

The Ecopolitics Podcast Episode 3.2: Can We Eat Our Way to Sustainability? (Transcript).
<https://www.ecopoliticspodcast.ca/episode-3-2-can-we-eat-our-way-to-sustainability-a-deep-dive-into-sustainable-protein/>

Published November 2021

Hosts: Ryan Katz-Rosene and Peter Andrée

Guests: Tara Garnett and Paige Stanley.

Summary: To consume or not consume meat? That is the question plaguing many an environmentally conscious person as we grapple with our personal responsibilities in the face of a warming climate. However, as our guests Paige Stanley, PhD Candidate at the University of California, Berkeley and Tara Garnett, Director of TABLE, a platform for informed discussion about food systems at University of Oxford point out, the answer isn't so black and white. In today's episode, we dive into the nuances of protein production, exploring both the macro and micro ways that farmers, scientists, and everyday people are tackling sustainable food systems. Ultimately, we strive to answer the question: Can we truly eat our way to sustainability?

[00:00:00] **Tara Garnett:** When it comes to whether farmed animals have a place in a sustainable food system and in our diet, I think the answer is yes. But, I think we have to think about where livestock production can do more than just feed us to what could be obtained by taking a sort of environment first perspective and in practice, that will mean a very, very, substantial reduction on current consumption patterns.

[00:00:36] **Peter Andrée:** Hello, welcome to the Ecopolitics Podcast, mini season three 'Everyday Ecopolitics.' This is a podcast for university students tackling some of the key questions and challenges in the field of environmental politics today. I'm Peter Andrée from Carleton University and with me is my co-host, Dr. Ryan Katz-Rosene from the University of Ottawa.

[00:00:59] **Peter Andrée:** Can we eat our way to sustainability? That's the question at the heart of the interviews we did for this episode. Those interviews looked at this question from a variety of angles, including for example, the pros and cons of cultured meat, which are animal tissues grown in labs.

[00:01:16] **Peter Andrée:** But to keep things focused today, this episode looks specifically at meat from livestock animals. Because meat is said to have such a significant environmental footprint, the question we're really honing in on in this episode is whether consumers can solve our environmental problems, including climate change, by choosing not to eat meat.

[00:01:37] **Peter Andrée:** This is a topic dear to both of us. Both Ryan and I study questions related to the environmental impact of livestock production and do research on sustainable food systems. Ryan, you have a very personal connection to this theme don't you?

[00:01:52] **Ryan Katz-Rosene:** Yeah, that's right, Peter. My wife is a farmer by occupation and so one of the main things that our farm produces is organic pasture raised meats. That link to food production, and animal agriculture in particular, has really filtered into my own research and it's really taken over my thinking of sustainable food systems. I've led a project on the future of sustainable protein, I've looked at the climatic impact of the livestock sector,

The Ecopolitics Podcast Episode 3.2: Can We Eat Our Way to Sustainability? (Transcript).
<https://www.ecopoliticspodcast.ca/episode-3-2-can-we-eat-our-way-to-sustainability-a-deep-dive-into-sustainable-protein/>

and I've co-edited a book on this very question of whether meat can be a part of a sustainable global diet. So, yeah, It's really taken over my thinking. It's one of the things that I'm constantly thinking about, and it's one of the reasons why I wanted to do an episode on this topic.

[00:02:39] **Ryan Katz-Rosene**: I think it's also just an important point that I wanted to note at the beginning of this episode, and to be upfront about my own connections to food production and protein production in particular

[00:02:51] **Peter Andr e**: Well, these are really important questions for me as well, Ryan. I've been teaching courses in food politics and food system sustainability for a couple of decades now, as well as courses in environmental politics. I am really interested in this relationship between making food systems more sustainable and addressing some of the big environmental issues that we're facing, like biodiversity loss and climate change. Certainly from students in all of my classes, I'm hearing lots these days about, you know, often people thinking about their own consumption patterns and their meat consumption in particular.

[00:03:31] **Peter Andr e**: I hear about students who are becoming vegans or focused on plant based proteins as a way to reduce their own environmental impact. I know for a lot of students these are really big questions that they're trying to wrap their heads around. So Ryan, you went out and interviewed two experts in this area. Who did you talk to?

[00:03:52] **Ryan Katz-Rosene**: First, I went out and interviewed an increasingly well-known name in the world of soil sciences and the study of regenerative agriculture. That's a big buzzword these days, and that's a doctoral student at UC Berkeley named Paige Stanley.

[00:04:09] **Paige Stanley**: My name's Paige Stanley. I'm a finishing PhD candidate at UC Berkeley in the Environmental Science Policy and Management department. I am originally from Michigan, but grew up in rural Georgia and first got into the field of animal ag in undergrad. I went to a small liberal arts school and wound up taking this animal ethics class that really kick-started my career as I think of it now.

[00:04:38] **Paige Stanley**: I did my master's research on lifecycle analysis of beef production systems. So, thinking about the different ways that we can produce beef and its impact on beef greenhouse gas emissions, their net emissions, and also thinking about how soil carbon plays a role in helping to mitigate beef's greenhouse gas footprint.

