

Farm to Table 2.0: Chefs Cutting Carbon

<https://www.climateone.org/audio/farm-table-20-chefs-cutting-carbon>

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Announcer: This is Climate One, changing the conversation about energy, economy and the environment.

Farm to Table is a movement in sustainable restaurants to promote food that's local, seasonal, fresh, and nutritious.

Gwyneth Borden: Part of being sustainable is having a very limited menu where you can use things across the menu and also manage how much you need to buy on a regular basis so that you don't have food waste.

Announcer: Because chefs want us to know the carbon *food*print of our menu choices.

Dominique Crenn: I wanna do things that I believe that's right for my customers, for the climate. Whatever I choose I wanna do the right thing.

Announcer: So what's the next frontier in restaurant sustainability?

Anthony Myint: It's basically like renewable energy many years ago. There are now ways of producing food that can save the planet, how fast can we adopt them, how fast can we usher in Farm to Table 2.0.

Announcer: Chefs Cutting Carbon. Up next on Climate One.

Announcer: Could a menu at a fancy restaurant be a map for solving the climate challenge?

Welcome to Climate One - changing the conversation about energy, economy and the environment. Climate One conversations - with oil companies and environmentalists, Republicans and Democrats - are recorded before a live audience, and hosted by Greg Dalton.

I'm Devon Strolovitch. A handful of prominent chefs are using their high-end restaurants to show how innovative grazing and growing practices can cut carbon pollution -- and create unique dining experiences.

Dominique Crenn: I have three restaurants I'm not trying to make something that look like a steak-frites. It's like I have something else to offer you.

Dominique Crenn is Chef and Owner of Atelier Crenn in San Francisco, which received two coveted Michelin stars. She's won numerous other awards and was featured on the *Chef's Table* documentary series on Netflix. Crenn was on the ground floor of the farm to table movement, which emphasized food that's local, seasonal, fresh, and nutritious.

Anthony Myint: Farm to table 2.0 should incorporate all the best things of that but I think it really needs to be focused on healthy soil as the world's most practical climate solution

Anthony Myint is Executive Chef and Co-owner of The Perennial. He's also a partner in Mission

Chinese Food and Commonwealth, a Michelin starred restaurant. In working toward restaurant sustainability, Myint has made environmentalism and deliciousness his top priorities.

Gwyneth Borden: Everyone is trying to move in the direction where their food is better for us, right. And in the process of doing that they'll make the environment better as well.

Gwyneth Borden is Executive Director of the Golden Gate Restaurant Association. She previously worked in corporate affairs for IBM and also served on the staffs of Gavin Newsom and Barbara Boxer. Let's listen as all three join host Greg Dalton for a Climate One conversation about restaurants reducing their carbon *foodprint*.

Greg Dalton: Dominique Crenn, you went to a Michelin starred restaurant when you're nine years old. Tell us about your early relationship with food growing up.

Dominique Crenn: Well, obviously I was born and raised in France.

Greg Dalton: Brittany.

Dominique Crenn: Yes. I mean, outside, yes. And food is a part of the culture in France. So food is something that you take very seriously. And my father and my mother come from farmers and which kind of opened my eyes about nature and the world and obviously the planet. And I mean, it was kind of natural to go to Michelin star restaurants, you know. I don't know, now it's pretty amazing. I remember I did order I think five desserts because I was kind of taking a bite. But, yeah.

Greg Dalton: So came organically to you. You grew up around it. Gwyneth Borden, when you are growing up meat, starch and vegetable were kind of the thing for you and a lot of others.

Gwyneth Borden: No, that was the thinking. But my grandparents are farmers and my dad was one of nine sons, grew up in the Eastern shore of Maryland. So I grew up and I chose to spend time with my grandparents. My earliest memories of my grandfather until the day before he died he was on his tractor. And as a small child, if you said you're bored, you're picking strawberries. I learned early on about the importance of food and what it meant. I really very much associated with my grandmother being a great cook. I also associated with my uncle who was a hunter. We had a whole second freezer in our house with everything that my uncle ever shot. And I tell you that I ate all kinds of things that I don't like, like muskrat, what is even a muskrat, growing up. But if my uncle shot it, we ate it. So I grew up with that and my parents have a little garden in our suburban backyard. And for a very early age the association of the earth and animals and food was very dear to my heart. I mean I grew up eating grapes in the grapevine in my grandparents' backyard and wondering why I could never find those grapes in grocery stores. Well, they're actually one grapes but I didn't know that at that time. To this day, I still can't eat grapes.

Greg Dalton: Anthony Myint, how about your earliest memories in relationship to food. There's that connection with childhood and favorite foods. What were some of yours?

Anthony Myint: I grew up watching a lot of cooking shows with my grandmother and I feel like in the suburbs I wasn't really thinking about food politics and the food system at a young age, obviously. And then, you know, as I got older, recently we had a daughter started thinking more about food and climate change, and really wanting to use our platform in the food industry to make change. And as we kind of have gone down this path of learning about the potential for soil to really make a big difference and radically reverse climate change. What has struck me the most is just how optimistic it is and how vast the potential is.

Greg Dalton: And so farm to table has been well-established people know what that is. What's the

next step, Anthony Myint, what's beyond farm to table, where's the leading edge right now of that movement?

