GMO Opposition Week

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I'm Ian. I'm a researcher here at University of Manitoba in Winnipeg, Canada. Ryoko has asked me to make a short presentation about the Canadian situation with GMO crops in Canada. My research focuses on farmers and their attitudes, perspectives, and experiences growing GM crops in Western Canada.

Behind me, you can see, these are the three Prairie Provinces, where a lot of agriculture is happening in Canada. Winnipeg is right here, in the eastern part of the Canadian Prairies. This is a huge area of cereal and grain crops, oil seeds, canola, wheat, barley, oats, a lot of these crops are being grown in this part of the Prairies. Lots of farming is happening here. The main economy for rural areas is agriculture for sure.

To give you a sense of what it looks like, here is a photo of a calendar, that's the Canadian Prairies in Manitoba with canola being grown in broad acres of the big open prairies sky. In Canada, canola is seeded on 10-14 million acres per year depending on the year, and the main GMO crop in Canada is genetically modified canola. That's the yellow crop in the background. It's an oil seed crop. I'm sure you are familiar with it. Right now, about 70 % of the canola in the Western Canadian Prairies is genetically modified, and about 95 % of it is herbicide-tolerant. The GMO trait is herbicide-tolerant. Basically, farmers can spray their canola with herbicides and it will kill all of the weeds but not the canola. That's the main benefit and reason why farmers are using it. It was introduced in 1996, and a lot of farmers began to adopt the crop. Now, it is the predominantly used canola crop in Western Canada.

Unfortunately, there have been a lot of problems. Before I get into them, benefits, include easier weed control, better weed control, increased efficacy around timing, basically farmers can spray the crop easier, and when it's most advantageous to them, and the yield has been claimed as one of the major benefits although we are not necessarily finding that with a lot of interviews and surveys that we've done with farmers. It's mostly operational benefit.

Many of you would be familiar with the Schmeiser case. Percy Schmeiser is the farmer that was sued by Monsanto, one of the big companies that makes GMO canola, and he went all the way to the Supreme Court in Canada. His particular case in Canada has demonstrated to the world that there are problems associated with the technology.

His fields were contaminated by GMO canola. Herbicide-tolerant trait can move on the wind via pollen, and the DNA, the genetic construct can get into non GMO crops. That was what happened to Percy, He was sued by the company for patent infringement for "stealing" GMO canola from Monsanto. He fought Monsanto and fought all the way to the Supreme Court of Canada, costing him hundreds of thousands of dollars to defend himself and defend the right to grow non GMO crops, and unfortunately, he lost.

At the Supreme Court, that's where I met Ryoko (Hi, Ryoko Thanks for having me here.) I made this film the "Genetic Matrix", and it was actually recently, with Ryoko's help and the help of people I'm sure who are attending this conference, it was translated into Japanese. There is the Japanese version of the film. I hope all of you can get an opportunity to see it sometime. You can learn more about what happened to Percy by checking out that film and it is translated into Japanese. That's one of the projects that I worked on. I've been following Percy's case very closely, and certainly, his case demonstrates the problems associated with the technology; the fact that it can contaminate other fields, can contaminate non GMOs, the fact that companies have patent rights and ownership over the DNA constructs where they exist in nature, and farmers can be sued over that, the problems associated with legal system, certainly the fact that it costs a farmer hundreds and thousands dollars to defend himself.

And certainly, our government has allowed the introduction of these crops without a very rigorous regulatory oversight, which means that it's been released, and there has been very few post-release monitoring studies. The research I'm doing here with my thesis advisor is one of the first projects to look at the post-release effects of the crop, and certainly we are finding that some farmers are experiencing benefits and others are experiences problems.

One of the projects that we undertook recently within the scope of my thesis was we produced a film called "Seeds of Change". This is another research project that was developed here at University of Manitoba. Essentially, it is a video of the risks and benefits of GMO crops in the Canadian Prairies. We interviewed farmers across Western Canada, across the Prairies, the picture that shows you the back here.

We presented what the farmers said the good and the bad. This particular video focused on volunteer problems. These crops can cross pollinate and they can establish themselves as plants in a field and they can become weeds. You've heard the term "super weeds" before. Certainly, farmers in Western Canada, some of them have problems with these weeds where DNA construct for herbicide-tolerance is in a canola plant in a field where a farmer doesn't want it, and it's harder to control because the herbicide doesn't kill the canola if the genes are in it. It won't die when using, mostly, Round-up. Round-up is the proprietary herbicide owned by Monsanto and the majority of the GMO canola grown in Western Canada is Round-up Ready. Round-up is used as an all purpose herbicide in Western Canada to clean fields, to kill weed population. Now this canola has the Round-up ready gene in it. Farmers cannot kill it with Round-up, so they have to_use___extra herbicides, becoming more costly, and the benefits of weed control are being undermined by the same crop that is supposed to help farmers.

The experience with GMO canola, RR canola, starting to become the benefits have plateaued, the risks are starting to increase. So farmers are starting to have problems with it, but at the same time, they are still growing it, so we have this contradictory situation.

This particular film was made in 2002 but it was not released until 2005. The reason why it wasn't released until 2005 was because the University administration would not allow the release of this film, my university wouldn't allow the release of this film, and the reason why was because they were heavily involved in bringing Monsanto to our campus. Now the Canadian Corporate Headquarters for Monsanto Canada is on

the University of Manitoba campus, my campus. And the administration would not allow the release of this film because they were in the negotiations to get Monsanto to the campus. This film was barred from being released for 3 and half years. We fought very hard and got this film being released. We released it all over Canada.