[00:05:03] **Ryan Katz-Rosene**: I also spoke to a very well-known researcher of sustainable food systems at Oxford university named Tara Garnett.

[00:05:11] **Tara Garnett**: My name's Tara Garnett and I'm a researcher at the university of Oxford. I run a project there called *Table*, which has evolved out of previous work I did with

The Ecopolitics Podcast Episode 3.2: Can We Eat Our Way to Sustainability? (Transcript).
<https://www.ecopoliticspodcast.ca/episode-3-2-can-we-eat-our-way-to-sustainability-a-deep-dive-into-sustainable-protein/>

the *Food Climate Research Network*. Essentially, what *Table* is about is exploring what people talk about when they talk about food.

[00:05:33] **Tara Garnett:** In other words, what are the big debates that people are having about the problems associated with the food system and argued solutions, and why do people disagree? So, how do they use and select evidence to diagnose the problems and offer solutions, and what are the values that inform their selection and use of this evidence? So we're new, we're just starting up, but that's what *Table* is about.

[00:06:05] **Peter André:** What a great combination of guests, Ryan. One's a researcher doing this high level analysis of debates around food sustainability and food policy, and the other's literally getting her hands dirty by doing soil sampling in regenerative farming systems.

[00:06:21] **Ryan Katz-Rosene:** Yeah, that's right. Paige's day to day really does seem to involve hands-on work, figuring out the relationship between grazing animals in particular, ruminant animals, and the environment. She really spends a lot of time with farmers and ranchers, doing soil carbon sampling, trying to understand what they do and whether their practices can mitigate the environmental footprint of meat production.

[00:06:47] **Paige Stanley:** I spent the last three or four years building a network of ranchers using an array of grazing management practices here in California, that has been, kind of hypothesized, to have an impact on soil carbon. They don't really call themselves regenerative ranchers, but that's probably what I would call them or what people would recognize them by.

[00:07:09] **Paige Stanley:** Essentially, I go out and I take soil samples across these ranches and I do a bunch of experiments with them in the lab to test whether or not their grazing management practices have been sequestering carbon; where that carbon is going in the soil; what kind of persistence that carbon has in the soil, so thinking about short-term versus long-term climate change mitigation; what impacts that carbon has on water infiltration and other soil water retention properties. In the end, I hope to have a really kind of social ecological outlook on the way that these grazers are approaching regenerative ranching on their home ranches.

[00:07:51] **Peter André:** So, Paige really looks at these questions at the level of soil and grazing management practices. Tara, meanwhile, has participated in these high level global food systems analyses through her work with the *Eat Lancet Commission*. Can you tell us more about that, Ryan?

[00:08:08] **Ryan Katz-Rosene:** I think many of our listeners will be familiar with the *Eat Lancet Commission*. This was a group, an international body of scientists that came up with what it called the planetary health diet in 2019, and Dr. Garnett was one of the

The Ecopolitics Podcast Episode 3.2: Can We Eat Our Way to Sustainability? (Transcript).

<https://www.ecopoliticspodcast.ca/episode-3-2-can-we-eat-our-way-to-sustainability-a-deep-dive-into-sustainable-protein/>

commissioners, who was involved in this really comprehensive project, looking at what constitutes a healthy and sustainable global diet.

[00:08:33] **Tara Garnett:** Essentially, it brought a bunch of academics together to consider two questions. When it comes to food, what is the safe operating space for food production such that it doesn't encroach unduly on planetary boundaries? One can have all sorts of discussions there about firstly, how you decide how much food takes up the planetary pie. Secondly, we have a whole discussion about what boundaries are and whether they are legitimate ways of looking at things. So, that was the first task. Then the second task was to look at what a healthy diet looks like, and then the third thing was, can you combine the two? And the answer that the report came to was just about.

[00:09:29] **Peter André:** That's super interesting, Ryan. I look forward to hearing more of Tara's thoughts and her reflections on the *Eat Lancet Report* and its conclusions and recommendations. But to begin, let's delve into the specific question of ruminant meat production, and whether it is or could be sustainable.

[00:09:51] **Peter André:** So one of the issues here, as I understand it, has to do with how grazing animals like cows are raised and the environmental impact of those practices. You spoke to both guests about the idea of regenerative grazing. This is the philosophy of rotating ruminant livestock in grass-based pasture in a way that mimics the way herds of herbivores move from one piece of a grassland to another, with the idea that this might be a more eco-friendly way to raise animals than feeding cows grains, or letting them range widely on pasture. What did our guests have to say about that?

[00:10:29] **Ryan Katz-Rosene:** Well, quite a lot, but first I think we should scope out the difference between regenerative grazing and what we might call conventional grazing a little better. This is really Paige's wheelhouse, so I'll play a clip where she explains the difference.