Anthony Myint: Well, farm to table 1.0 if we can call it that. It's about fresh and local and nutritious and healthy. It's kind of like know the farmer it's a little bit quaint, I would almost say, pastoral. Farm to table 2.0 should incorporate all the best things of that but I think it really needs to be focused on healthy soil as the world's most practical climate solution. The problem is beef in feedlots that are being fed antibiotics and making the manure not usable. There's millions of acres of rangeland it's not really land that suitable for growing tomatoes and soy beans and stuff. The absolute best use from a food production standpoint is beef. And if beef can restore that land just like planting trees we have a real potential to save the world through how we eat and the choices we make.

Greg Dalton: Dominique Crenn, you don't serve beef in your restaurants. You have a different view of the cattle industry.

Dominique Crenn: Well I think that it was very conscious. The beef industry in United States is, I don't know if it's beef first of all. I mean, seriously, but it's kind of destroying, you know, a lot of things. I remember when I read this article and that kind of clicked in my head when I read this article about this company that went to the Amazon and cut down the trees just to put livestock of beef there because people were in demand of hamburger meat. That really like, I was just like, are you serious, are you crazy? It's just this greediness about consumption it's killing humanity, it's killing, you know. So I made a conscious decision until we fix that problem, I'm gonna do the things -- I wanna do things that I believe that's right for earth first of all, for my customers, for the environment, for the climate whatever I choose. I wanna do the right thing. So beef will not be on my menu.

Greg Dalton: Being carbon neutral can be a challenge in small towns. Take for example Traverse City in Northern Michigan. The husband-and-wife team of Eric and Amy Kolden opened White on Rice sushi truck in 2015. A year later they opened a brick-and-mortar restaurant and they're slowly working their way towards making White on Rice carbon neutral.

Eric Kolden: We definitely like to let people know that we do the compost thing and that we're really trying to be aware of our carbon footprint. So, you know, obviously chopsticks are made of wood but then we have wood boats that we use soy sauce cups, ramekins, our soup cups.

Amy Kolden: That's a priority that we do use products that are compostable. The big thing to me that I noticed and after working in other kitchens is the food waste and the food scraps like that's huge.

Eric Kolden: And that kind of breeds into the food a little bit so now we're using organic, free range chickens. We're using tuna that's trucked in versus flown in. I do have troubles because how can you get asparagus in northern Michigan 12 months out of the year. I still have to have a vegetable roll-on every day and it happens to have asparagus in it. Like that's a horrible excuse like what else could I pick? What else could I pick? But it's been on my menu for like five years and I got people that want that more than anything. Like people will yell at my wife because I don't have asparagus that day.

Amy Kolden: I feel like we're very small but I think if everybody could just take little steps like this make more mindful choices, it can make a big impact.

Eric Kolden: I don't know what carbon neutral even looks like. I don't even know what carbon free if that's a thing you can achieve. I know that we have to use trucks to get stuff here. I just have to chip away at it. There is no real end in sight because the more you see, the more you see, you see how much more you can do and how much people don't do. There's a lot of small places just trying to exist.

Greg Dalton: That's Eric and Amy Kolden of White on Rice in Traverse City, Michigan. Gwyneth Borden, a lot of in there, you know, overwhelming so many things trying to get the right supplies the right food small business just trying to keep it going. Tell us about that. Whether this is really an elite thing for sort of high-end or well-endowed, well-capitalized restaurants. How can a little person deal with all this complexity and be green?

Gwyneth Borden: Oh I think, you know, locally, people really make a concerted effort to get to know, you know, what the water quality is, will I get my fish from there how do I use vegetables that maybe aren't sexy. You think about some of the root vegetables how do I incorporate root vegetables that may be less expensive for me to purchase in my food. How can I use the tops of my carrots or other parts of the entire vegetable not throwing it away maybe I'm using the skin. So people are being really creative and looking at the issue of food waste specifically, how can they take tonight's dinner and repurpose that for tomorrow's lunch to make sandwiches. How can they take an animal and do nose to tail use the entire animal and then make stocks and things from the bones. When people are being very creative in the ways that they can to make a big difference. I mean people here very much care about the quality of our food and the quality of food depends on our soil and our environment. I think we're lucky in the Bay Area that people have an understanding in that matter. Is it more expensive and hard? Are organics more expensive, absolutely they are. And people make incremental choices. Some people choose to buy organics in areas where it does make a big difference in taste and in terms of like where we know toxins are greatest and then on other areas they don't. But as restaurants sort to scale especially if they have more than one location they're in a better position with producers to negotiate better rates or sometimes they can go on with another restaurant to kind of get better rates. But people are, you know, really making an effort, I'm not saying it's easy sometimes again when you don't have scale to buy products, you know, compostable products whatever it might be. It can be very difficult and that's why mandates are not, you know, really preferred in the space but I understand why people feel like they're necessary.

Greg Dalton: Anthony Myint, tell us about what you try to do to create sort of a full circle economy where there's worms that create poop that's food for the fish that then -- tell us about that trying to create a full circle at a restaurant.