This is the poster, and we called it the “Free the Film! Tour: The documentary that they do not want to see!”. It was a promotion campaign saying the people would not allow seeing this movie because of the corporatization of the university campus and the lack of academic freedom that is happening here. We finally liberated the film with the whole bunch of help from the Canadian Association of University Teachers and a number of different student groups, and we got the film out.

Now the film is on the Internet. If you go to this website:
www.seedsofchangefilm.org, you can download the film, or you can stream it online. If you want to learn more about what Canadian farmers are saying about GMO crops, you can go to this website, and download the film. It’s only in English right now, maybe we are going to translate it into Japanese one day, but hopefully, you can check this out, once again: www.seedsofchangefilm.org, and you can get this research through the website. That shows benefits and risks. It talks about some of the problems.

One of the main issues that is also happening here in Canada is the_struggle by____ organic farmers. Organic farmers don’t allow GMO corps into their field rotations, it’s not allowed under the standards, and essentially, farmers who were growing organic canola stopped growing organic canola because of the problems associated with contamination and the fact that they can lose the certification if the contamination occurred, the fact that the market share is lost if there are traces of GMO traits in the organic crops. Those farmers have been disenfranchised. They have lost the opportunities to grow crops that worth good money to them.

Right now there is a group of organic farmers called the Saskatchewan Organic Directorate. Their website is: www.saskorganic.com. If you go to this website, there is a link there for the Organic Agriculture Protection Fund. OAPF is a committee formed by SOD, by the group of farmers in Saskatchewan here. This is Saskatchewan, it’s the province beside us. Organic farmers in this province, there are over 1200 organic farmers in Saskatchewan. Those farmers have banded together and trying to sue Monsanto and Bayer. Bayer is the company that owns LivertyLink, GMO canola.

They are suing Monsanto and Bayer for the loss of market share, for the contamination, for the cleanup cost associated with GMO crop contamination. Troy Stozek,____the man behind the camera right now, and myself made DVD about the Saskatchewan Organic Directorate and their struggle against Monsanto. There’re clips from a documentary they were making on their case. This DVD features David Suzuki. He is a really famous geneticist, and he is Canadian but his familly is from Japan. He is one of the most famous Canadians here in Canada. He is an anti-GMO scientist and activist. He came and he did a presentation as a fund raiser for the Saskatchewan Organic Directorate.

Their case is essentially the “ Schmeiser ”, it’s the second legal round. The Saskatchewan Organic

Directorate has the same lawyer that Percy had, it's Terry Zakreski. Terry Zakreski is arguing that in Percy's case if the gene, wherever it exists in nature, is owned by this company, then they should have responsibility for it. So they are using the lost with Percy's case as leverage to sue Monsanto and Bayer. They are trying to establish liability for the contamination of this crop, for the loss of organic market share, for the clean up associated with that. That is what this film addresses. This is another video that we made here, and it's partly related to my research and partly not. We are also doing it just to get the word out about what is happening.

My research is in risk assessment of genetic engineering. I'm working on a number of papers right now, publishing my findings, and we've done surveys with farmers and we've done quantitative analysis of farmers' experiences with GMO crops. To summarize, farmers are benefiting in using this technology. That's why it's been grown across the Prairies, although there're also risks. Those risks include contamination, legal harm associated with patent infringement and lawsuit. It includes the loss of the markets.

One of the big issues here is GMO wheat. Monsanto had developed Round-up Ready Wheat. It was the same as Round-up Ready canola with herbicide-tolerant, except in a wheat crop. Canada and the US were the first two countries to want to introduce these crops, hugely controversial. At the same time, over 89 % of the buyers of Canadian hard red spring wheat said "we don't want to buy it". And people from Japan and buyers from Japan who buy a lot of Canadian hard red spring wheat said "we don't want this, why are you going to introduce it?" Mass of controversy which we were involved in, we surveyed farmers across western Canada about their attitudes toward this, we found that 83 % of farmers were against the introduction of Round-up Ready wheat, and we fought that battle. With the help of Ryoko and people from Japan, Japan delegation came here to talk to the Canadian Wheat Board to talk about how international consumers didn't want this, international grain companies and buyers didn't want this. And we beat the Monsanto on the Round-up Ready Wheat issue, although we almost had it introduced. It was very close. It was being grown in field trials across western Canada. And that was probably the most controversial GMO case in Canada. So we've introduced GMO canola, but we held off on GMO wheat, and we are still trying to figure it out in terms of what the long term risks are going to be. Certainly, there are some, and essentially that's what our research is on.

We encourage you to get in touch with us. If you have any questions about any of these issues, check out some of the websites. Ryoko knows how to get in touch with me. I'd be happy to provide some of the information further. Certainly, I encourage people in Japan to think critically about agriculture. I know that a lot of people are concerned about food issues there. I think that's really important. We should be moving forward. I'm an environmental scientist, so I'm concerned about the environment. We want to make sure that the future generations are not going to be harmed by these crops. I'm not necessarily opposed to GMOs completely, but I think it needs to be introduced in a way that is responsible, and done with insights through science and research, that is not happening in Canada right now. It's kind of the Wild West these things are being introduced, and that's no good.

Thank you for your time. Matane!