[00:10:43] **Paige Stanley:** So kind of business as usual grazing, at least in the United States and probably also globally, would be a kind of low to moderate, continuous set stocking. So that means ranchers have some plot of land or ranch boundary, and they will graze their livestock continuously with almost no, or maybe low rotation. So, they'll leave the animals out to have access to the entirety of the landscape, either year round, or in the case of California they might be rotating between two or three or maybe four pastures depending on the season. What that does is it causes a lot of, or it can cause, a lot of overgrazing or patchy overgrazing.

[00:11:31] **Paige Stanley:** Cattle will return to the same kind of yummy sources of vegetation in that paddock and they might leave other kinds of vegetation out there that they think are less yummy. So you'll get spots of bare ground and then spots of vegetation that are under grazed. That can cause a whole host of soil disaster scenarios, including soil erosion, it can cause "what do you plant encroachment", or invasive species, you can oxidize a lot of your soil carbon by having a lot of bare ground, et cetera, et cetera.

The Ecopolitics Podcast Episode 3.2: Can We Eat Our Way to Sustainability? (Transcript).

<https://www.ecopoliticspodcast.ca/episode-3-2-can-we-eat-our-way-to-sustainability-a-deep-dive-into-sustainable-protein/>

[00:12:08] **Ryan Katz-Rosene:** So, that's conventional grazing and then she juxtaposed that with regenerative grazing.

[00:12:13] **Paige Stanley:** The set of principles that I've come to understand as "regenerative or adapted multi-paddock grazing" is ranchers will, instead of letting their animals have access to the entire ranch at any given time, they'll group them into herds of high stock densities, so a lot of them kind of grouped tightly together. They'll rotate them across smaller paddocks that they often separate by mobile electric fence, and they'll do that relatively quickly. The principles are to rotate quickly and then each paddock will get a decent amount of rest before being re-grazed.

[00:12:56] **Paige Stanley:** That does a couple of things. It prevents that kind of patchy overgrazing dynamic that can result in bare soil. It causes more uniform grazing at the more micro scale, so it's getting those animals to eat things that maybe they wouldn't normally eat on their first go round and then allowing the paddock to have lots of rest before being re-grazed.

[00:13:20] **Paige Stanley:** As long as you're leaving enough photosynthetic leaf area, meaning as long as you're not overgrazing it each time the idea is that those plants stay in a more vegetative phase rather than moving onto their reproductive phase, and they maintain kind of a greener life cycle for longer. So, it extends your grazing season and it also keeps your roots alive in your soil for a longer time.

[00:13:46] **Peter Andrée:** So as maybe a non-scientist listening to this, the implication I'm getting from some of what she's saying is that maybe this has net benefit on bringing carbon out of the air and into the soil. Is that a leap we can make here?

[00:14:02] **Ryan Katz-Rosene:** There's a leap we might be able to make Peter. It's complicated though. This is how Paige explained it.

[00:14:08] **Paige Stanley:** We think all of those dynamics, in addition to the kind of more concentrated manure deposition at any given time, we think all of those are having an impact on soil carbon sequestration. Meaning rather than losing carbon or just maintaining an equilibrium state of carbon, what we're seeing in studies over the past 10 years is that we're gaining soil carbon on these ranches that are using these principles.

[00:14:35] **Peter Andrée:** So then just to be clear, it does sound like she's saying that they're finding that farms and ranches using this type of regenerative grazing management are seeing carbon being sequestered in soil. I suppose if that can be maintained, that's where this notion of regenerative grazing comes from as a potential tool for climate change mitigation. Is that right?

[00:14:59] **Ryan Katz-Rosene:** I think that's right. That's why we've heard a lot about this idea of regenerative agriculture, and in particular regenerative grazing. It's taken off in

The Ecopolitics Podcast Episode 3.2: Can We Eat Our Way to Sustainability? (Transcript).
<https://www.ecopoliticspodcast.ca/episode-3-2-can-we-eat-our-way-to-sustainability-a-deep-dive-into-sustainable-protein/>

particular in places like the United States where they're actually carbon markets being developed around this type of grazing practice. However, it's complicated. Both Paige and Tara expressed real limitations in so far as, whether this can be a way to mitigate climate change. The first thing is that we have to remember that ruminants, these are the animals that graze, they emit a lot of methane, in particular cattle.

[00:15:38] **Ryan Katz-Rosene:** Methane, as our listeners will know, is a very powerful greenhouse gas. It's much more powerful than carbon dioxide in terms of the amount of energy it locks into the earth system. So I asked Paige what she thought of the argument that some people make, that when you factor in carbon sequestration from regenerative grazing, you end up with a system that's either net climate neutral or even climate beneficial. In other words, net negative after taking into account the whole system of emissions. Like the methane that's emitted above ground, the nitrous oxide emissions and so on and so forth. Because I know that she's done a study, Peter, that has shown net negative emissions, but her answer was a little bit more measured.

[00:16:23] **Ryan Katz-Rosene:** She basically said, we need to be doing more research on this question and more importantly, I think she turned to this question to the need to take a more nuanced approach. She really emphasized that there's an alternative to the conventional feedlot based beef production system that is viable, and that produces a lot of benefits. Those systems that rely on fossil fuel based equipment and fertilizers to produce grain that's fed to livestock are problematic, and that regenerative grazing offers an antidote to those types of systems.