Anthony Myint: Sure. We started working on the restaurant, The Perennial, to kind of explore sustainability in a restaurant. What would it look like if you had, you know, kind of environmentalism right up there with deliciousness, as your top priorities. And, you know, we started with an interest in food waste conservation all these things. Pretty quickly we learned that stuff is important, but our biggest potential is to move the industry towards ways to improve actually producing food, carbon farming, regenerative agriculture and all these ways of growing food that actually reverse climate change. Waste reduction these things it's kind of like working at the margins a little bit it's not even like an elephant in the room like mismanagement of land and soil. It's the whole room. The whole room is on top of the elephant. So like if we had to think about just quickly as a thought experiment, what percent of food in the world is grown with healthy soil. I think it would be less than 5%.

Greg Dalton: About 5% of American cropland is organic just for the sense of scale, is that right?

Anthony Myint: Something like 4-5%. And then a lot of that organic land is kind of like industrial organic where they plow the land and spray it with approved chemicals. They're not necessarily farming with nature. And so I think the biggest shift that we all need to embrace is how can we farm with nature. How can we get as much money to improve as much land as possible. And so what these guys were doing in Traverse, you know, they really speak towards like the challenges of the small guy. And so the exciting thing for me is that carbon neutral represents a framework where at Mission Chinese \$.10 per diner is going to make the restaurant carbon neutral. It's not only for Atelier Crenn it's for anybody it's for Shake Shack, it's for Panera, you know. And those couple cents can be going towards farming practices that reverse climate change.

Announcer: You're listening to a Climate One conversation about the new Farm to Table – Chefs Cutting Carbon. Coming up, Greg Dalton learns more about the challenges of running a restaurant sustainably.

Dominique Crenn: I try to educate the people that are working with me in my restaurant but I'm also trying to educate my guests without throwing things in their face, but it's obvious that there are things that we do that other restaurants do not agree with.

Announcer: That's up next, when Climate One continues.

Announcer: We continue now with Climate One. Greg Dalton is talking about restaurants reducing their carbon footprint with Gwyneth Borden, Executive Director of the Golden Gate Restaurant Association. Dominique Crenn, Chef and Owner of Atelier Crenn. And Anthony Myint, Executive Chef and Co-owner of The Perennial. Here's your host, Greg Dalton.

Greg Dalton: Gwyneth Borden, a lot of restaurants around the country these days claim to be sustainable. They have sustainable this and sustainable that. What is sustainable first of all, how do you define that?

Gwyneth Borden: I mean I think that's -- what is sustainable is that local farms they're close by, is it that you have bamboo tables. I mean the word sustainable is a very broad word and it means a lot of different things to a lot of people. I think that, you know, yes, there are some people who say fresh it's sort of like natural fresh but doesn't mean organic, right. There are words that people use that may sound better. They could say the chicken is free range but that doesn't necessarily mean the chicken is organic. It's just sort of decoding what those things mean, you know, having a label of organic is a very specific designation. I think if you see a menu that has a lot of things on it you can pretty much guess that it's not a sustainable restaurant, right. I mean part of being sustainable is having a very limited menu where you can use things across the menu and also manage how much you need to buy on a regular basis so that you don't have food waste. So if you see a place with a large menu they're probably not very sustainable. And that's why I think you see more and more trends of prix fixe even places that want you to pay in advance. The advantage of that is that they can minimize food waste. They can buy exactly the amount of food that they know they need and make the exact number of dishes and that's a wonderful thing. And I know consumers aren't necessarily used to that, but I think, you know, consumers need to really embrace this notion of I don't wanna go in a restaurant that offers me everything I could possibly eat. I wanna go in a restaurant that has a very focused menu that's very fresh of what's seasonal that's the other thing, if

they're offering you something if they're offering you mangoes in December and they're in Des Moines that's clearly not sustainable, right. So it might be healthy and great to have mangoes but that's not sustainable. I mean so there's some things that are kind of obvious, seasonality, length of the menu but then there's choices that consumers have to make in terms of really supporting those places that are trying to move you in that direction.

Greg Dalton: Dominique Crenn, you're known for seafood at your restaurants. How do you feel about farmed seafood? Some people would say that that's better, that's the future, aquaculture. What's your view on, you've studied the ocean very carefully, what's your view on aquaculture?

Dominique Crenn: I think it's still in progress, in the work. I'm not sure yet. I think I'm a little bit troubled with everything that's going on with the ocean. I mean I work with some farms just for like the trout up in Sacramento and all that. But I think everything needs to be really work very well because like, you know, people can use aquaculture, people can use organic but at the end of the day it's not all organic. So I think I'm a little bit that those words kind of make me crazy, you know. I think what we need to do as individual is to do our own research and understand if the farm wanted to, you know, farm fish, we need to go there to understand what they're doing, you know. I mean I know a lot of farmers that can't have organic certification but they do everything sustainable like they make sure there is no pesticides in there. And small farms, I wanna support those people, you know. So it's really up to us to make sure we're doing the right thing but like buying, we have responsibility to buy the right thing. But it's up to me as a chef to make sure that if I go to a vendor I make sure that I know exactly the transparency of who they are. So it's just knowledge is power, you know, so get the information and then you can make your own choices. And that's what I would say.

Greg Dalton: And you spent a lot of time doing that running a restaurant but for an average consumer going to the grocery store who spends five seconds making a decision, doing all that sounds exhaustive and complicating. Who has the time and energy for all that?

