



# **CULINARY CHANGE**

## *IN WHAT WAYS WILL THE 21ST CENTURY SUSTAINABLE DIET PROMPT SHIFTS IN TASTES, CULINARY TRADITIONS AND FOOD CONSUMPTION HABITS - IN NORTH AMERICA AND GLOBALLY?*

*[TRANSCRIPT FROM THE FORTH SESSION OF THE FUTURE OF PROTEIN CONFERENCE]*

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**Marie-Josée Massicotte** [00:00:00] Newly arrived colleague, Ryan, who did a fantastic job with Shannon and I'm sure many others but this is a superb event. I'm really excited to see the quality of speakers and debates and discussion we are having so really great job. I hope you're going to do many more of that. No way. Not this year. Okay so we're running to the next panel on culinary change. The big question was: in what ways will the 21st century sustainable diet prompt shifts in taste, culinary tradition, and food consumption habits in North America and globally? So I think at the end of the day after all the discussion we had it's getting towards closer to a food dinner and it's going to be a really great way to finish the day. And we have another set of great speaker for the afternoon and I'm going to go following the list of speaker panelists we have. So Jodi Koberinski I hope this is good. Yay. Former Executive Director of Organic Council of Ontario and 2015 Oak Fellow at the Oak Institute for the Study of International Human Rights at Colby College. And almost done with her Master's Degree at the University of Waterloo so she's gonna be our first speaker for 10 minutes.

**Jodi Koberinski** [00:01:30] Great. So yeah I want to just start by thanking the organizers of this event. I think it's, as has been said earlier, it's really important to do this kind of trans disciplinary conversation and really challenge each other when we're tackling such large problems. So when I looked at this question I couldn't get past the 21st century sustainable diet, as if we know what that is, or that it will be possible for us to conceive of one, or that there will be some sort of global governance decision on that. And I find that my work that I'm doing really has me looking at and questioning some of these assumptions about how we proceed and I'm I'm I'm wishing that we had this question 35 years ago when I started down this path because I think 35 years ago we could have had a really great conversation about how people's engagement in the food system could transform that food system. But we got an IPCC report a couple weeks ago and that report tells us we have 12 years. 12 years to make some fundamental changes and so I think that the conversation or one of the conversations we need to be having, and I'm sorry I wasn't here earlier in the morning and maybe it came up then, is why are we making an assumption that we can continue, at all, in the ways that we have? I think fundamentally as long as the food system we're in is tied to global capitalism, in its current expression, I believe that as long as we have a neoliberal food regime which is tied to inequities, and we can look at the IPES 2016 report from uniformity to diversity, we can look at the UNCTAD 2013 report, we can look at the IAASTD 2009 report, and if we put all three of those reports together the conclusion is we can not continue to trade food as

a commodity and not recognize its other food values. And so I did hear from some of the other speakers, particularly in the ethics conversation, where we're starting to have a connection between what we value and how that shows up in policy. So my hopeful work or the work that I'm engaging in right now over the next four or five years, as a finished my master's and jump into a Ph.D, is looking at this notion of food valuation. And there are different models. The one that I'm following is a new model that Jose Luis Vivero Pol put out in his dissertation in 2017 and it's a conceptualization of food as commons. And so in that IPES report, where we're looking at a fork in the road between the industrial food system and an agro ecological food system, what Vivero Pol offers, and other thinkers in this in this realm, is looking at food values beyond commodification and so this may mean the 21st century food diet is one that is based on provisioning. It might be one that's based on reciprocity. It might be based on any number of values that cannot show up in the conversations we have when the only value for food is as a commodity. And I think that if we don't put this kind of normative shift at on the front burner before we're getting into policy formation we will form the wrong policies. And so I'm deeply excited about the great work that my colleagues at Food Secure Canada have been doing. It feels like it's an overnight success to be having a national food policy conversation. We began that conversation formally in 2001 at Ryerson, so it took us as a civil society 16 years to get a policy conversation about food. But we haven't at the in that push we haven't necessarily pushed for a normative shift at the same time and so we have really great work coming out of Canadian academia. We've got the food systems scorecard that came out of the group of fledge at Laurier. What's the what's fledge? Can someone tell me the acronym? Food Locally Embedded Globally Engaged. Thank you. So those folks, Charles Loveco, Allison Blaepalmer, and some others, put out a really great product looking at bringing valuation into the food systems. We can look for sure, as has been mentioned before, to our indigenous hosts, our First Nations hosts here in Canada, who have food systems that are values based food systems and I won't presume to teach them or you know lead into that but we can certainly look at, if you want to see this at play, look at Joseph LeBlanc's 2014 dissertation. He's from Lakehead and he did a five chapter dissertation in which he goes into detail what a First Nations food economy looks like and really encourages us to get away from these sort of Pollyanna discussions about and this is a this is a Joseph LeBlanc he'll say food is sacred. Yes it's sacred but what does that mean? It means that it's sacred when I can look after my family and that we don't want to put these sort of ideals on the edge we have to really dive deeply into what you know what does a First Nations food economy look like? And it's a legitimate economy. So I kind of wanted to start with that, start this panel with that engagement that I know we're gonna hear very good ideas about concrete things we can do within the economic system that we have but we keep treating the economic system like it's the thing that can't change and the ecology as the thing that can be bent. And so whether it's we want more non meat protein but if we're doing it the way we do it on the Canadian prairies, where we're using a minimum of five different chemicals, from fungicides to herbicides in a typical lifecycle of a lentils. So this isn't when I see a problem coming I'm going to do this prophylactically throughout this season I'm going to start with a seed coating I'm going to fumigate I'm gonna have pre emergence herbicide I'm gonna have a midsize urban side season herbicide and then at the end of the season I'm going to use diquat and glyphosate to kill the lentil to get the product that I want off the field... We really need to look at the systems of what we're producing so I'll be interested to sit and listen to my colleagues talk about what the diet itself may consist of, but if we're not looking at the values of how we do food exchange and how it is we produce the food that we choose to eat, whether it's a cricket or a lentil or a cow, we're going to end up with the same problems as the ones that we're talking about today. Thank you.

**Marie-Josée Massicotte** [00:08:47] Moving on with Lenore Newman. She is director of Food and Agriculture Institute, Canada Research Chair, and Associate Professor with the Department of Geography and the Environment, University of the Fraser Valley.

**Lenore Newman** [00:09:06] Hi everyone. And it's just been amazing conversation today and some really glad to be here. Also give me a wave at two minutes. I tend to go on. So I'm sure Ryan invited me, partly because I am quite pro GMO so it always is good for a bit of a tussle. He didn't let me help with dinner though, so you're safe. There's no little surprises in there whatsoever. So I'm gonna answer the question in the Canadian context cause the other thing I'm known for is talking about Canadian cuisine and I'm gonna make a couple of framing assertions for this discussion. The first is rather uncontroversial. Let's assume a shift toward plant based diets and plant proteins continues and we'll look at what that does to Canadian cuisine. The second is a smidge more controversial. My work focuses on two areas: culinary geography and agricultural policy. And it sounds so dull you wonder how I got in so much trouble. And this work takes me from the smallest producers to massive factory farms with tens of thousands of animals in a room. And increasingly it takes me in to labs. I became interested in bioengineering, specifically production of animal products without the animals, about five years ago, professionally, and the science is evolving so quickly that I think I can make that second assertion that is within a human generation or two the age of cultivating living animals will be largely over, except for niche production and we're living through a revolution as profound as the Neolithic revolution itself. So it's an amazingly interesting time to be alive in the study of food. Now I'll come back to that after dropping that huge bomb on the crowd. But first cuisine. Cuisine's living. Its complex and changing reflection of landscape, technology, and culture, and a change in culture toward plant based diet will impact cuisine and has impacted cuisine. And I actually feel that one is kind of an ongoing process. If you study a Canadian menu from about a century ago you'll notice a lack of plant matter. It's almost 100 percent meat product, meat and fish, and you kind of have to wonder how that actually even worked. And the trend toward eating more plants has been with us for a while and is continuing and I want to veer into academia briefly. Concept really on my mind these days, I'm doing a lot of work with the government, reshaping our agricultural policy, and I've been thinking about the idea