[00:16:58] **Paige Stanley:** Any gains we can get from soil carbon is great because we're replacing something that's been lost in the soil. But, I don't actually think that those systems need to be climate neutral or climate negative in order for them to be beneficial.

[00:17:13] **Paige Stanley:** I still think that there are huge benefits to ecosystem health, to ranch or livelihood, to climate resiliency and adaptive capacity. All of these things that we're getting from soil carbon sequestration that don't necessarily mean that it has to be negating all of their greenhouse gas emissions.

[00:17:30] **Ryan Katz-Rosene:** So to recap Peter, Paige is essentially saying that while regenerative grazing likely has net benefits in terms of soil carbon sequestration and certainly it can have net benefits. Overall, its value needs to be juxtaposed with the broader system of environmental costs of the conventional feedlot system that it could replace in a more, potentially, climate friendly world.

[00:17:55] **Peter André:** I see. So, the environmental benefits of regenerative grazing need to be understood in relation to the systems they would replace. That makes a lot of sense to me. But some of my students might argue, well, that's all fine, but why don't we just cut meat and other animal products out of our diets entirely? Wouldn't that be better for the planet? And I take it that's kind of the direction that the *Eat Lancet Report* encouraged us to

The Ecopolitics Podcast Episode 3.2: Can We Eat Our Way to Sustainability? (Transcript).
<https://www.ecopoliticspodcast.ca/episode-3-2-can-we-eat-our-way-to-sustainability-a-deep-dive-into-sustainable-protein/>

go in. I'd like to hear more from you on that and your discussion with Tara. What did she think of these questions?

[00:18:30] **Ryan Katz-Rosene:** Well, it was certainly interesting to hear Tara talk about her involvement in the *Eat Lancet* commission and the report and what it came up with. The *Eat Lancet* commission itself emphasizes a diet that's plant forward, "where whole grains, fruits, vegetables, nuts, and legumes comprise a greater proportion of foods consumed." I'm still quoting here, Peter, "meat and dairy constitute important parts of the diet, but in significantly smaller proportions than whole grains, fruits, vegetables, nuts, and legumes."

[00:19:06] **Ryan Katz-Rosene:** So the *Eat Lancet* commission and the report came up with a diet that was not vegan, but a substitution of a certain amount of meat consumption and dairy consumption with plant-based alternatives in particular plant-based proteins. Tara, on the whole, still defended a position that says we should adopt a diet with a lot less meat in it for a variety of environmental reasons.

[00:19:36] **Tara Garnett:** I think that reducing consumption of animal products is an extremely important part of it, perhaps less from a climate change perspective and more from land use. Because if we use 40% of the earth surface for food production, that's 40% of the surface that is not available or less available for other living things and we use most of that for animal production.

[00:20:07] **Tara Garnett:** Some of it is used in a way that is kind of co-existent with biodiversity and other forms of life. But in most instances it's really, really damaging. By cutting back on animal products, you are potentially, but this is dependent on a whole range of political and economic decisions, is potentially sparing some land for other life to flourish.

[00:20:35] **Ryan Katz-Rosene:** So, there's that argument and on the flip side, Tara was quite sensitive to the fact that the *Eat Lancet Report* has commonly been interpreted in the popular sphere in the media as pushing if not a vegan diet, you know, close to a vegan diet. As she explained to me, in part, she thinks this is a response from people who really just put up their backs from feeling like they're being told that they had to completely change their diets, change their lifestyles. But a significant part of it, I think, was also people just misinterpreting, or what she called willfully ignoring, the more nuanced findings of the report.

[00:21:15] **Tara Garnett:** Some of the critique was very justified and some of it was less so. Starting with some of the sorts of justified critiques, firstly was that the report simply does not discuss the middle part of the food provisioning systems. It looks at production and then it looks at consumption, and it doesn't look at the transformation of food along the way. And linked to that, secondly, it doesn't discuss power relations, and justices and injustices within the food system. That's a major shortfall, but it is also a consequence of the fact that we delimited our problem just for practicality. So, that was one criticism.

The Ecopolitics Podcast Episode 3.2: Can We Eat Our Way to Sustainability? (Transcript).
<https://www.ecopoliticspodcast.ca/episode-3-2-can-we-eat-our-way-to-sustainability-a-deep-dive-into-sustainable-protein/>

[00:22:09] **Tara Garnett:** The second argument was that this was a sort of closet vegan agenda, which I think was pretty unjustified. Partly because the attacks are sometimes personal that, you know, all the commissioners were vegan and of course I sat in on these interminable dinners and I think there was one vegan amongst them. And, you know, maybe two, perhaps three vegetarians and the rest were omnivores, but that's the kind of personal attack.

[00:22:36] **Tara Garnett:** I think it was argued that the diet was a one size fits all solution. I think that again was probably quite unjustified. In fact, it was pretty much a contraction and convergence approach. So it implied a very, very substantial decrease in animal product consumption in the global north and dietary diversification away from a focus on highly processed foods. And then in the global south, it implied a substantial increase in legume, fruit and vegetables, and animal product consumption. There was quite a lot of variation built into it.