Dominique Crenn: I do.

[Laughter]

Anthony Myint: I mean in a way that is to me the beauty of the label carbon neutral because it covers a lot of ground. And at the end of the day I think it's a little bit unrealistic to ask those guys in Michigan totally reinvent yourselves. It's unrealistic to ask McDonalds totally reinvent yourself. There's shareholders they can't totally reinvent themselves. They can send five cents a burger towards improving the supply chain improving healthy soil. I think if we ask, you know, if we took a poll in the room really quick. Let's say there's like two salad restaurants right next to each other, you know, a block from your work. Chicken Caesar salad, free range chicken, whatever. One place is \$12, one place is carbon neutral and it's \$12.20. And the \$.20 goes towards improving farming, which one would you choose? Maybe it doesn't even matter, you would just go to whichever because that doesn't matter. But if that second one with the \$.20 if 1% of restaurants did that, billions of dollars is going toward solving the food system.

Greg Dalton: So Gwyneth Borden, talk to us about that. You represent the industry here in San Francisco which is, you know, a bubble we know. But if Anthony is correct in his math just a few cents can really make a difference and regenerate the soil. Seems like, you know, can restaurants get on board for that?

Gwyneth Borden: No, absolutely. I mean a lot of restaurants are already on board for that some are working with their own they have their own farms they're doing beehives on top of their

businesses. People are doing a lot to lessen their carbon footprint and to really proselytize to restaurateurs in other parts of the country to get them on the same page. I mean people, if you're in the food business, you're in the body nourishment business and unhealthy soil leads to unhealthy bodies and you don't want that. I mean even the large, we mentioned McDonalds, I mean they are also moving into direction of bringing back cooking to food and like mangoes in smoothies. I mean I think everyone is trying to move in the direction where their food is better for us, right. And in the process of doing that they'll make the environment better as well. So it's an interesting inflection point where we are right now where there is this coinciding movement of, you know, away from pharmaceuticals and more of a desire of going back to looking at food as a way to deal with pain and other things and the ailments in our body. And as we move in that direction, then I think everyone starts to see the value of the environment and healthy food can provide for that.

Greg Dalton: And Americans are eating less meat more poultry. Gwyneth Borden, one report is that 40% of millennials are moving or adopting a plant-based diet.

Gwyneth Borden: I found that I mean we've had interns everything single year and every year we've had interns that have either been pescetarian, vegan or vegetarian it's definitely a generational shift. And what's been really fascinating is, you know, more and more restaurants while they're not labeling themselves vegan are minimizing kind of the meat offerings kind of putting them on the side and really focusing on the vegetables forward. Using the language vegan is tricky because it does turn off people who are not vegan who think I'm gonna have vegan cuisine tonight for dinner rather than thinking that it's a restaurant they could eat any time and enjoy their meal. But you're seeing a trend a subtle trend of people moving in that direction where meat and plant-based things are much more at the forefront but not necessarily being super obvious about it. And that's happening at all price points in the marketplace. You think about the Impossible Burger is another great example and that was happening at Shake Shack and then also fine dining restaurants. People really --

Greg Dalton: And White Castle.

Gwyneth Borden: Yeah. So, it's amazing that movement.

Greg Dalton: We're talking about restaurants and sustainability with Gwyneth Borden, representative of the restaurant industry in San Francisco. Dominique Crenn a Michelin starred chef and restaurant owner and Anthony Myint, executive chef and restaurant owner. I'm Greg Dalton. We're gonna go to our lightning round and ask our guests some quick questions starting with true or false. Gwyneth Borden, Chinese restaurants are slower to adopt environmentally friendly practices than other restaurants?

Gwyneth Borden: It's always all the same.

[Laughter]

Greg Dalton: Dominique you want to answer that?

Dominique Crenn: Truth.

Greg Dalton: True. Anthony Myint, organic crops require application of more pesticides and insecticide than traditional crops. True or false?

Anthony Myint: I don't know that.

Greg Dalton: Dominique Crenn, cooking is activism?

Dominique Crenn: Right. Truth.

Greg Dalton: Dominique Crenn, some people think you should shut up and cook?

Dominique Crenn: That's right.

[Laughter]

Greg Dalton: That's what you plan to do?

Dominique Crenn: Oh no, I'm never gonna shut up.

[Laughter]

And I still cook. So that's okay.

Greg Dalton: This is association, I'll mention a noun something and the first thing that popped to your mind unfiltered. Anthony Myint, GMOs.

Anthony Myint: I'm in favor of natural breeding.

Dominique Crenn: That was a long word.

[Laughter]

Greg Dalton: First thing that comes to your mind Dominique Crenn. Foie gras.

[Laughter]

Dominique Crenn: No comment.

[Laughter]

Greg Dalton: Gwyneth Borden. Kale.

Gwyneth Borden: That is great for you.

Greg Dalton: Gwyneth Borden. Big Food.

Gwyneth Borden: Big Food. Big Food can help move the country forward. They have to take on their responsibility.

Greg Dalton: Anthony Myint. Your favorite cheese.

Anthony Myint: I really like Brillat Savarin.

Dominique Crenn: That's French.

Greg Dalton: Dominique Crenn. Your favorite vegetable.

