

# Handpicked Presents: Voicing Change

Season 4, Episode 4: Agroecology in Canada and Brazil

Featuring Dr. Erin Nelson, Dr. Eve Nimmo, and Dr. Andrew Spring

## Transcript

### Speakers

Charlie Spring (CS)

Laine Young (LY)

Erin Nelson (RN)

Eve Nimmo (VN)

Andrew Spring (AS)

{[intro music]}

**CS:** Welcome to Handpicked Podcast, this season we're featuring episodes recorded as part of the Voicing Change project. We're your hosts, Charlie Spring...

**LY:** ... and Laine Young. So what is the Voicing Change team tackling today?

**CS:** This is the first of two episodes looking at agroecology.

**LY:** Okay, I think I remember that word from Season 3 of Handpicked?

**CS:** Yes, we heard from Drs Eve Nimmo and Erin Nelson then about agroecological food systems in Brazil and Ontario, and actually we'll be hearing from them both in this episode as well. I'll be introducing this Voicing Change episode with a brief reminder of what agroecology means to us as the Voicing Change team, so let's get to it!

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**CS:** Welcome to the Voicing Change podcast. In this episode, our guests from Canada and Brazil will share some examples and perspectives on agroecology. Agroecology has taken on new meanings over time, but its global spread has been spearheaded by social movements of small-scale food producers demanding fairness in their food systems, particularly in Latin America.

Agroecology is many things- it's a scientific practice of applying ecological principles to food production which really starts in the field, but it is also a movement builder, with people gathering around this term, and this movement, and learning from each other. Importantly I think, agroecology goes beyond specific techniques and questions of yield etc to ask difficult questions about how our food systems are organised- for example are food producers democratically involved in shaping policies that might, say, protect food producers and workers against exploitation by corporations?

Agroecology's holistic approach I think encourages us to take seriously issues like how to balance questions of food security with food provider livelihoods as well as environmental impacts. But we should note that not everyone who practices agroecology uses the term 'agroecology' - Indigenous and peasant communities have been enacting many of its principles since time immemorial.

So we hope that today's conversation shows you some of the hope and power that is being wielded by small-scale and Indigenous farmers and harvesters around the world, at a time when many are facing threats of a fast-changing climate, tough economic pressures and also the rise of authoritarian governments...

So here's the conversation, where Voicing Change members Andrew and Eve interview Erin Nelson..

**RN:** So my name is Erin Nelson. I'm an assistant professor at the University of Guelph in the Department of Sociology and Anthropology. And I work on agroecology in Ontario, Canada, also in Cuba and Mexico.

**VN:** My name is Eve Nimmo. I am a research associate at the Laurier Center for Sustainable Food Systems at Wilfrid Laurier University, and I'm also the president of an NGO called CEDErva, which is the Center for the Development and Education of Erva-mate Systems in Brazil

**AS:** And I'm Andrew Spring. I'm an assistant professor in the Department of Geography and Environmental Studies at Wilfrid Laurier University in Waterloo, Ontario.

So today we're going to talk a little bit about agroecology. Agroecology is a theme that has kind of been identified as part of our conversations with our partners in Kenya and certainly Brazil and certainly emerging in the north. Today, we'd like to have just a little bit of a background and talk about what is agroecology and maybe a little bit about maybe what it looks like . So Erin, maybe we can start with you.

**RN:** Sure. So, I guess theoretically the official definition of agroecology would be something like it's the ecology of food systems, and it tends to be thought of as a scientific discipline. So, there's like the academic side of agroecology that's about research, and there's a real focus on agronomy and ecology there. And then it's also a set of practices that happen on a farm or wherever you might be producing food. And then it also tends to be thought of as a broader social movement that's about making food system change.

So, you've got kind of the academic piece, the farming food production piece, and there's a real social change piece as well that's about shifting power dynamics in food systems. At the heart of it, I think what agroecology is really about is building food and farming systems that are more ecologically sustainable, that are grounded in what communities want to do in the way they want to produce food, and that it enables communities and people within them to have sustainable livelihoods, to live well. To eat well, to steward their lands well. And to have some control over their own food systems.

**AS:** You know, we talk about agroecology and certainly what you describe sounds wonderful, but what is it, what does it actually look like?

**RN:** So, it's interesting when I was first introduced to agroecology, it was when I was working in Cuba back in 2006, and I'd never heard the term before because it hadn't been used that widely in Canada or globally. But it has been around as a term for a long time in Latin America.

I guess if I'm thinking about what agroecology looks like on the ground, there are a few important things. One would be when I first started visiting agroecological Farms, one of the things that stood out was just how biodiverse they were. So, conservation of biodiversity is a really key piece of agroecology. And there's just a function to that ecologically. And it's also just so beautiful. I think that's an important piece in thinking about what agroecology is. It's messy and it's beautiful and it's challenging, but you can just feel that there's so much life in an agroecological space.