of [...], or world creating. That our policies and our technologies actually shape our landscape. [...]. But now the Canadian context. When I wrote my my work on Canadian cuisine I broke her natural our national identity into properties. That it's seasonal, it uses a lot of wild foods, favors ingredients forward rather than recipes, it's increasingly multicultural, and it exhibits strong sub cuisines in regional vernacular regions. All that means go to different parts of the country it's different. That sounds about right let's apply the assertions. Well I don't actually think the shift toward plant based diets will change things that much, but it might strengthen our link to seasonality. We're seeing not in the Fraser Valley with our chefs driving cultivars that wouldn't have been used before cause they want to stretch the season rather than bring in foods from overseas. And it might also increase our wild plant use and one of my predictions is that indigenous fruits and vegetables, many of which were actively suppressed during colonisation, will return. And as an example, our university is trialling the haskap, which is a berry found in the northern part of B.C. Looks like Saskatoon berry, tastes a bit similar as well and that's really an interesting one and also there's interest in cultivating wild carrots, camel lily and spring bank clover in B.C. which is cool. So that's one thing that might happen. I think any move toward more plants is just going to strengthen the Canadian elements we're already hearing about, except we might shift a bit more toward highlighting more of those plants. Rather than just saying oh that's a Pemberton duck we might say it's Pemberton potato. That's a very B.C. example by the way. So don't worry if you don't know what it meant. If you ever go to Pemberton you'll know what it means. But what about this question of protein without cows or sheep or chickens? Well what does Canadian culinary approach have to say about that? And I'm gonna start my answer and probably limited to an already commercially viable technological technology which is bioengineered fermentation. Yeast and also bacterias can be used to turn sugar into alcohol which was one of our first food technologies and remains very popular I am told. But yeast can be genetically engineered to do other things, and it is. Consider insulin. Developed in 1922 by a Canadian Frederick Banting, it saved millions of lives but it was made out of pork pancreas which had some issues. Number one they weren't very good for Muslims, so they had to use beef pancreas instead, which is a terrible substitute. Quality was very lumpy and also people tended to develop pork allergies. So in 1978 a team by led by Herbert Boyer inserted the gene for insulin creation into bacteria and yeast to produce insulin in the lab. Almost all the world's insulin comes from that technology. So it's also hailed as genetic engineering's first big breakthrough. But now let's go into food. The first food that we adapted that was genetically engineered in this way was also a bio-engineered yeast. Rennet is meat used in cheese production, some of you will know, and it comes from the stomachs of cows and sheep and there's never enough of it. And so we decided to start making it using the same process. Take yeast alter it to make rent it, you get rennet that we now call vegetable rennet and, surprise, 80 percent of global cheese production is made with this genetically modified product. I hope I didn't ruin your day. And the weird part is because you're not using the yeast in the cheese, you're using the rennet, it doesn't need to be labeled as a GMO cause it's not really a GMO. In fact, it can be labeled GMO three free. So there you are. And so you're saying well Lenore how does this wrap into cuisine? It's simple you can make other things this way. And the example I wanted to use was milk, because milk is just a chemical, colloid, and it might seem complicated but it's just a matter of scale. You can you can add you can make the proteins, the casings and they wheys, add in a plant fat, add in some minerals, add in some liquid, add in a sugar, doesn't have to be lactose, and suddenly you have milk. They're already doing this. It's almost to market. It will be the first one to market. I always tell people the vat burgers are a bit of a bit of a publicity hog. They're like the Kardashians of GMO in that the milk is almost there. But what I want to say is, in Canada, I think we'll do it regionally. And so to wrap up I want to say I think we'll do now this is basically microbrewery technology. The reason we like microbreweries is because yeast adapts to its local environment. So all the breweries are different. That's why we like it. And so I think in Canada we might wade these are all these are all public technologies, they're mostly open source, we might see local microbreweries open selling local micro brewed genetic milk products and cheeses. And I think that is possible. And you don't have to stop with cows and that's one amazing thing. The only reason we use cows is because someone managed to domesticate one once and we know that from genetic studies, one time domestication, and look at the things, of course. They were domesticated the Oreck which was a truly scary animal. Now there is one dairy on earth that makes moose milk and I'm Scandinavian so I can say only a Scandinavian would think of that. And moose are really hard to domesticate. They're really hard to milk, but you can genetically engineer your yeast to make moose milk and how Canadian is that? So I think what we'll see and I'll wrap up cause I know I'm really short on time here, I think what we'll see is now there. I'm skipping over there are big ethical and environmental problems that need to be addressed with that technology. Feedstock really makes a difference, if you're reusing food scraps it's great, if you're cutting the rainforest down to grow sugar it's terrible, and there's a lot of ethical issues that we have to look at, yhere's food safety issues there's a ton of policy issues that I'm interested in no one else's. But well you are, so, we'll talk. But I think for chefs, they're going to be able to have one of these bio reactors on their counter and they can make whatever kind of milk they want or eventually probably grow whatever meat they want although it's a harder technology. And I think we will just incorporate it as we always have. And Canadians, if nothing else, are really great at being multicultural in many ways including with our foods.

**Marie-Josée Massicotte** [00:19:32] Another thing that Ryan seems to do right is to keep his speaker at the time that the we're supposed to it's pretty amazing. So Chef Kyle Mortimer-Proulx is the next speaker. Kyle is a well is lost in my pamphlet. Okay. Has been active in the Ottawa dining scene since the early 2000s and has developed his style and experience at the CAA three A's for Diamond Brook Street Hotel and I had award winning and blah blah blah. Great chef but I'm just gonna synthesize saying that I had the pleasure to try Kyle's food when he was back in Aylmer, at the Maison Conroy and that was an amazing dinner. And so that's great that you're talking about chef because the next feature is gonna be with us.