Dominique Crenn: Tomato. I mean tomato is a --

Gwyneth Borden: It's a fruit actually.

Dominique Crenn: It's a fruit and vegetable. Yeah, tomato. It's umami it's amazing, sexy.

[Laughter]

Greg Dalton: Gwyneth Borden. A food you would be happy to never eat again.

Gwyneth Borden: It's really funny because I pretty much like most things. Seafood maybe I don't like. I'm having a hard time with that.

Greg Dalton: Dominique, something you don't wanna eat again.

Dominique Crenn: Oh, wilted lettuce.

Greg Dalton: Last question. Dominique Crenn. The best food to help a hangover.

Dominique Crenn: I don't know. I never have a hangover.

[Laughter]

Greg Dalton: Alright. Let's give them a round for getting through that lightning round.

[Applause]

Gwyneth Borden: I think we failed.

Greg Dalton: Speaking of hangovers, Dominique Crenn, tell us about the wine industry growing around the world. And what is the environmental impact of the wine industry what are the issues there?

Dominique Crenn: Well, I think the issues have been herbicide and pesticide I think. I've been serving a lot, I mean when we open Petit Crenn everything is the wine list is biodynamic and organic. The same thing we do at Atelier and Bar Crenn so.

Greg Dalton: What is biodynamic? What is that mean?

Dominique Crenn: It's kind of the science of the moon. It's whatever the environment that you are is helping you to kind of grow whatever it needs to be grown.

Greg Dalton: The right thing for that place.

Dominique Crenn: Yeah the right thing for that place. Because I think wine is a big problem also I mean, you growing all those grapes and pesticides in the soil, I mean it's a big problem too. And we don't talk about that often. We just talk about the food but we need to talk about the winemaking also which is also something very important right now.

Greg Dalton: Anthony Myint your thoughts on wine and its impact looking to change the food and system wines. Is this significant part of that is that on your radar or not?

Anthony Myint: Oh absolutely. I mean it's many acres in San Francisco the city collects something like 700 tons of compostables a day. Quite a lot of that is distributed on local vineyards and what an amazing program if other cities could develop that. Flipside is, you know, imagine in France, there's a wine cellar, you know, in a hillside or underground or something like a wine cave that has no carbon footprint to cool the wine or like store it. Here in California maybe there's an air-conditioned warehouse storing the wine. And so it's a little bit tricky to focus too much on things like local. I think it's way more important to focus on kind of the growing practices and how the wine in the soil are basically working together in this kind of climate lands.

Greg Dalton: Gwyneth Borden, lot of innovation happening people concerned about the growing appetite for protein. There's startups and venture capital going into, you know, fake meat or lab meat. They have clean meat is I think what they call it. Is that something that's on your radar this idea of tuna without a fish, cellular growing basically steaks in a laboratory. What do you think about that?

Gwyneth Borden: I think restaurants aren't quite there in that space. The Impossible Burger would be the closest thing I would say in terms of people coming up with a product that acts a lot like beef but isn't beef for their menus. But I think that, you know, people who are in the restaurant business are really into like the hospitality and the service and kind of the science have interest them, but no one is running out to get this latest, latest and greatest fake meat product on their tables. But they are looking at ways to make dishes with produce that might resemble meat, you know, the watermelon that looks like a ham or doing dishes like that. So you see more of that are people taking wordplay with meat dishes and using them for vegetable dishes. So you see that but you don't see it quite the sort of scientific experiment beyond like sous vide and other kind of cooking methods. I think, you know, it'll be interesting to see where that all goes --

Greg Dalton: Down the road, it's not quite there yet.

Gwyneth Borden: -- down the road. You know I just think it's just not, yeah.

Greg Dalton: Dominique Crenn, your thoughts obviously you're a naturalist. Your thoughts about it?

Dominique Crenn: Well I mean it's interesting like I'm just thinking right now is why do we have to mimic meat or tuna. Why we don't try to find something that is maybe something else, you know. It just make you think about how the culture of the human culture is it's like, oh my god if I don't have my burger I'm gonna like die. It's like why we don't try to find something else. I don't wanna say anything about Impossible Meat but I'm not sold on this. You know, he use corn and he use soy and he use wheat. It's not --

Greg Dalton: And GMOs.

Dominique Crenn: -- and GMOs. I mean it's just like, you know, we have to be very careful when we want to do something. They want to do something like that they need to go, as I would say, you know, talk the talk and walk the walk. But why we don't try to like, hey, I mean -- I have three restaurants I'm not trying to make something that look like a steak-frites. it's like have something else to offer you. Let's be creative here and not just like, oh, this is the oldest staple of the American, you know, society and I'm gonna make tuna melt which is not tuna but it's gonna melt. I mean whatever.

[Laughter]

I mean why we don't try to like be open to something maybe more nutritious and delicious, why not, you know?

Greg Dalton: Anthony Myint, the advocates of this would say 9 billion people rising middle classes in China and India, craving for protein. If that protein is satisfied, the oceans will be decimated there's not enough land that coming up with a laboratory solution will satisfy people and maybe save the planet. Do you buy it?