[00:23:18] **Peter André:** It's really interesting to hear Tara respond and even refute some of the criticisms that the *Eat Lancet* commissions report received, such as this idea that it was a closet vegan agenda or that it was promoting a one size fits all diet. But I also get a sense that she's heard some of that critique, and I hear her saying that she continues to advocate for folks in the global north to significantly decrease their consumption of animal and animal products and diversify their diets. But I'm also hearing some nuance in her claims, just as an example, there's a big difference between eating chicken and beef, right?

[00:24:05] **Ryan Katz-Rosene:** Yeah, Tara did reflect on that being an area where she actually wanted to see more nuance in the report itself. But not necessarily in a direction that most listeners in the west would have expected. We're used to hearing the idea that from a climate perspective, it's chicken and pork that have a lower impact. Therefore, those should be favored over beef and lamb. But as you will hear in this clip, Tara kind of expressed concern with that idea. In particular, the way that the report didn't really take the whole environmental picture into account.

[00:24:39] **Tara Garnett:** Where I was most unhappy with the *Eat Lancet* report was that it failed to consider the different costs and benefits of different kinds of animal production. So, to the extent that it favored poultry and pig production over ruminant production, implying that they were somewhat more sustainable simply because their carbon footprint was lower.

[00:25:09] **Ryan Katz-Rosene:** So Peter, as we've kind of heard so far, the interview with Tara did get a little bit into this idea of the polarization of the popular discussion on meat and livestock in relation to sustainable food systems. You know, she talked about attacks, personal attacks that she received for participating in the *Eat Lancet* commission.

[00:25:30] **Ryan Katz-Rosene:** This theme of polarization was something that Paige also addressed. Paige pointed out that, in part, that's because of the complexity of the issue that we see these sort of extreme start positions from people on this very issue.

The Ecopolitics Podcast Episode 3.2: Can We Eat Our Way to Sustainability? (Transcript).
<https://www.ecopoliticspodcast.ca/episode-3-2-can-we-eat-our-way-to-sustainability-a-deep-dive-into-sustainable-protein/>

[00:25:46] **Paige Stanley:** Yeah, maybe it is unnecessarily polarized because I think the actual truth always lies somewhere in the middle. And you only really get to it by wading through kind of a landmine of details, and nuance, and exceptions, and trade-offs, and without all of that information and without the public knowing all of those details.

[00:26:04] **Paige Stanley:** And, you know, honestly, maybe they shouldn't, it's taken me 10 years to get to the understanding I have now. I don't really expect that of every single person on the planet, and so I think it's easy to come to hard truths like people who are really polarized. For example, everybody needs to be vegan or we need more livestock grazing to reverse climate change, kind of roughly representing the two ends of the polarization spectrum. I think you only come to really extreme opinions like that by knowing half-truths.

[00:26:38] **Peter André:** That's really interesting, Ryan, that Paige is talking about the more extreme opinions in the debate, often being based in half-truths. And I wonder, did Tara speak as well about this kind of polarization and these extreme positions?

[00:26:54] **Ryan Katz-Rosene:** Yeah, she certainly did.

[00:26:55] **Tara Garnett:** Meat is neither God, nor the devil, but that's not what you hear from social media. And I think there's a whole complex of issues. I mean, that is what makes the livestock thing so really, really interesting in that it encapsulates a whole range of concerns from ideas about identity, and culture and tradition, to notions of health, to a kind of very tangible way of interacting with the natural world, to discussions about animal ethics and animal welfare, and of course both the environmental dimension and how we measure environmental impact and the whole set of debates and questions surrounding that.

[00:27:43] **Peter André:** It sounds like both of our guests, that you talk to Ryan, are saying there are a lot of gray areas related to animal agriculture and the environment, there's a lot of values, and assumptions and half-truths that come into these debates. But further the answers aren't black and white, especially when we bring it back to the context of ruminants grazing and pasture environments.

[00:28:09] **Peter André:** Just to go back to that point, I gather there are controversies right in there. I've heard some climate change activists argue against the potential benefits of regenerative grazing by saying that when it comes to the carbon sequestration potentials of soils, that this is ultimately really limited. Did that topic come up in your discussions?

[00:28:32] **Ryan Katz-Rosene:** It did, and in fact Tara was a researcher who put together a really influential report that kind of called to question the long-term storage capacity of pastures for sequestering carbon. You know, there's actually a lot of debate within soil science today about this very question, and I asked Paige about this question of whether carbon becomes saturated and this is what she had to say.

The Ecopolitics Podcast Episode 3.2: Can We Eat Our Way to Sustainability? (Transcript).
<https://www.ecopoliticspodcast.ca/episode-3-2-can-we-eat-our-way-to-sustainability-a-deep-dive-into-sustainable-protein/>

[00:28:56] **Paige Stanley:** I kind of have two top line thoughts, and then I'll kind of unpack them both. One is that even if we expected to saturate soil carbon in the order of 50 years, that to me is still a near-term climate change mitigation strategy and it doesn't negate the benefits of doing it in my mind. So even if saturation were thing I say, so what? Like, it's still far enough down the line to where we can utilize it as an important climate change mitigation tool. So that's one.