**Kyle Mortimer-Proulx** [00:20:31] All right. Bear with me. Unlike most you in this room I'm not really an academic. I'm a frontline worker. But I have been part of our Ottawa dining scene for the last couple of decades and so I think that I'm definitely have some relevant things to say in terms of what I've witnessed, how my career has spanned. I did spend a couple of years as a chef at a hundred percent vegan fine dining restaurant which is where I really started to make my name in town. From that I went and I opened up a 400 seat Smokehouse Canadian Smokehouse in the middle of the Byword Market just to keep from getting a little bit pigeonholed in my career, when it comes down to it. My current project is in a reclamation. It's a reclamation project in a church from nineteen hundred, about ten minutes just down the street from here and my focus is really about sustainability, not just sustainability in terms of the food that we're going to be serving, but also hopefully in the way that we can approach it staffing wise because it's a pretty difficult industry out there on the front end. So now we'll go with more my prepared speech if you don't mind. A successful future of sustainable protein and restaurants will be based on portion control, imagination, resourcefulness, balance, and education. Being a chef is a fun job. We get to spend our days chopping produce that has arrived fresh from the farms, still warm from the summer sun. We whip up delicious and nostalgic desserts that transport diners to a different point in time. Perhaps when they had less stress and responsibilities. We butcher pristine, well cared for animals that are delivered by local farmers and create specials that are destined for our guests tables and stomachs each night. That is, if we can convince our guests to try something that they likely haven't had before. Is that piece of braised lamb neck, brown butter basted sweetbreads, grilled heart, halibut tail, or slow roasted pork hock just as good as a 10 ounce New York strip loin, filet of salmon, or boneless skinless chicken breast? Not only do we have to convince them that it is in fact delicious, but also that it is worth the 20, 30, or 40 dollars or so that we have to charge to, not only cover all of our costs associated with the dish, but hopefully make a few points of profit as well. As chefs we attempt to introduce our guests to new products, techniques, and flavor combinations as we discover and become excited about them. Generally, it would be my advice for diners to place their trust in a chef and allow him or her to cook whatever they want for you, because it will no doubt be something that they are truly proud of and excited to be serving at that very moment. The care and attention that goes into that dish will be higher than if you ordered something that's been on the menu for weeks or months and has likely bored the kitchen crew by now. After reading the biographies and titles of the various academics in this room that are presenting it's apparent that I'm one of the few blue collar workers that have a voice in front of you all today. One of the things that I'll share with you over my, sorry one of the things that I'll share with you today are the two words that I've learned make the biggest difference when creating a new dish, writing menus, and deciding how much you can charge your guests for each item on the menu. Perceived value. In our current food climate, that is saturated with a variety of food trends and marketing descriptors, it may take a lot to stand out from the crowd. Simply being farm to table isn't enough. Organic is no longer special, it is now expected. Local is the norm but not revered. These words that were once reserved for small independent restaurants with limited menus and strong ties to the community are now blasted from all of the big box franchises, grocery stores, and fast food chains. We chefs are challenged with creating dishes that appeal to the diners who claim that they want to support local, organic, and seasonal farms and restaurants, but rarely want to pay the real cost for it. Their understanding of what food actually costs is lacking and has been affected by these larger companies who claim to offer the same products but for much much cheaper due to their own purchasing power and ability to corner the market in various ways. Take A&W who has essentially bought up the entire beyond meat cellular or beyond meat market of cellular meat. By doing so they've made it extremely difficult for a restaurant chef to serve this product at all, let alone at a price point that would allow them to make money on it, because their clients would associate that product with a cheaper grab and go meal that they can pick up down the road. This is where a perceived value comes into play. Is a beet salad worth sixteen dollars? You can buy a bunch of beets at the grocery store for two bucks. Why would someone want to pay 28 dollars for a hanger steak? Can't I just get an eight ounce beef tenderloin instead? How come this chicken sandwich cost eighteen dollars? I can get two for six down the street. Every chef is different. We all have our own unique backgrounds, experiences, palates, and influences. We all cook with a different style and have different strengths when it comes to running a restaurant. The one thing that we all must do, though, is create. We must constantly create dishes that not only fulfill our desire to feed people, but they also have to be enticing to the diner and profitable enough to help us pay all of our bills and keep the doors open and lights on. I find that more often than not when eating out and creating my own menus we chefs are less inclined to transform beautiful fresh flavorful and local ingredients and instead aim to highlight their own natural flavors textures and colors. Keeping it simple can have its own drawbacks though. The conversation that I hear most when it comes to how food is valued is based on whether someone can make the same thing at home or not. If a guest thinks that they can make that dish in their own kitchen then they'll immediately undervalue it because they add up the prices of the raw ingredients as if they were to go to the local supermarket and grab stuff off the shelves themselves. What they don't factor in, though, is the labour, rent, gas, plateware, and cleanup that is associated with cooking, to name but just a few restaurant costs. To create value for our guests we have a couple of options as chefs. One we can be resourceful and imaginative, creating delicious smaller portion meals with sustainable products that guests will find interesting and thus keeping the menu prices a bit lower. This is generally where most chefs are currently at now. No longer do we have to offer 10 or 14 ounce feedlot raised steaks with basic sides. Instead we're able to offer four or five ounce pieces of grass fed beef with some deliberate flavorful seasonal vegetable preparations. In doing so we're offering our guests quality over quantity. Two, We can slowly stop serving animal protein at all and instead switch to protein that is coming from pulses. This is happening more and more with forward thinking chefs. But even most who are still meat centric offer one or two vegan dishes on their menus to appease their clientele. One of the current North American restaurant

trends that we're seeing is the rise of various vegetable and pulse heavy dishes that are typically based on flavors or preparations from developing countries that have been enjoying this type of food for millennia, albeit more out of necessity. This is something that offers more value for restaurant diners as they are typically a little less familiar with the flavorful and spice driven food from Indian, Ethiopian, Burmese, Thai, Turkish, and Peruvian backgrounds to name just a few. By offering guests different dishes that are not as easy for them to recreate at home, with a slightly lower menu price due to the omission of animal protein, we're giving them an option with a perceived value that is higher than those that are meat centric. One of the distinct challenges that restaurants are faced with, though, is the label of misappropriating other cultures. In an ideal world it would be seen as other cultures positively influencing us in North America so that we may try and broaden our own palates and skill sets. But it can be a tricky subject for some. A third option, which is the least desirable, is to take care of our restaurants bottom line by purchasing cheap, factory farmed, conventionally produced ingredients that will allow us to lower our food costs and menu prices while expanding our margins. Our clientele will feel as though they're getting a great deal. Even though the food is coming in from farms who spray pesticides, give antibiotics to their battery caged animals, and increase their carbon footprint by shipping these products thousands of kilometers to hit our tables. This is unfortunately the option that most franchised restaurants choose. While myself and most other chefs that I know are more than happy to justify the cost of spending more on local, organic, sustainable, and ethical meat, seafood, and produce, at the end of the day we have to be able to transform and sell these products to our guests and have them feel as though their meal was worth it. It is up to us to find ways to keep the costs down but offer exceptional value to our diners. Dishes that appear complex due to the layering of flavors and textures, while ensuring that guests are left full and happy, are best. A constant search for less popular, but still flavorful cuts of meat, is typically what we look for. This is how we ended up with menu favorites such as braised short rib, grilled flank steak, cured pork jowls, along with the ubiquitous sausage and hamburger. Beyond all of these considerations that we must make as chefs when creating dishes that not only represent us individually but also appeal to our clientele, we must teach our customers, and thus the general public, that the cost of supporting a sustainable, ethical, and local food system is worth the extra money. It does cost us more, and in order for restaurants to survive our palates and mindsets must adjust to be more accepting of what is being grown, harvested, slaughtered, and ultimately available to us at any one of the three hundred and sixty five unique micro seasons throughout the year. The cost of labor has been increasing and the profit margins in restaurants are shrinking constantly, forcing us to question whether small restaurants themselves are sustainable in this day and age. Education and open mindedness are key in order to continue to push this discussion further. But ultimately it is worth the investment for us as chefs to spend the time talking with our guests while we have their attention and to communicate with them about the positive impacts that farming sustainably will have on our planet and our bodies. It is my belief that finding a balance of serving smaller portion meat protein dishes, alongside pulse heavy preparations, all being supported by local and seasonal produce, is a way for us to go. Moderation is key. Thank you.

**Marie-Josée Massicotte** [00:30:38] OK. Our last speaker, Paul Uys, Senior Director of the Arrell Food Institute of the University of Guelph. 40 years of experience in the retail sector. Came to Canada, I learn for Loblaw's Company Ltd where he headed the product development departments responsible for the company's emerging control labels. Your turn.