Anthony Myint: No. Absolutely not. There's definitely a place for that kind of product as an overall strategy to reduce the consumption of beef waste on feedlots. Let's just be clear for sure

that's a good replacement. And in a lot of ways that's kind of like a band aid strategy that's not actually solving the bigger problem. So the bigger problem is those products are not necessarily reversing climate change. If you take the acreage that those things are produced on and you already used that acreage to produce food regeneratively in a way that improves the soil, you would do better than the lab grown meat. And then in terms of the 9 billion I mean I think I heard a stat the other day that it's something like 70% of the world's food is grown on 19% of the land on smallholder farms like in Africa, Asia wherever smallholder farms. And so that by far is like the solution. The mistake that people think about is like oh what am I gonna do without the, you know, the nitrogen fertilizer and all these things. Those things are actually kind of just a mistake in history where we started on a path of industrial agriculture to keep kind of bomb factories on standby producing nitrogen. And it's not actually better for growing food in the long run. It's good in the short run. It's like, you know, taking drugs or taking steroids but it's not better for the soil definitely not better for the planet.

Greg Dalton: Gwyneth Borden.

Gwyneth Borden: I just want to add to that and just say that I think in the future you're gonna see things in the menu that normally are on the menu, right, crickets for example, you know, kelp.

There's lots of things that are regenerative you're starting to see new season -- fish and other -- fish that you had never really heard of before on the menu. I think people are just gonna change the equation they're not gonna start making products in the laboratory to serve in restaurants but they're gonna look for things that maybe we used to eat or that naturally regenerates and incorporate in our diets. So the menus today that have burgers on them could be, you know, some sort of cricket or kelp or some other dish that we haven't yet conceived of. I really think that's gonna be the change it's not so much that we're gonna see things made in laboratories appearing on restaurant menus. There'll be a fun restaurant here or there that will do that as a gimmick, but that's not the long-term strategy.

Announcer: You're listening to a conversation about carbon-neutral cooking and dining. This is Climate One. Coming up, Greg Dalton learns more about how restaurants can be platforms for changing the food system.

Anthony Myint: We're at a moment in food where it's basically like renewable energy many years ago. There are now ways of producing food that can save the planet, how fast can we adopt them.

Announcer: That's up next, when Climate One continues.

Announcer: You're listening to Climate One. Greg Dalton is talking about the new farm to table with Gwyneth Borden, Executive Director, the Golden Gate Restaurant Association. Dominique Crenn, Chef and Owner of Atelier Crenn. And Anthony Myint, Executive Chef and Co-owner of The Perennial. Here's Greg.

Greg Dalton: Anthony, you named your restaurant The Perennial. So tell us what a perennial is and how you think it could be a big change for the food system.

Anthony Myint: Sure. Honestly we named it The Perennial after visiting a man named John Wick who I think might be in the audience tonight. And so thank you for the inspiration John. But the

name is a reference to kind of like a new kind of sustainability that is prioritizing growing through natural systems. And so like a lot of the ecosystems like in the U.S. or whatever used to be perennial polycultures. And so without like perennial grasses and these things kind of anchoring these ecosystems they kind of just erode and, you know, I heard a stat somewhere that scared the hell out of me. In the last 50 years we have abandoned as much farmland as all the farmland. Okay so why is that? Because we're not farming the right way. And so we're really excited because we're at a moment in food where it's basically like renewable energy many years ago. There are now ways of producing food that can save the planet, how fast can we adopt them. How fast can we change the acreage. I don't blame anybody for having like any ideas that they had before. This is brand-new. We bake bread with a perennial grain called Kernza. It's not available to the public yet.

Greg Dalton: Why?

Anthony Myint: Because they're just now -- so they spent 15 years doing natural breeding The Land Institute in Kansas with the University of Minnesota and, you know, natural breeding takes time.

Greg Dalton: Patagonia is making beer.

Anthony Myint: Patagonia is making beer. So you can get Long Root Ale made with Kernza. K-E-R-N-Z-A. And so it's the first kind of perennial grain, 10, 20, 50 years from now there's gonna be perennial wheat and perennial rice but we got to start now. And so it's sort of like introducing this term and kind of trying to usher in farm to table 2.0.

Greg Dalton: And is that also, tell us about no till, the importance of till, no till in terms of talking about soil. How damaging is tillage and how could that be change?

Anthony Myint: When we think about like the rainforest, oh man that's horrible to chop down the rainforest. The soil is the rainforest. And like microbiological form there's all this life, you know, there's roots on fungus. I heard an anecdote about in a forest there's a tree stump and nothing, no leaves, nothing. Scientists would think that would be dead. They scrape it. It's actually alive. How's that possible? That's impossible. It's because all the other trees are keeping that tree stump alive to preserve the network. There's so much going on underground we don't know about it. It's like way over our heads and the organic matter in the soil is what makes food nutritious, delicious, and holds carbon in the soil. And so, you know, basically if you're gonna plow that up, you're killing them. If you plow it up every year you're systematically losing all that organic matter and that's why we've lost all the farmland over 50 years and that's why we have a golden opportunity right now to reverse that trend.

Greg Dalton: Dominique Crenn, you were named the world's best female chef in 2016 and had some very strong thoughts about that. Tell us about the glass ceiling and, you know, what you feel about that award.