Conserving resources is also really important, and I think agroecology tends to not be really prescriptive about certain practices, but it's really about a mindset of trying to create more closed loop systems and reduce the amount of inputs that need to be brought into our food production systems. I think about some of the agroecological farmers I've met in Cuba, for example, there's this amazing farmer, and he developed this drip irrigation system that doesn't require any electricity and it uses old recycled pop bottles that have been cut in half and sort of recycled medical tubing that he's got rigged to provide drip irrigation to his crops. And he's actually patented that innovation and shared it across the island. So that's you know, there's resource conservation there. There's also really creative, locally based innovation, which is, I think, another really important part of what agroecology is.

**AS:** I typically think of agroecology as like a traditional knowledge source of food growing. So I don't know if you want to kind of jump off that a little bit.

**RN:** Again, I think about the example of Cuba, what I have tended to see there is a really interesting collaboration between more sort of formalized research centers and scientists and local farmers who have been doing agroecological production for in some cases, a long time.

So, it maybe differs a little bit from how it might look in the Northwest Territories or how it might look in Brazil. But there's a real emphasis on knowledge, co-production and co-creation and really strong reciprocal relationships between farmers working on the ground and drawing on their own practical, experiential knowledge and then research scientists who might have labs and more sort of formalized research methods that they're using. And those two sort of ways of thinking and ways of producing knowledge come together so that ideally on the farm, when you're doing the production, you can draw on the best of both of those knowledge systems.

And I know when I do work on agroecology here in the Ontario context, and I should say not all the farmers who are doing this work or even where the scientists, not everyone involved in this is going to use the term agroecology. So, in Ontario, a lot of the farmers that I would work with would call it ecological agriculture, not agroecology.

**AS:** To me, agroecology was this traditional knowledge system of food growing in Global South or Latin America or something that happened elsewhere. But the way, you kind of describe it now, it's much more of like synergistic relationships between people who produce food and researchers. And it just seems more like this organic collaboration of a lot of different people

**RN:** Yeah, I think collaboration is a really important word. I would say that that kind of collaboration of lots of different people, young people who have their own innovative ideas and maybe have gone to university and studied agroecology.

You know, I also did work in Mexico and the University of Chapingo there has an agroecology program and they educate and train people from largely the southern states in Mexico. So, there's a lot of Indigenous students who come to the university and bring their own traditional ways of knowing about food production. They take a degree and perhaps a degree in agroecology and blend that knowledge with their, their traditional farming knowledge and bring sort of both of those elements back to their communities.

**VN:** As Erin was saying, this collaboration between traditional knowledges, Indigenous knowledges, and academic knowledges is actually really productive, a really productive way of improving the sustainability of farming practices, improving livelihoods bringing more value to the products that people are producing and recognizing the value that this knowledge has, right?

So, it's interesting that the way that agroecology, even though it comes from South America in some parts of South America, it's not seen necessarily as scientific practice because it has this, you know, this connotation of being mystical. \*laughs\*

**RN:** Can I pick up on that?

**VN:** Sure!

**RN:** I think another negative connotation that it sometimes has is that you can't produce enough food. It's not productive, an agroecological system. And actually there's so much evidence to the contrary that demonstrates that yields of a particular crop might not be as high in an agroecological system.

But if you look at the system as a whole and the resources that are being brought in and the amount of food and other ecosystem goods and services that could be produced actually an agroecological system is much more productive than a conventional system. And I think if you think about climate change and the crises that are on our horizon in terms of food production, soil health, natural resource health. Agroecology to me is really the way forward.

I was reading the IPCC report, which just came out a few months ago, and they talk specifically about land-based efforts to mitigate climate change and its huge, the potential to use our land management as a way to mitigate climate change. But it's this untapped potential and it's there's so much information out there and so much knowledge about agroecological production, and yet it's not getting the traction that it could.

And that's where I think that social movement piece comes in, because there's really a need for policy change. One of the reasons I find it so inspiring to work on agroecology in Cuba is because the national government supports it. So, they have a whole research and development sector and an extension sector that's focused on supporting farmers to engage in agroecology. Which is kind of the opposite of a lot of other places. So, I do think that's an important piece of agroecology, is shifting power dynamics, shifting systems, shifting policies.

To make these kinds of food production systems more viable because there's all of these structural things that pushed farmers into a more conventional orientation, and ideally the push would go the other way. Now you've got me talking about agroecology and I can't STOP!  
\*laughs\*

**AS:** So, yeah, you know, cause the last question was like, how is it a tool for change? And I think you just nailed that one, right? Farmers are being pushed into this one mode of operating that we know is bad, that we know fails..

**RN:** That they often know fails and doesn't work. But yet, if that's where the subsidies push them, if that's where the policies push them, if that's the only way that they can make a living for themselves and their family.