**Paul Uys** [00:31:05] Thank you, and again thanks for the organizers. Kyle, you're not the only non-academic here. I might have Arrell Food Institute, University of Guelph behind my name, as was mentioned, I'd like to see myself. I'd like to see myself as a humble shopkeeper and for the last 40 years I think that what I did was to influence a lot of Canadians and South Africans before that. That's the accent by the way who don't recognize it. And I think that is a role that I have cherished. If you look at my bio I have continued, since retiring from Loblaw's, to take an active role in many sustainable, and I also like to use the word responsible by the way because sometimes things aren't necessarily sustainable, roles. But let me move on. I have a lot of slides to get through. Some of them, the wonderful thing, as Mike von Massow said earlier, coming last I think a lot of the ground has been covered and a lot of the topics have already been touched upon. However, I think you know looking at the whole culinary piece and crystal ball gazing I think we're going to cover more of the same talk mixed in different ways and I think that's the wonderful thing about today. However what I do think and the good news is and we talk about good news and bad news. I do think we have a consumer who is much more engaged than in the past. When I first arrived here 30 years ago to head a product development at Loblaw's a foodie was the person who could talk about what the latest hors d'oeuvres was or had tried balsamic vinegar or you know had discovered extra virgin olive oil. The foodie of today is all about what's in the food and that's the most wonderful thing and what has changed. I also like to believe, and this is a term that I brought when I came to Guelph, is that because of what is happening at the market end of of the supply chain we are increasingly folk for folk forcing what needs to be done down at the farm gate level and no no no longer we talking from farm gate to fork it's now fork to farm. So I have just two points. Having said that, what is also continuing to be the good news is that we have a consumer that is much more conscious and they are conscious they are focused on healthy, sustainable, and just. And I'm going to touch upon those three three criteria as we go through this. One of the things, of course, that we have and this is this is relatively new data coming from Loblaw's a couple years ago asked asking consumers what mattered most to them from a CSR point of view, from a social responsibility point of view, the number one thing is local and it still continues to be and in fact actually when you look at local, protein and animal protein is arguably one of the most important factors and the fact dealing with local and one mustn't lose sight of that. However we are we know and we've been talking about this for the last day

is this whole question about eating meat and eating red meat. And we know that that many different organisations and scientists are challenging us on this whole piece. The WWF globally is challenging the world to reduce its consumption of red meat by 50 per cent by the year 2040. Again and I'm sorry for those at the back of the room. We obviously are dealing with a very different demographic. When I arrived here maybe five per cent of consumers, and that was even probably that was probably fairly extensive, and I know that because I was responsible for introducing vegetarian products into President's choice. Today, that this is this is a Dalhousie publication that came out earlier this year, we have at least 10 per cent of our consumers in Canada, and and it and it obviously expands elsewhere in the world, that in fact are ultimately vegetarians or vegans. In fact you mustn't look at just that 10 per cent because there's a very sympathetic sympathetic factor. So 10 per cent of consumers are probably affecting households by 20 per cent. So that is actually quite striking. The other piece that I think is important is in fact ultimately that first that that 32 per cent of Canadians observed some form of committed dietary regime. And I think that certainly is translating into a very very important factor. So we obviously we've talked about the questions around omnivores, flexitarians, vegetarians, you know, we've got we've got Paul McCartney promoting Meatless Mondays. By the way, I think we should have Trumpless Tuesdays. But but you know but I think the important piece is that in fact ultimately 80 per cent of consumers are actually consuming some form of meat and they are the target and are who are ultimately in my view the biggest area where we can change. Whether they are currently carnivores, omnivores, or flexitarians going through that loop, that is where the real dramatic change can take place. And obviously I think we're looking at that. I'm not I'm not going to spend too much time on this whole question around cultured meats. What I do think it's coming it's the economics is going to work. It's not a question of if it's when it has. But what I do think and with all the hype that comes what is also must remember and I keep on bringing this up in the conversation, when you're dealing with an animal you've got carcass utilisation. If anybody knows the economics around it, you've got to find a way that the high end pieces and actually Kyle just touched on it earlier about finding the lesser known. You've got to find a way to find those into the market and if they don't they it just forces prices down. Cultured meat is basically going to go up against ground meat because that's the format that it's going to be. It will just force ground meat to become cheaper. And what's going to happen is that ground meat is gonna to find its way out. So the the question of economics is going to play very very heavily in this area. And yeah I'm certain people will want to eat it. But even when it's a very successful economic proposition it's still going to be a question around economics. I'm not going to touch on this anymore because I didn't know that Jared was going to be in this in this audience. He can talk much more extensively on the question around the correct me or what I can tell you, because I'm still very closely involved with Loblaws even though I'm a pensioner, is that I this particularly when they launched this and I was with them at the time a week a month afterwards they had over 100 million media hits on this particular product and it certainly is indicative but I do think what is from our own perspective and if you see from my my bio I'm very interested in sustainable food is sustainable fisheries. I think the real implication around insect is in fact protein is does it where does that translate into the animal feed piece which is very critical, particularly in wild capture seafood, which is often used in the in the chain and we need to take pressure off that. Obviously what we're dealing with is a consumer who wants to trust. They want to be able to verify. They want to know that the farm gate and if you can put a picture of where that product has come from it means so much more from in the sense of consumer and understanding that that whole piece. I think the question around sustainability is gonna we're gonna increasingly see this in urban urban agriculture. We can have. Mike you you talked about sustainable at least farmed fish. 60 percent of farmed fish in Canada today is what the market is and it'll become even bigger and bigger as we move forward. We can take farmed fish right to our doorstep. We can literally have a distribution center on the outside of a major town and you can be farming millions of fish it very very economically literally on your doorstep. I did touched on this is a question that I think that it's coming coming down the pike. And increasingly I think we are looking at various different health angles. Often they can get carried away by media and various different other forms. But I think the focus of gut health, as we look at healthier foods, is increasingly going to have a more significant role. And where does this actually ultimately lie out of coming out of the animal supply chain? One of the topics we haven't talked about, but it is completely and utterly hand in glove tied into the whole question of sustainability, is the question around integrity and sourcing of integrity and I think this is something that in fact as we move forward, we talked about obviously the ethics earlier, this is a very key piece of the equation and goes hand in glove. I have a talk. Yeah interesting. Lenore, you talked about GMOs, this whole question of the ideology around GMO versus the science. You know there's this whole we have now approved a salmon to be produced in Canada that is GMO is made from a GMO source, Aqua Bounty, and of course they're pitching the whole question around it being much more sustainable. So where did the two actual angles coming out. I'm not going to go too much into the whole question around eating out it, obviously is a very important point of focus, Kyle obviously talked a lot about the different types of choices but what of course is a very critical points part part of the restaurant or the food service business is that they are focused on less choice for the customer. They have to hitch their wagon to in fact what they're ultimately going to going to support, so they can't have a non non organic and an organic option. They've got to decide one or the other. And of course this is becomes even for those activist groups who are looking to engage it's obviously the soft underbelly. We've got the question around the ethnic influences. I think it was touched on earlier. I think there's a there's cultural respect that comes into this and what are those dynamics. I think very key. I've got two more slides. One is that this is the question around convenience, around a meeting a convenience meeting ethnic diversity. Pulses are increasingly becoming easier to produce. We've got the ethnic flavors that are coming into the equation. I think Kyle again touched on this and I won't go into any more detail. And finally my last slide my last slideoops is the question around pets. I think we, you know, and Kate can is obviously an expert in this area, but this is a very critical piece. Canadian pet sales approximate 2 billion a year. 40 percent of

households own a dog I think in the US. What is the focus on that particular area and how sustainable is it? We know that in fact organizations like MSE are certifying seafood into it. And I think increasingly we're going to see different programs that support a more sustainable area in the pet food. Thanks very much.