Dominique Crenn: So first of all I dislike the word female chef. I think a chef is a chef. I was talking to someone the other day and oh this journalist I don't think she understood why I will be so strongly against, you know, that award. And I'm like, well, when you're listening to music do you listen to music because it's a woman or do you listen to music because you like the music? So when you eat food, I'm cooking food for you. Do you like it because it's a man cooking it or it's a woman that's cooking it? And they don't have any answers. It's not about gender and I understand that obviously the woman power needs to raise to the top but like to judge someone because of their gender. I don't know it's really annoying.

Greg Dalton: Gwyneth Borden.

Gwyneth Borden: I think I mean the bigger issue is that people when they don't wanna be inclusive they're like, well why don't we create a woman award? But why not look at more inclusive restaurants that women happened to also be chefs of, they you wouldn't have to. It's sort of like we don't wanna be more inclusive so we'll create a special Asian chef, African-American chef whatever award because for some reason we can't possibly conceive that all these people are the same and can compete at the same level. So I do find it offensive because it's as if like, well you can't compete at the level at the game that we decided so we're just gonna give you something else to make you feel better about yourself. You don't really know who's cooking at the restaurant that you go to. I mean maybe the executive chef is a man, but maybe the actual chef de cuisine is a woman, right. And you like that restaurant you don't really know if it's a man or woman but, you know, the person whose names on the door sometimes gets the primary recognition. So I mean it's just kind of silly really.

Dominique Crenn: What I wanna say is, you know, diversity bring dialogue new ideas and it bring, I don't know, it's our hope for evolution and we have to be enthusiastic of everything I think this is very important, you know. You have to welcome everything, everyone. This is very important. Same thing in the kitchen, you know, you have to welcome everyone in the kitchen it's not just a white boys club, sorry to say white boys club, because it's true for a long time. It should not be a club, it's a place where we're cooking because we want to bring people together. We want to create memories, we want to create experience, we want to be a part of what is good for everyone and humanity and all that you know. It's just like it doesn't matter if it's man or a woman. First of all, women cook better than men, But--

[Laughter]

Who is cooking at home? Your grandmother or your mother, right? No, but it's like can we stop about this. It's just like this narrative, it's just a bit crazy.

Greg Dalton: Do you ever get overwhelmed or despair about the faith of the world, you know a lot Dominique Crenn, about the oceans where the earth, the math is dark the times are dire. Do you ever get despondent about that?

Dominique Crenn: You know I'm a very positive nature. I don't get depressed very easily. As a matter of fact it make me want to do more on what's going on right now.

Greg Dalton: That motivates you.

Dominique Crenn: I was totally motivated because I know that I do have a responsibility for the future generation. It's so important, you know, it's exciting, it's really exciting. And you know what exciting is when you talk to youngster and when they are willing to listen to it also. It's very exciting to see that they also want to change it, you know. And we just have that responsibility to do it. I mean everything that, you know, we're doing, everything that Anthony is doing, you know, it's a process. Everything is a process, you know, nothing is gonna happen overnight but if you just do a little bit every day, I think we can change the course of things. When you go to a restaurant, and you make sure you drink water or whatever, just make sure you ask them to not give you any plastic straw. One thing. It's one thing you can do. No, it's true one thing you can do --

Greg Dalton: The straw thing has taken off very quickly.

Dominique Crenn: Yeah, I mean you go buy your grocery bring your own bag, you know, don't

take the plastic home. Like just little things like that will be, doesn't cost anything but the impact of it is amazing.

Greg Dalton: Shapes your culture and also defines who you are. Even if it doesn't -- it defines who you are. We're gonna go to our audience questions. Welcome.

Female Participant: Good evening. Thank you all for being here this has been a wonderful evening. I am Patricia Port, recently retired from the government. My question is could you each say a few words about your relationships with the food banks?

Greg Dalton: Food banks, who'd like to -- Gwyneth Borden.

Gwyneth Borden: Yeah we partner with San Francisco Marin Food Bank pretty frequently, you know, obviously, you know, we're the restaurant association, you know, people are coming into restaurants. But we, our responsibility is just not just to people who are dining in our restaurants but making sure other people got to eat. And obviously it's a big food gap in our country. We also work with CUESA who's just down the street that does the farmers market most people don't know what CUESA does is that they're actually educating urban kids about agriculture and where their food comes from. And so while we take for granted that we are, you know, buying tomatoes or whatever at the farmers market, they're helping kids who might never have actually seen, you know, the Golden Gate Bridge. It might not realize that it happens that way but to know about foods. So we work closely with the food bank and CUESA and other organizations around hunger issues especially.

Greg Dalton: Let's go to our next question. Welcome.

Male Participant: Thanks. Hi, Jacob Conley, live in San Francisco in Richmond. My question is a couple months ago earlier this year the journal Nature kind of came out and verified what we thought to be true previously, which is that animal agriculture is the leading cause of environmental degradation greenhouse gas emissions. When you look at all of the contributors that's the number one cause. So from your guys perspective why isn't the immediate response to that in the food industry, oh let's go plant-based. If animals from dairy to meat are the leading cause of the degradation and the impact the negative impact why aren't we just saying let's go to plants and then figure out the animals later.