[00:29:30] **Paige Stanley:** The other is that I think the idea or the way that the public often views carbon saturation and the soils in conversations like this. For example, to make arguments, like we shouldn't be doing regenerative grazing because we're going to reach carbon saturation. I think that that is a terrible miscommunication on a part of the sciences. Yes, there is a theoretical, maximum amount of carbon that soils can hold, but it's theoretical. Soil carbon is highly dynamic. It changes and it depends on your climate, your pH, your temperature, your precipitation, all of these things. And so to think that at some point in time, we're going to have this saturated sponge of carbon where no carbon is moving around, we're not adding, we're not losing any, and we can't add any more. I think that that's not true, and I think any soil scientist would agree.

[00:30:30] **Ryan Katz-Rosene:** So Peter, she really went into a lot more detail here on the science of soil carbon sequestration. I'm not going to play that here because I think it got a little bit into finer detail than we need to. But I think the clip you just heard really sums up her position. The point is there's a lot of potential for soil carbon sequestration, but how much room is there in any given soil pool really depends on a whole range of factors.

[00:30:59] **Peter André:** I want to turn back to the politics of animal agriculture now. This core question about whether we can solve our environmental problems by not eating so much meat. What did Paige and Tara have to say about how this debate is happening and the implications for actually addressing the problems around climate impacts of animal agriculture globally?

[00:31:26] **Ryan Katz-Rosene:** Well, as you might expect, both of our guests had a lot to say on this front. Maybe to start Tara made the point that the purported benefits of regenerative agriculture have been misused by many actors to try to kind of maintain the status quo, and she saw that as a problem.

[00:31:46] **Tara Garnett:** My feeling is that regenerative agriculture has achieved a sort of prominence because it offers a kind of salvatory potential in its name, and it has gained a lot of traction among people who have quite a lot of land in parts of the world where those sorts of systems are kind of historically well suited. I think what's interesting about regenerative agriculture is that it inspires people who are kind of thoughtful and enthusiastic, and therefore inherently good farmers.

[00:32:21] **Tara Garnett:** In that sense, I think it's a very positive development, but I think what's more worrying about it is two things. One, it risks being co-opted by some of the kind of major corporations, you know, every big corporation now has its regenerative agriculture

The Ecopolitics Podcast Episode 3.2: Can We Eat Our Way to Sustainability? (Transcript).
<https://www.ecopoliticspodcast.ca/episode-3-2-can-we-eat-our-way-to-sustainability-a-deep-dive-into-sustainable-protein/>

work stream. But the other big danger I think is that it doesn't address issues of power, and it doesn't address issues of consumption, land ownership, and all the rest of it.

[00:32:52] **Tara Garnett:** What it can be accused of doing is propping up current consumption patterns. Look, we can carry on the way we are because this meat is regenerative, and I find that quite worrying. I don't think it needs to be like that, but I think that's kind of the way it can be used sometimes.

[00:33:13] **Peter André:** That's really interesting. There's a risk that advocacy for regenerative agriculture as a climate solution can be co-opted. That it may not encourage changes in consumption patterns in the direction that she thinks is really important to go in, and that it's also missing some of the power relations in the food system and other problems in the food system.

[00:33:43] **Peter André:** Those are all really interesting points. I wonder, you know, this episode was called, 'can we eat our way to sustainability'? Our series looks at everyday ecopolitics and the roles of individuals in their daily lives. So I wonder, did she have any advice to say about what the individual can do in terms of what they're going to eat everyday?

[00:34:05] **Ryan Katz-Rosene:** Yeah, that's a great question. Let's bring it back to the topic at hand. Given that Tara was part of the *Eat Lancet* commission, which essentially offered a form of dietary advice. I asked her what she says, when people ask her, how little, how much, what kind of meat they should eat? And she gave a really interesting answer.

[00:34:28] **Tara Garnett:** First thing is the fetishization of the number, I always find that very, very difficult because the answer depends on what else you are or are not eating, how much you're eating, what else you're doing with your life, and other aspects of your kind of carbon and environmental expenditure. There isn't a single answer. You could take as a rule of thumb: what am I eating now, let's try halving it, this is an arbitrary suggestion. I think one thing to bear in mind is that reducing doesn't mean eliminating.

[00:35:03] **Tara Garnett:** I think, again, it goes back to this question of polarization that the people feel kind of threatened and disturbed. And I'm not talking about your students here, but the general public, because suddenly as soon as someone indicates an aspect of their lives is problematic, it means that they have to somehow give it up altogether. So people really, and understandably, kick back against that.

[00:35:27] **Tara Garnett:** When it comes to, how do I go about doing this? I mean, I think it's going to be different for each person. I think, again, the motivations are going to be different for each person. One way of doing it is to eat more vegetables, eat more legumes, question the centrality of meat on the plate, going beyond your personal consumption.