**Marie-Josée Massicotte** [00:42:38] OK. So great, again, discussion and speakers. I'm going to ask very quickly a show of hands. What I'm gonna ask is would you like to have like eight minutes discussion in those table where we can have the speakers you know walking to one of the table and then the people in the back could join those tables to have this question discussion interactions at the table first and then come back with discussion, questions, comments after that? Those in favor? Wow. Those against? Let's do it. Okay. So just have you know, comments, question among yourself. Just trying to tease out some ideas that we can come back after. So I would say very quickly to people in the audience. You can come and join those table even if some people are standing. That's all good as well. And if you can join one of those table to participate even more in the discussion. Thanks.

**Miscellaneous** [00:44:03] [...]

**Marie-Josée Massicotte** [00:54:01] So yeah if you are finishing on a key theme you can take one more minutes and then I would invite the speakers to come back up and have this open discussion together. But I'm happy people are talking so that's great. Please. It's hard to stop the conversation but. OK. I'll ask the speaker to get back here and I don't know if. Yay. Is there someone who's gonna be? Ryan you're gonna have a mic for the questions? OK.

**Ryan Katz-Rosene** [00:57:03] Just a reminder to speak into the mic.

**Marie-Josée Massicotte** [00:57:06] So yes I am reminded to remind everybody that if you want to ask a question, make a comment, try to always use the mic because it's live on Facebook and video is recording so it's great if you can use the mic. Otherwise we won't get the questions so please try to use the mike.

**Ryan Katz-Rosene** [00:57:32] We have a question here.

**Marie-Josée Massicotte** [00:57:33] Wonderful.

**Ryan Katz-Rosene** [00:57:35] Okay and I can paraphrase or you.

**Audience Member #1** [00:57:37] Sure like I can ask. I'll ask so my name is Dolly and my question is about GMOs. You mentioned that almost everybody does not like GMOs but coming from an engineering background we're pretty pro GMO. So I was just wondering like why people don't like GMOs?

**Ryan Katz-Rosene** [00:57:53] And I think I had recommended that she ask you Jodi. So.

**Jodi Koberinski** [00:57:58] Lenore will take a stab at this but I appreciate, as a person who has problems with it, to be able to answer directly. The main issues are, one, we have regulatory capture by industry and therefore claims of safety aren't necessarily supported by the science because much of the science that's done and then counted as safety is actually asking fairly frivolous questions, and I'm quoting Jonathan Lethem from Independent Science News when I speak to that. The second reason is it reinforces an inappropriate approach to food production. It reinforces the industrial system the way that GMO is have been introduced and brought into this situation right now. And then I think the third main issue is that the the GMOs we're seeing in the market are the first and easy ones which have been to be produced to take herbicides or produce their own pesticide. And there were far better approaches to solving those particular issues. So because we went out of the gates that way with genetic engineering as opposed to taking a wow discovery science approach maybe we need to maintain in the lab until where we have more information about that, you've now got an entire movement around the globe that's resistant to those initial impetuses and so you it's gonna be much harder for the kinds of potentially positive applications that Lenore and other people are talking about to be received because the regulatory capture is still there.

**Lenore Newman** [00:59:44] Yeah and I I think in a way, too, scientists misunderstood people's feeling of the sacred around food and and animals. And so when GMOs first started rolling out they weren't we didn't talk about things like insulin, where it's clear it was good, or you know some of the current applications, trying to replace safe [...] or shark fin, things where we're trying to achieve a good end. There was a lot. The very first burst of GMOs, there was a lot of, number one, field trials that were, to be honest, you know I think by anyone's standards, risky, and there were also a lot of frivolous things that people did because they could, like the glow in the dark cats, and now I do feel that was kind of cool because you could find your cat easily but you know the truth is though you know the truth is it made scientists seem like crazy risk takers and we didn't come and [...] came in we didn't come in and say look we might be able to solve many of our most chronic diseases with these technologies. And so I think there was this some poor poor optics. And even to date there are no scientific studies showing any harm from the GMOs we have done. But I think we have also not been good at trying to convince the public that we're actually being careful.

**Jodi Koberinski** [01:01:26] So really quickly. Absence of evidence is not evidence of absence.

**Paul Uys** [01:01:34] I'm just going to add a piece that really from a market point of view I think is critical. And yeah I think well I'm not a scientist. Interestingly enough going back in my career I was responsible for introducing organics into Loblaws and I did it because it was an option to give a non gmo alternative to consumer. But what I do think is really the critical piece now that I think needs to be considered. I believe that we should be completely open and transparent about the food supply system. I think that is a fundamental pillar in terms of sustainability and anything that we're looking at. And I think from a regulatory point of view, really, we need to move towards the fact that we state on a package whether this there is there is a GMO produce product or whether there isn't. And let the consumers then desire and decide and I think quite frankly and this might not go well in this room. I think over 90 percent of consumers don't care less and will just get on and purchase what they want to purchase how they want to purchase. Those 10 percent who do already probably care and are already probably buying non gmo sources, organics, or others. But I think the critical pieces moving forward we should become much more transparent about what is in the foods. And I think that's the way to deal with GMOs.

**Kyle Mortimer-Proulx** [01:02:59] One second sorry Ryan. I just wanted to add something. I had a brief train of thought with with Paul talking about sort of Loblaws. I think it's still. I think it would be more beneficial for the consumer to, instead of having to search out what the organic alternatives are to GMO products, to have it the other way. It shouldn't be the small scale farmers or even large scale farmers but if they're organic or. That should just be food, right? Like just simple as that. That's the food. It's the it's the GMO stuff, and I'm not I'm not anti GMO. I think that GMO has had some very strong changes and not even just medically with insulin but also with food. You know especially when you're dealing with harsh winters and stuff like that. But that's the stuff that they should have to jump through hoops to label it as this is GMO. Let everyone else just grow their food and eat their food and understand that what they're buying is good for them. That's my thought.

**Lenore Newman** [01:04:02] I would just very briefly add though, then we have to consider is a cow a GMO? Because there are no wild cows. They're a creation and they were created through genetic modification, just very slowly.

**Jodi Koberinski** [01:04:18] So that's why we're encouraging folks to go back to the old language of genetic engineering, GE, as opposed to GMO. That was a bad choice that was made not by activists.

**Audience Member #2** [01:04:33] Okay so moving away from the GMO topic. I was more curious on a side of education. So we've heard a lot about changing culinary practices and I'm, I think, probably a rogue consumer because I only choose the thing on the menu that I've never had before and I choose restaurants for that reason. So I think that's a very odd thing. So my first question would be how do you get more people to try different things, I think is the first problem. And the underpinning for all of this that we're not talking about is usually when I show people what commercial agriculture is and bring them there and then tell them that they have the option and it'll cost them twice as much because it's more expensive to farm. They go mmm mmm. So it's important until it's expensive. And so how do we a) get that right sized and educate people about where their food comes from? Because I agree with previous speakers. I don't think urbanites, especially, have a clue where their food is coming from.