Anthony Myint: I mean I think that would basically be like looking at cars and saying cars are a big problem why doesn't everybody bike. There's a place for cars, you know, that's the reality. People are gonna keep driving let's instead find solutions like creating an electric car. In the case of beef as Dominique was saying the problem is the management and the production of beef. Cows themselves are not the problem. The land that used to be in the West was grazed by bison there's more pounds or there are fewer pounds of cows in America today than there used to be a bison. Those bison were crucial to keeping those ecosystems healthy keeping that soil healthy. It's a dry environment and you can't necessarily grow soybeans and tomatoes and these things. Cows produce 50 to 70 pounds of manure a day. So this is photosynthetic fertilizer that is keeping the land healthy. The cows aren't on the land right now, if we can get them back on the land cows and livestock and animals will not be the leading cause of climate change as you're saying in the article.

Greg Dalton: So it's about factory farms. Let's go to our next question.

Male Participant: Hi, my name is Britney Sy. I'm a senior building consultant for architects and engineers. So that was a great segue, Anthony thank you for that. I am curious, so you are saying there are roads, so, you know, cars are gonna drive on it. If we have gas ones maybe we provide

them electric ones and then people will use those. So I'm very interested in decarbonization and electrifying our restaurants potentially, restaurants, create big trends people will watch them. And so it would be really interesting to see restaurants take like their gas stoves and their equipment that use gas and use electricity instead. Especially in the Bay Area so much of our utilities or so much of our energy is provide by Hetch Hetchy which is a hundred percent clean energy. And so that would be a great message for folks to switch over to electricity. I'd like to know from you all what are your guys' views on that trend if that's a possibility and maybe what do we want to tell utilities or manufacturers to push us forward?

Greg Dalton: Thank you. So electrifying restaurants.

Anthony Myint: I can take that.

Greg Dalton: Anthony Myint.

Anthony Myint: When we were working on The Perennial we looked pretty closely at carbon footprint stuff. So part of the issue in the Bay Area is the PG&E was not offering a hundred percent renewable options at that time. Plus gas equipment is substantially cheaper than electric equipment. And so kind of at the conversion rate of the carbon footprint of the gas and the lack of efficiency we ended up choosing some gas equipment. I think as renewable energy becomes available as equipment becomes, you know, more popular in the U.S. there should be a trend towards more electric equipment and restaurants. If anybody is running restaurants and doesn't know the stuff there's a local arm of PG&E called the Food Service Technology Center, super amazing guys, they provide, and gals, I think, that they provide free, I've only met guys there, but they provide free consulting for anybody in the Bay Area. And so it's kind of like the James Bond lab, there's all these guys drinking espresso and like testing all the equipment. Electric equipment is more efficient. And so if you are in a place where but it sort of comes down to volume. So if you're like frying, you know, 50 pounds of French fries an hour, get the electric deep fryer even though it cost \$7000. If you're frying like a couple things once in a while and the other gas prior \$700, you know, maybe that's okay it's like tough trade-off.

Greg Dalton: Next question. Welcome to Climate One.

Female Participant: Hi, I'm Erica Kuduba I'm an environmental engineer and I work closely with some commercial kitchens. I find that in commercial kitchens, maybe not at your level but and some of the more common ones that there's a lot of staff turnover. And I appreciate all of the sustainability metrics that you guys were kind of talking about before any of the food comes even into the kitchen. But I was wondering if you have any encouraging remarks for the kitchen staff and maybe some of the lower restaurants that have high staff turnover and lower employee incentives to maybe be practicing the sustainability techniques. Not from the chef level but actually from like the employees that are working there if you have any suggestions to engage them.

Greg Dalton: Dominique Crenn.

Dominique Crenn: Well, thank you for the question. I think for anything it doesn't, not just in the restaurant when you become, you start your own business. I think the first things you need to look at is the people that are working with you and you have to be able to invest into them. I think this is number one, you know. If you treat your employee well, if you give them the tool to success and also give them opportunity, you're gonna see that they will stay with you. I mean obviously the industry do so much turnover it's crazy. So I mean when I open, this is the third restaurant and I can tell you for the last three years it's been very consistent of us keeping people in because we invest in people. We take care of them obviously we treat them with a lot of respect. We definitely treat them

properly we want to make sure they have a balanced life, you know, creating also retirement 401(k) plan. Somebody, you know, can start as a commis in my restaurant three years later become one of the executive assistant. Why? Because we give them the tool and maybe we send them somewhere. We also implementing this program that we will pay each of the, we will pay time, a time away to give you time to charity. You go and do volunteer work somewhere, we will pay for that. So you just have to take care of them. And when you take care of the people that are working not for you but with you, it just create this incredible team and then the business I think becomes kind of successful.

Announcer: Greg Dalton has been talking about carbon-neutral restaurants with Dominique Crenn, Chef and Owner of Atelier Crenn and two other San Francisco restaurants. Anthony Myint, Executive Chef and Co-owner of The Perennial, as well as a partner in the restaurants Mission Chinese Food and Commonwealth. And Gwyneth Borden, Executive Director of the Golden Gate Restaurant Association.

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Greg Dalton: Climate One is a special project of The Commonwealth Club of California. Kelli Pennington directs our audience engagement. Tyler Reed is the producer. The audio engineers are Mark Kirschner and Justin Norton. Anny Celsi and Devon Strolovitch edit the show. The Commonwealth Club CEO is Dr. Gloria Duffy.

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