The Ecopolitics Podcast Episode 3.2: Can We Eat Our Way to Sustainability? (Transcript).
<https://www.ecopoliticspodcast.ca/episode-3-2-can-we-eat-our-way-to-sustainability-a-deep-dive-into-sustainable-protein/>

[00:35:58] **Tara Garnett:** If you're organizing an event or something like that, making the food at least two thirds plant-based or something and asking people to opt into meat-eating. There are a million such suggestions that I expect listeners to your podcast will be very, very familiar with.

[00:36:17] **Ryan Katz-Rosene:** Tara is essentially saying people should eat more of a plant rich diet, but she also made the case that the issues of the environmental impacts of our food system will not just simply be solved through consumer choice.

[00:36:31] **Tara Garnett:** I'm totally fed up with the focus on the individual as the locus of responsibility when we know how much the consumption practices at the individual are shaped by a whole range of different scales of influence from the sort of the political and the economic, to the kind of the familial, the cultural simply the timings and the routines of the day and trade relationships, all the rest of it.

[00:37:04] **Tara Garnett:** The choices I make when I eat breakfast are very much circumscribed by everything else that's going on. So there's that. We know that the story of public health promotion is a story of failure, because it has focused on the individual. The reason it focuses on the individual is that there hasn't been the political will to experiment at more structural, systemic levels.

[00:37:36] **Tara Garnett:** Again, going back to this *National Food Strategy* report that just came out, I think what was so welcome about it, among the NGO sector, was that it made it clear that these are structural issues, structural problems, not something that the individual could or, or indeed should, have to tackle on their own.

[00:38:00] **Peter André:** So, how did Paige respond to this question of the role of individual consumer choice versus national food strategies, or government regulation, or other forms of collective action through the state?

[00:38:14] **Ryan Katz-Rosene:** I think our two guests were really on the same page here. Paige talked about how much her position on these issues has evolved over time that she's been studying this issue, and she came to a similar outcome as Tara.

[00:38:28] **Paige Stanley:** When I first started in all of this, I would have solidly placed myself in the consumer choice bucket. I started by reading things like Omnivore's dilemma and learning about Alice Waters, so vote with your fork was very much my mantra. I think as I've learned more about the role of corporations and kind of the inner workings of policy and the farm bill, and the way that the food system in at least the United States was created, I pretty much am solidly on the opposite side now.

[00:39:02] **Paige Stanley:** I am of the mind that corporations created the climate crisis and policy choices created the agricultural and associated environmental problems that we have with agriculture today. I think the direction of causality would point to policy and

The Ecopolitics Podcast Episode 3.2: Can We Eat Our Way to Sustainability? (Transcript).

<https://www.ecopoliticspodcast.ca/episode-3-2-can-we-eat-our-way-to-sustainability-a-deep-dive-into-sustainable-protein/>

corporations. But with that being said, with the way that kind of the federalist and democratic structure in the U.S. is structured, I would say it would be impossible to get policy change without some consumer push.

[00:39:41] **Peter Andréé:** Okay, that's interesting. So on the one hand Paige is saying this is a structural problem and a policy problem, but she still sees a role for the consumer, the citizen, in terms of pushing for change. What does that look like?

[00:39:55] **Ryan Katz-Rosene:** Well, that's a good question. I pushed them both on this issue a little bit by asking for their response to a highly influential article published in the journal *Science* a couple of years ago and its authors, Joseph Poore and Tom Nemeck, they did a fairly comprehensive assessment of the environmental footprint of different foods around the world.

[00:40:21] **Ryan Katz-Rosene:** The lead author, Joseph Poore, was interviewed, in a highly influential interview, since then. He said, "a vegan diet is probably the single biggest way to reduce your impact on planet earth." So I asked both of our guests if they agree with that statement by Joseph Poore.

[00:40:39] **Paige Stanley:** I don't. I think he'd be hard pressed to convince me that dietary choices would eclipse the role that fossil fuel consumption plays in climate change mitigation. But you know, one thing that I like to tell people when they point me to papers like that is that big global assessments like that, often make it to journals like *Science* and *Nature*, and they often always come to the same conclusion. That a vegan diet, or I've also seen an Ovo-Lacto Vegetarian diet being considered the best. They always come to that same conclusion.

[00:41:18] **Paige Stanley:** But, global assessments like that they lose all nuance that comes with eating and producing food, what we produce and what would be sustainable to consume in a place like California, kind of abstracted from global environmental production, is so much different than what would be sustainably produced and consumed in a place like Iceland or Greenland.

[00:41:42] **Paige Stanley:** And so to assume that there is a global sustainable diet, is just asinine to me if I'm being totally honest. That's because even when we're thinking about accounting for greenhouse gas emissions from the livestock sector, the way that we're doing these different things, like growing their food or grazing them, or trucking food from elsewhere, or how they're pumping their water. These are highly regionally specific practices and they have an impact on the order of magnitude on the total greenhouse gas footprint of that animal.