**Kyle Mortimer-Proulx** [01:06:01] I had a line, or a paragraph, in what I was going to say, that I end up deleting, which I had to do with how many people attend the farmer's markets on weekends but don't really buy anything. And it's sort of how they just go, they might spend like 15 or 20 bucks to like grab berries because they're great and they're in season, but they're really not buying their week's worth of produce at the market and they're not spending 30 dollars a kilogram on beef or pasture raised pork or anything. It's more it's more of an outing and that's why they're usually on Sundays, at least downtown Ottawa. Saturdays and Sundays. But that was part of when I was getting too convoluted about things and I kind of scaled it back. So I'll focus a little more on how I try to educate people, because I can really only speak for myself. I like to cook off cuts of meat for the most part and I try and do it in ways that people can see as being familiar. So I'll include familiar flavor profiles or cooking techniques or something. Sometimes it's a little bit hidden, you know perhaps, or you put one type of meat like if it's an organ, for instance, with something that's a little more accepted from the mass scales of people. And then the other side of things is when I'm cooking something that is more of a prime cut you know if it's like tenderloin or chicken, just in general to be honest, or a strip joint or something along those lines, I try and prepare it in a way that is a little bit different and push the guests' palates and boundaries. That way it sort of strikes up a conversation and then I can try and educate them a little bit more. So no matter where I'm cooking I will host different series of dinners essentially and sometimes they're wine dinners or beer dinners and where I actually met Ryan and Marie-Josée was at my restaurant and Aylmer, that I closed back in January, but I was hosting a lamb dinner, a nose to tail lamb dinner, and I purchased five lambs off of Ryan's wife Erin and you know I served them, had cheese, and I served them a grilled heart salad, I definitely served them a rack of lamb, but when it came down to it you know I served all of my food and then I went out and then I chatted and then you go to table to table and some people knew what they were coming in for and a lot of people didn't fully but they trusted me because they'd had my food before and they lived in the area and stuff. But I guess it's very much a grassroots movement until it's no longer a grassroots movement, like once you have the voice, once you're a Jamie Oliver, you know, then you have a bigger voice and you can go on TV and you can show what sugar, like how much sugar is in a soft drink, but until then you just kind of can only do what you can do to be honest. And the reason I show up here is because I started cooking, you know at my mom's knee when I was a kid

because I and I continue with it because I loved it. And then somehow as my career path evolved so did you know cooking on TV and it was suddenly Food Network. And so whether what I say is relevant or not is not for me to say but when I'm being invited to things to share my perspective then I'll show up and I'll say what I have to say and if people want to take anything from it that's up to them. But I guess that's the best I can do, so.

**Paul Uys** [01:09:07] How long is a piece of string? I think this is a very interesting discussion that we've already touched on, understanding where our food comes from, as Mike talked about. I think the good news and I touched upon that earlier I think, as and I am talking about the global north and obviously the more Canadian environment, we are becoming much more conscious about what where our food what's in our food. The pendulum is swinging slightly towards having an interest. I think the question is, though, and it's a societal issue, and it comes back to the fundamental question is, we don't value our food to the extent that we should value our food. And it's from a total society point of view and I think when we start to value food in the real sense and it's not just the fact that it's 6 percent of our income or whatever it is from a Canadian point of view but that it's part of our community, that it's part of our home lives, and that's the challenge because we don't sit down and have meals anymore. So I think how do we how do we engage that piece and as I say, how long's a piece of string, it's a very obviously it's a very complicated story. Coming back, I think one of the things and yeah I was through my slides but one of my slides I talked about the nudging effect and there's no question that we've seen again and in the global north the ability for foodies and celebrity chefs to have a very profound and you touched on Jamie Oliver and I think he he is actually the epitome of that type of movement, you know, he's not he's he's he's not only taught us to to actually cook at homes but he's had a very demonstrative effect on society, what what kids are being fed at schools in England, you know, serving sizes so he takes on a quite an activist role and I think there are different people, there's Ned Bell out on on the West Coast who's very focused on sustainable seafood, and so and these people increasingly are having the ability to connect through social media and those other factors. So it's a it's a it's a complicated question, Kate, but I you know there are many different factors but I think they will come into it.

**Lenore Newman** [01:11:27] I would briefly add too though that regulation and policy have to play a role. And I love that I don't have to think about bovine growth hormone in Canada, and I really hope I can keep not thinking about it.

**Ryan Katz-Rosene** [01:11:44] Josee where are we going?

**Marie-Josée Massicotte** [01:11:47] I don't know. This was my hand for taking my turn but [...].

**Ryan Katz-Rosene** [01:11:54] Here and then Sara and then.

**Audience Member #3** [01:11:58] I'm glad you mentioned the global North, Paul, because one of the things we were talking about at our own table is what is happening elsewhere, because meat consumption is going up elsewhere, right? And what is sustainable fish too, right? So we can talk about what's happening in the global north, in Canada and everything else, but elsewhere, you know, even if we make our changes, you know, what's gonna help elsewhere and how is it going to happen and I wonder if you have any insights into that? We were just talking and Jared was mentioning that apparently there is some commitment by governments now to reduce consumption of red meat based on the WHO, World Health Organization, and other things. But you know how do we change make that kind of a change at that level in culinary and otherwise?

**Ryan Katz-Rosene** [01:12:48] I think Marie-Josée wanted to take three questions at once, then you guys can pick and choose.

**Marie-Josée Massicotte** [01:12:54] Just to try to have as many questions as possible.

**Audience Member #4** [01:12:58] Thanks. Fantastic panel, yet again. So thanks to all of you for that. I want to echo what uh about the importance of policy and regulation. One of the reasons we have the agricultural system we do in the global north right now, and to a certain degree in areas of the global south is because, well I'll speak specifically to Canada the US, we've had about 100 years of agricultural policy that has supported the specific model of agriculture that's been focused on grains and surplus and this is fed in to animal agriculture because a lot of the animals eat the surplus grain and it's seen as a efficient way to use the grain. I would, one question I have is is what kind of, after a century, and not necessarily just nudges but serious government policy supported this model, what and one of the outcomes I think is a kind of corporate control that we see often. So for example the the the burger that you discussed, right? So why does A&W have a monopoly in Canada? It's selling this specific burger. We have to look at the choices you have as a chef and what you can choose and it's not just about you keeping prices down it's other people are benefiting from low prices. That you as a chef can't necessarily access. And I'm wondering what sort of policies, especially at the consumer end, looking back at distributors and the kind of supplies we have from farms, that you folks might suggest to change the cuisine or bend it towards an area that you'd like to see.

**Ryan Katz-Rosene** [01:14:42] And a final question.

**Audience Member #5** [01:14:45] Yes. So a couple of you touched upon portion control and moderation, especially in the future of our diets, and I was wondering how we could expect to incentivize that sort of behavior in a continually more consumer based economy.

**Jodi Koberinski** [01:15:12] I'm going to start with the what about rising meat elsewhere question. Rising meat and dairy. Again it goes back. For me it's a it's a policy and globalized neo liberal food regime issue because we have our companies that are based here in North America, typically in the States, but also in Canada, we're promoting a kind of food in these places where we have a rising middle class and for example I work on a farm in India and we teach a course called the 80s out of agro ecology, it's a one month long course, we get about 50 people a year and half of them are folks in India who've recently left software jobs. It's almost almost to the T. And they're taking a year to figure out what to do with themselves. And we did one lecture where we showed ten years of advertising from American fast food companies that had recently come to India and it's just ad after ad of these very masculine big bold words and you know very phallic looking subways and Subway sandwiches you're going to eat those and you know it's like all this you know play on virility and the woman who was giving the lecture was Vandana Shiva's sister, who is a medical doctor, and when one of the students pointed out all this sexual imagery, she was just upset about having this crappy food pushed on them, it went right over her head. And I was like please don't scandalized Mira, she shouldn't know that this is happening. But I know and I you know I answer the question for the person. But my point is is that whether it's that or it's Nestle, as someone had mentioned, pushing formula on Guatemala, rules that we made for ourselves here that we can't advertise at our children in a certain way, the same companies who obey that rule here are going to India, are going to China, are going to Guatemala and they're doing ads in the ways that we have said are damaging for our children's ability to develop good food habits. So you know in terms of this maybe bleeds into the other question I'd like to see that if your stock exchange is here and here's where you're traded, you follow the rules of here wherever you practice. You don't get to be craft here, doing one thing here, and then you get to go to China and do a different set of rules and still get our tax breaks and our subsidies for the kind of work that you're doing. I think that is a sham. So we've got again back to we've we've allowed our democracy, as as nascent as it was, to be stopped in its tracks and we have to deal with that. So it's democracy connected to the economic system.

