My greatest concern is that we implement some sort of policy or framework that unintentionally disincentivizes those early adopters—for example, by only rewarding the late adopters—because at that point, the early adopters are being told the only way they can get this particular carbon credit is to stop doing conservation tillage, blow off all the carbon they've already sequestered and then start over again by reintroducing these practices. I do think it's important for us to think about how to credit the avoidance of emissions that would be so easy to end up in that situation with the wrong policy instrument.

Ms. Monika Tothova: I would add, if I may, that it was 28% of the entire agri-food system, but of course we recognize that agriculture also has positive benefits in terms of lowering greenhouse gas emissions. It's a matter of the agricultural policies within specific countries on how they balance this demand. There is no universal prescription, right? A lot depends on how the agricultural policy is set up in the country.

If you reward people who have been doing something for a long time—conservation tillage, for example—while at the same time you encourage, maybe with a slightly different policy instrument, the people who have not been doing that..and in fact they should, let's say, convert to this practice.

The Vice-Chair (Mr. John Barlow): Thank you very much.

Finally, we have Ms. McPherson for two and a half minutes, please.

Ms. Heather McPherson: Thank you very much, Mr. Chair.

Again, thank you to the witnesses.

I'll start with you, Dr. Bedard-Haughn. The Organisation for Economic Co-operation and Development, the OECD, in 2021 recommended investing in emission abatement technologies to prevent emission leaking, which many witnesses have also echoed at this

study. Do you believe this is a favourable alternative to BCAs? Do you think both approaches could work together? Could they complement each other?

I'd love your thoughts on that, please.

• (0920)

Dr. Angela Bedard-Haughn: Very briefly, yes, I do think it's important for both of these to work together if we do go to the BCA. I think with the border carbon adjustments, those are further into the future due to all the various complexities we're looking at. Some of the emission abatement approaches that we're looking at, depending on the specific one you were talking about, will be more innovation-driven and will be relatively easy to adopt in the shorter term.

I think it's a “both-and” as opposed to an either-or.

Ms. Heather McPherson: Do you have any comments on that?

Ms. Monika Tothova: I absolutely agree that we need to try everything that is going to work in terms of abatement or different policies so that we achieve an improvement.

Ms. Heather McPherson: Thank you.

Dr. Bedard-Haughn, I have one last question for you. There were consultations regarding Canadian BCAs in 2021. Did you or the University of Saskatchewan know about these consultations? Did you participate in them?

Dr. Angela Bedard-Haughn: I did not.

Ms. Heather McPherson: Did you know about them?

Dr. Angela Bedard-Haughn: I did not. I was relatively new to my dean role at the time, so it may not have come to my attention. I can't say for sure whether any of my colleagues may have been engaged in those conversations, though.

Ms. Heather McPherson: So, from that, can I assume that, from your perspective, the consultations were insufficient?

Dr. Angela Bedard-Haughn: I don't know whether they were insufficient or not. I can say that when I reached out to my colleagues in agriculture and resource economics on this issue in advance of being here today, the only one I heard back from who was actively engaged in this space was Richard Gray. However, there have been a couple of retirements in the last couple of years, so it's possible that institutional memory has been lost.

Ms. Heather McPherson: Thank you very much.

The Vice-Chair (Mr. John Barlow): Thank you very much, Ms. McPherson.

Thank you, witnesses.

I'm just going to ask Dr. Bedard-Haughn one question.

In the previous questioning, you mentioned your concerns about implementing a system that may not recognize the achievements of those producers who have adopted minimal till, crop rotation, precision agriculture and things like that. Have your colleagues done any work on coming up with a preferred system, let's say, that would give recognition to producers for their carbon sequestration in terms of a carbon credit market or something along that line? Has there been any consensus on what would be a preferred model?

Dr. Angela Bedard-Haughn: I don't think we're fully at consensus yet, beyond saying that, yes, we need to have something in place. We are actively working on two or three different possibilities in that space, including, as I mentioned, credit for avoidance in addition to or complementary to a different tool than sequestration. I think that's one piece. There have been other conversations about ways to incentivize this, thinking about the soil benefits and the ecosystem benefits that go with some of these practices as well.

So, are there other opportunities for crediting these folks by looking at their risk reduction? When we think about agricultural risk, these same practices tend to reduce the risk of soil erosion, soil loss, disease and so on. So, are there crop insurance benefits, for example, that could be accrued to some of these folks who go beyond, in addition to any type of a carbon market?

With regard to the carbon market, we're just really stuck right now with the international requirement for the additionality piece. However, I do think that we need to acknowledge that each year that they're continuing to do this practice, these folks are avoiding a whole lot of carbon loss that would otherwise be occurring. Likewise, with precision agriculture, they are avoiding a lot of emissions that might otherwise be occurring.

So, we are actively working on ways to quantify that.

The Vice-Chair (Mr. John Barlow): I'll give Ms. Tothova an opportunity....

Has there maybe internationally been some work on an international standard, let's say, in terms of best practices? Are there other countries that have implemented a system that seems to be working?

Ms. Monika Tothova: There have been efforts. I'm not sure whether I would call them at this point a success, right?

There is still quite a bit of room for improving the methodologies, harmonizing the methodologies, and it goes back to what I said at the start of my testimony: that a truly global issue like this does require a global response.

• (0925)

The Vice-Chair (Mr. John Barlow): Thank you very much. I appreciate your time.

Thank you, witnesses, for being here today. Your testimony is much appreciated.

Colleagues, we're going to suspend for a couple of minutes to allow our witnesses to move on with their day. Then we'll come back to get some committee work done. We're just going to suspend for a couple of minutes.

Voices: Thank you.

[Proceedings continue in camera]

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