[00:42:19] **Tara Garnett:** Change needs to happen in every single aspect of our lives and I really, really worry about the kind of I've gone vegan so I can fly flat across the world with an impunity approach. One can be vegan and have a very resource intensive diet in lots of other

The Ecopolitics Podcast Episode 3.2: Can We Eat Our Way to Sustainability? (Transcript).
<https://www.ecopoliticspodcast.ca/episode-3-2-can-we-eat-our-way-to-sustainability-a-deep-dive-into-sustainable-protein/>

ways, both in terms of selection of the foods one chooses and in one's practices around waste, or cooking techniques, or whatever.

[00:42:51] **Tara Garnett:** I also think that these concerns are interconnected. So, issues around transport, issues around diet, how one chooses to spend one's leisure, all these things they're kind of part of the same whole. I can't see that one can focus on one thing in isolation from everything else. I think that eating less meat is a very, very important part of it. It comes with potential moral hazards, it's not a get out of jail free card, and there are lots and lots of other things we need to be doing as well.

[00:43:28] **Peter André:** That's really interesting. They both ultimately disagree with the broad claim by Joseph Poore, that going vegan is the single most important thing you can do to save this planet and stop climate change but from slightly different perspectives, right? Paige was really focused on this question of, that regionalism matters and food systems in different places are different and their environmental impacts are different, and the production systems are different, and that all needs to be taken into account. And Tara is really focusing on the fact that diet is isolated from other issues, like transport and how one spends their free time, you can't isolate those things.

[00:44:10] **Peter André:** It's neat to see that these two experts, even though they're coming from places and disciplinary perspectives, actually end up agreeing on a lot. Animal agriculture, as conventionally practiced, has a lot of environmental problems associated with it. Regenerative agriculture, as an alternative approach, has some potential advantages. However, it's not a panacea and let's be careful of the various people who will just want to co-opt it to keep the status quo going. Nor is a simple switch to a vegan diet the solution across the board. But, plant rich diets are something that we should all be thinking about more.

[00:44:49] **Peter André:** I'm curious Ryan, as a husband of a farmer, what are your takeaways from these conversations you had with Tara and Paige? From what you heard, can we eat our way to sustainability?

[00:45:00] **Ryan Katz-Rosene:** Well, I share a lot of the assessments that both Paige and Tara offered in my interviews with them. Look, there's no doubt that from the point of view of climate change and the biodiversity crisis, there are major gains to be had from stopping the expansion of agricultural land. In particular, stopping deforestation and from producing more food on the agricultural lands that we currently use.

[00:45:28] **Ryan Katz-Rosene:** One of the easiest ways to do that is to reduce the size of the global livestock sector and switch out some of the protein we get from meat for plant-based proteins, nuts, legumes, or those kinds of things.

[00:45:42] **Ryan Katz-Rosene:** But on the flip side, I think that there is a tendency for some to want to go full bore, right? What our guests were talking about earlier in terms of polarization in this debate. You see arguments in our contemporary eco-political landscape,

The Ecopolitics Podcast Episode 3.2: Can We Eat Our Way to Sustainability? (Transcript).
<https://www.ecopoliticspodcast.ca/episode-3-2-can-we-eat-our-way-to-sustainability-a-deep-dive-into-sustainable-protein/>

where people tend to want to see things in very black and white terms rather than the sort of the nuanced gray that they are and that I think they should be.

[00:46:08] **Ryan Katz-Rosene:** So what I kinda mean here is that it's apparent to me animal source foods have a really important role to play in the AgriFood system, in social systems and, even in sort of an ecological and economic terms. So personally, I wouldn't want to throw the baby out with the bathwater, so to speak.

[00:46:28] **Ryan Katz-Rosene:** I think that we can collectively have an impact. On sustainability by changing the way that we eat collectively as a society. And in part, I do think that that means reducing the share of animal proteins in a typical Western diet. However, you know, I do think the animal proteins should have some role and that producers of all types of foods, meat, or otherwise across the food system need to find ways to reduce the ecological footprint of production. And so Peter, that's my take.

[00:47:00] **Peter Andrée:** Okay. Well, thanks for your assessment, Ryan. It's really interesting to hear your take as a farmer and as a husband of a farmer, and I'll turn it to our audience now. Do you think we can eat our way to sustainability? Should consumers stop eating meat or ruminant animal byproducts in particular? Where do you stand on these questions? We'd love it if you share our content and get in touch with us, let us know what you think on the issues that we discussed in today's episode.

[00:47:29] **Peter Andrée:** So that's it for this episode of the Ecopolitics Podcast, make sure to follow us on Twitter @EcopoliticsP and check out all the incredible artwork and additional resources like transcripts and pedagogical materials that we put together for each and every episode at our website, which is ecopoliticspodcast.ca.

[00:47:49] **Peter Andrée:** This episode was produced by Nicole Bedford, support with transcription and captioning for season three is provided by Ashley Fearnall, and Adam Gibbard helps us with artistic design and digital support. The podcast is made available under a Creative Commons License. 2.0 Canada. Thanks for listening.