**Lenore Newman** [01:17:51] I would I would put in a strong call for a policy change we need is, in Canada, we largely don't fund public independent extension and in British Columbia this is an absolute crisis. What it means, it favors the big industrial players that have support. For example our chicken guys get all of their info from Kentucky and people like Tyson Foods and we don't have a Made in Canada approach and that's just pure underfunding and that's one place where I look to the US and I'm like there's a system that in some states is way better. And yet we have we have basically no extension and it shows.

**Paul Uys** [01:18:41] I think there was a question about the global global north versus the global south. One area that I mentioned earlier I'm very involved in is the sustainable seafood area. I sit on the board of the Marines Church of Council which is, for those who know, is the is the global sustainable initiative. It's a real challenge because you know nearly nearly a billion people you see food as their primary source of protein. Many of them are in the global south and they are actually in the most vulnerable in terms of how how those fisheries are ultimately being maintained. And often countries are coming in or doing deals with governments at the time coming in fishing and denuding the waters. And I you know, how does how does one address that? I think obviously there there's global action organizations like the U.N. have have to have a role. I think Jodi's point about organizations and the principles and and and transparencies of of of of companies that if they trade in a certain sovereign area those those should should apply to wherever they're trading and I think that that's a concern. I think also I think one of the things we've got to be we've got to be concerned about though is that you know we tend to think that what we're doing in the global north is right and many and was touched on earlier and by a number of people and I think you know we talk about you know the food being produced in the global south often by peasant type production systems which are very effective in their own right. Well certainly they can do with help and and and be more productive. But I don't think we must view that the fact that what we know and what we do maybe in the prairies is going to apply somewhere else. So I think I think that's a very key piece of the equation is that there's enormous amount of arrogance that we know best and that needs to be applied wherever we are wherever we are from from a sovereign point of view. So that's my pennies is worth.

**Kyle Mortimer-Proulx** [01:20:53] In terms of the portion control, just quickly, cause I feel that's going to be an easier one at least on my end with sort of the restaurant side of things to explain. With smaller portions equals lower menu prices which is a little more enticing for the customer base. Whether it's that they come in and order one smaller dish and they get to try some different stuff throughout the week and then they kind of move on, then that's fine, it keeps their lower average bill so their dollar goes a little bit further but they still get to try different things. Or they simply come in and they get to order four or five different dishes you know and they kind of build their own tasting menu almost but I guess that's where the the incentive is in terms of the smaller portion size for a lot of it. But also I guess when I'm saying smaller portion size overall I'm more referencing animal protein sizes, where you know I no longer serve 10 or 12 or 14 ounce pieces of protein. Typically steak as my number one reference point because that's kind of what I grew up seeing. I typically serve three to four ounces and that's usually a raw weight which means that when you're actually getting it you're eating two and a half to three and a half ounces, but it's supported by other

things. It's supported by a good amount of local seasonal vegetables, whatever is in season at the time, it's supported by some different carbohydrates from, you know, we're coming to squash season for instance right which is a little more hardy and actually that'll be on one of your dishes tonight that I'm cooking. But so things like that so it's not as though you're just getting that three ounce portion but you are getting a good amount of some pulses and stuff like that too so you're still going to you're not leaving super hungry still, you're still eating, you're still getting try it but it's our job to try and find out where that balance can be where we're offering a good value driven concept for our guests but we're also still able to survive and I'll give you guys just a quick number and it's mostly based on small indie restaurants. 5 to 8 percent is a successful small independent restaurant that's our profit. So when one of my cooks burn something. See you later. Like and this is the difference between being able to have a sustainable restaurant or not because when guests are coming in and they're complaining about spending 30 bucks on you know that ocean wide certified piece of halibut that I'm spending 38 dollars a kilogram on and I only get a 50 percent yield, you know, like it changes everything and so it comes down to the education of the consumer in terms of what they're actually buying. And you know so we closed our restaurant in January. It wasn't because it was poor food, you know, we were listed as one of the top three best new restaurants in Ottawa/Gatineau 2017 and I closed in January because the market wasn't strong enough. I decided after being open for about 14 to 16 months that we would end up bleeding and it was time to leave that market and change it up because it was dead. So and then I would just want to quickly Oh Sarah is no longer Oh sorry I apologize. I looked at your seat there. You referenced or you're asking sort of like the A&W burger and why it's a little difficult for me. You know, Lenore mentioned, you know, like at one point maybe I'll be able to have the facilities in my kitchen to grow my own you know cultured meat essentially, right? It's all about if things are cost prohibitive or not. You know I just gave you guys the rundown of how much we're really looking at as profit. So when you're then considering what are you going to do with that 5 to 8 percent and say that's you know you're you know a 40 seat restaurant you're probably averaging 750,000 to maybe 1.25 million in gross sales a year, depending on sort of what your price point is, that's not a lot of money to then you know reinvest everything you need to do. Do you need new chairs? Do you do you need new H vac system? Do you need a new fridge? Do you want to expand your revenue streams by offering takeout and you need to buy new new equipment for that? So it's more about cost prohibitive. Or there are more cost prohibitive things that we would love to do but realistically what I've determined is when you're building something out that's when you need to figure out what you're going to do, make sure you have the money for it then because once you're actually operational you're screwed. Like you can't you can't really invest that unless you've got a miracle investor with deep empty or with deep pockets that really believes in your product. But for a restaurant that's very rare. So that's kind of our That's my take on it.

**Ryan Katz-Rosene** [01:25:24] I think we might have time for one more round of questions Marie-Josée.

**Marie-Josée Massicotte** [01:25:27] Yeah.

**Ryan Katz-Rosene** [01:25:28] And there were there was you guys are good. And I think Diana and you had a question.

**Audience Member #6** [01:25:34] I would just with the moderation thing with humans in general so they did a study where they looked at how much someone liked a food, and the more they liked a food the more they thought was a moderate amount. So the more they liked pizza the more pizza they thought was moderate. And you know when we're looking at a food environment of hyper palatable ultra processed foods where protein is the most satiating of the macro nutrients, and we're looking at you know companies like Subway and McDonald's going into these third world countries, it's not I would just argue it's not the protein in the Subway sandwich or in the McDonald's burger it's it's everything else that comes with it and the fact that people just are you know that stuff tastes really good, it activates our reward sensors in our brain, and it stimulates us to overeat.

**Audience Member #7** [01:26:38] So this is like half a comment half a question I suppose and it's weaving together the point that seems consumer demand for more environmentally responsible products can be kind of fickle. The need for policy that was mentioned in some of the discussion earlier as well as some. Oh yeah. And then the farm scale right. So it's wonderful to get people to be purchasing more local smaller scale farms. But I mean there's still gonna be issues of economies of scale and things like that. So I think it's equally important to look at shifting consumer demand basically baking into shifts in consumer demand through things like either you know pollution pricing or regulation or cross compliance for you know agriculture across the board, especially the larger firms, so that you know consumers can't just free ride and get the cheap stuff that has the environmental impacts, and it's only a small segment of the market that actually captures those attributes in the price, but rather you know it'll become more across the board pricing reflection. So you will shift at least some more people to the smaller scale stuff but more fundamentally it'll just be getting people to think of the prices of the environmental impacts in the food they buy more and so I'd like to hear your thoughts on that. Sorry.

**Ryan Katz-Rosene** [01:27:56] I think final question. Let's just show me a hand [...]

**Audience Member #8** [01:28:06] I'm so sorry I will have three connecting questions. First it would be it will be relating to the GMO matter if it's OK. Right. How would you how would researchers conduct a major scale experiment in an enclosure of the lab? And secondly would you rather be absolutely convinceable with the safety of GMO, or would you rather find the fullest research on GMO that it is safe to eat consume GMO. And lastly to make people more

appreciative to the value of food we eat, the researchers have to make GMO is in fact healthy.

**Lenore Newman** [01:29:02] Well I actually want to take on the small is beautiful one because I think it's a real mistake that the food movement gets caught in this idea that small is automatically good and big is automatically bad because I think it depends entirely on the crop. And you know if you're growing hops for beer maybe an acre is great, but if you're growing grain and no one is yet convinced me that you should grow grain you know acre by acre. And so I think we really have to watch out because we've had a long track record of thinking small is great. But that's that really plays to the rural idyll. This idea we have of farming in our head and it's romantic. And to be honest it doesn't hold up to science.

**Paul Uys** [01:29:57] I can come back, by the way, and talk about the GMO piece which you came back to, but I would like to touch on the policy piece by the way which was raised earlier and I don't think we really we discussed it to the same level. Canada is developing a food policy as we speak. I think it's expected to be probably published before well certainly before the elections next year. It'll be interesting to see what transpires. I've been involved with interestingly enough with with an initiative with the EU who are currently looking at also themselves a common food policy and certainly a lot in that in those discussions and I don't think we have the same level of discussion in Canada. A lot of what we're talking about today is very topical as far as the EU's common food policy is concerned. And I think it's how do we how do we translate that that message to our policymakers and I know we talked about saying we need to have more of these meetings in bigger groups but I think the how do we act whether it's through lobbyist groups or whatever. But I think we need to be this type of discussion needs to be taking place with what what is coming down the road and coming back to the EU, the EU, and I was involved with the forum in May, one of one of the pillars of discussion that is being being looked at from an EU food common food policy point of view is the question around agro ecology. So agro ecology organics which is obviously already there and it is a standard but I think you know how do we generate that discussion to come back on to our doorstep? So I did want to touch on that.

**Jodi Koberinski** [01:31:50] Yeah. Just to pick up where you're leaving off. It's really important to remember, when we're talking about agro ecology, that we're talking about a political and social aspect not just how it's now being defined out of universities in the states, which have taken on the agro ecology thing and they want to make it the ecology of the agricultural system. It is much agro ecology is much more than that. So if you haven't read anything about agro ecology I encourage you to read Rossett. He's a I can't remember what does anybody remember what university he's with? Ross anyway R O S S E T T and he writes very eloquently on the need to have that political analysis. Whose food system are we talking about? Agro ecology is not just a new word for organic, it's actually about the humans are in the food system, the worker is in there, though the landowner is in there, and we have to have all of those elements. In terms of you know I didn't go into deeper detail when I'm talking about the sort of post-colonial food system is a post postage stamp approach. We need to return to food forests. Mark Shepherd, out of the states, does some really good work on this and he's not talking at the scale that my friends play at, which is like an acre of food forest and it's really great and you know we have hippie parties and it's a lot of fun, we're talking about hundreds of acres at a time so you know in much of of the prairies over to eastern Canada we're talking about can we reinvigorate chestnuts, can we reinvigorate old oak stands, can we be working with nut bearing trees and moving away from grains as a source of flour to nuts as a source of flour. And so you know this we have had 100 years of great agriculture because we had an expansionist model in which there was always somewhere else, some other grassland you could go, and mine the new the nutrients from that soil for 20, 30, 40, 50 years. That's gone. And so this notion we can continue to base our agriculture on grains in the way that we have up until now is something that we might have to reconsider. I also want to encourage people to look at health per acre and other metrics. As long as we have the metrics of commodification then large scale, doing grains the way we do them, if I'm measuring yield of the sellable grain, yeah that's efficient. But if I'm measuring energy, the embedded energy in that process, I'm going to have a totally different calculation. And in a study that was done out of India, 2011, we saw that organic production in that peasant agriculture style, compared to industrial farming in that peasant agricultural style, you get two and a half times more nutrition per acre when you do things in that smaller scale and so it might mean reimagining a step back from our cosmopolitan world, joining Brent in how do we have fun on a farm, because it doesn't have to suck if we don't have a capitalist model for doing it. Dan Johnson from Salt Spring Island Seeds says it'll take 17 adults one day to mulch an entire acre of lentils. You could be doing that while you're three friends who don't like to farm are making music and your two friends who hate all of it are cooking food for everybody. But because we're in a wage labor reality in which I must exchange my energy for cash with which to go buy my food we get the system we get.

**Lenore Newman** [01:35:32] I just I just thought briefly on the GMO question, it's a bit too big a question to answer. However I would throw out that it's a problem we've always had to face. It's not new to GMOs. When you plant land grazed seeds that you've saved carefully for generations, you know, you get mutants every now and then you get a mutant and sometimes that mutant is good and sometimes it's very bad and it's a very complex question. How you test to see if it's safe but I can't really answer in depth because it's a bit too much of a big topic.

**Ryan Katz-Rosene** [01:36:19] [...] Well did did did you have a quick one?

**Miscellaneous** [01:36:20] [...]

**Ryan Katz-Rosene** [01:36:27] And I really wanted to ask Paul a question about Trumpless Tuesdays but I'll keep that how can I how can I sign up?

**Miscellaneous** [01:36:35] [...]

**Marie-Josée Massicotte** [01:36:37] Paul I guess you have to stay around for the next round of questions. I just want to thank everybody and to add my two cents. This is the pleasure of being the chair of a panel so exciting panels that you don't get to ask any questions but I will just make my comment anyway because listening to many of the comments and like building on today but also especially I think Jodi what you said at the end and Kyle I was just thinking and I feel so old when I'm gonna say that because my dad used to tell me all the time you know Marie you have to slow down and the rhythm at which you are living your life is going to kill you. And basically I think I have to admit that he's right. And when I'm listening to what Kyle is doing in a kitchen it's all questioning our rhythm of life. And I have to recall that students of mine undergrad student, single mom, with a kid, that is talking to I cannot even answer the questions. She is jumping to answer other students in the classroom about nobody can afford the CSAs basket, the consumers supported agriculture, and and she's like standing up and she's like I'm a single mom and I am getting my basket of fresh local vegetable and I'm cooking for my kid and this is super important and how can you say that this is not affordable. And then she's going on and on about Netflix and your cell and how and where are your priorities. So I just want to end on this but realizing how the pressure, social pressure, cultural pressure, and food pressure, how is it that everybody's trying to sell us fast food already made and now we have all those you know ready to cook basket measured for you so that you don't waste any time and your kids can eat properly so that they will never use the cup to measure anything maybe but yeah just then another piece of thinking. Thank you so much everybody. And Ryan do you want to close it?

**Ryan Katz-Rosene** [01:38:55] Yeah. Just one quick announcement that I wanted to thank the audience in particular for coming out today. Please come tomorrow. As you can see there's still a few empty seats so bring a friend and I just wanted to note for the panelists the event this evening if you walk straight down there's sort of a walking Boulevard all the way down to Serafin Marion Ave and turn right. That's where the new venue is for the event tonight at. It's the Alex Trebek Alumni Hall. He won't be there unfortunately.

[END]