But I mean, I think also it's important, like I'm not a farmer, right? And agroecology is hard. And I think we expect that the burden of taking risks and doing the work, gaining the knowledge, managing the systems against a backdrop of drought and resource instability and all of these other issues, that burden is on the farmers themselves. I think it is important, especially for people who aren't doing the food production and aren't doing agroecology on the ground, to also recognize how challenging it is. You know, it's not easy to manage agroecological system. It requires a lot of knowledge and expertise.

**VN:** But that's one of the reasons why the partnerships between research and farmers are so important because researchers can actually take on some of that burden in some ways, like the work that we do in in Brazil in Embrapa Forestry is replicating those systems to take those risky steps to try those things out that maybe farmers are like, "well yeah, this might be a good idea, maybe we should try". But, you know, we don't we don't want them to take on that risk.

And so having those partnerships with research scientists who can implement some of these practices, test them and see the possible outcomes, I think is really important because then it doesn't put the burden on the farmers to just follow "oh, well, we think, you know, the scientists think this might be a good idea". No, we're going to test it and give you give options.

And it's not and it's not prescriptive either, which is really important. Right. Is that it's not a system, a one-size-fits-all system. Right. And I think that that's one thing that's very attractive about agroecology is that you can do so many different things within a property. You can have conventional crops, you can have agroforestry systems, you can have gardens, you can have fruit production, you can have livestock production, and they can all be integrated into a system.

A lot of farmers, I think, feel that moving away from that conventional crop structure is really risky. So, they have to not only see that it could work, but have, you know, researchers helping to demonstrate how to do that as well. And obviously, the exchange of information between farmers who have done that, right?

**RN:** Well, I was just going to say, yeah, the role for civil society organizations, too, and farmer associations, you know, like an organization like CEDERva that brings farmers together and provides a voice for them as a collective, I think is really important.

I know in Mexico there is the local, the network of local organic farmers' markets has been really important in raising the profile of local ecological farmers in that country. There is the National Association of Small Farmers in Cuba. There's the Ecological Farmers Association of Ontario in Ontario. And I think all of those organizations that work to really strengthen farmer networks, are, play a really important role in that collaboration too. You know, you've got the farmers, you've got the research centers or scientists, and you also have civil society organizations and networks. They're all an important piece of the puzzle.

**AS:** So, what you're describing to me is essentially this community of practice that all groups and part of this project been working to build. And it's one of those things that you never think of that act of supporting agroecology is actually agroecology itself.

**AS:** For a place like the North that has very little experience growing food, we've seen agriculture as a way of actually bridging the gap between a place that has no kind of cultural background in food growing to meet it with the culture of the people who live there, right?

So, stewardship is the language we talk about and research and monitoring and being stewards of the land and taking care of the land, that those are the principles of the Northern food system. And they reflect a lot in agroecology, just the food just kind of happens to walk around as opposed to kind of being grown.

And so, you know, if we have an opportunity in the north to think about how agriculture is going to develop, then why wouldn't it develop in this framework of agroecology that speaks to kind of the Dene principles and the culture of the communities up north...

**AS:** So, Eve, can you walk us through some of what agroecology looks like in Brazil?

**VN:** We work in southern Brazil in the, you know, biome called the Araucária Forest. Agroecology has various manifestations in Brazil, depending on where you are in the country, obviously, because it's a very large country with a lot of different biomes and a lot of different practices, a lot of different traditional knowledges.

And so where we work, we mostly work with erva mate producers, and erva mate is a tea that is consumed by a lot of people in in southern South America. That's made from leaves of the erva-mate tree. So, the agroecology around these agroforestry systems, we define it as such because it is a system that, as Erin was saying, is kind of a closed loop system. And so, it's it uses the biodiversity of the region, of the forest as a benefit to the system. And so, Erva mate is a tree that

that grows in the understory of the Araucária Forest. It's naturally a shade loving tree. And so it's really important to have forest cover where erva mate is grown and produced.

And so over generations and based on traditional knowledges and Indigenous knowledges in the region, the system has developed into a part of the property. On most small scale farms has a forest that has erva mate and not only erva mate, but also native fruit species, as well as often livestock production in the forest with other associated crops and products on the farm, for example, agroecological gardens that it's actually often the women in the family that that care for the gardens that have a wide range of, of fruits and vegetables that are used by the family.

The small-scale farmers that we work with, they might not necessarily identify themselves as agroecologists, but from our perspective, what they do is, is agroecology because they have created on-farm systems that are quite sustainable and they're quite diverse. And so ,it's there's a lot of agro-biodiversity because of the different kinds of crops that are produced, but also because they have a forest aspect and an agroforestry system in which several products are used from the forest. The products that come from the forest are quite diverse as well. So, there's erva mate but there's also the long living trees that are iconic of the region, such as the Araucária tree and several other tree species, which are really important for forest conservation in the region.

And so as in agroecological systems, there is most of these farms are quite self-sustainable because they grow a lot of the food on the property, they take advantage of the resources of the forest and use them in a sustainable way. And they also are really actually quite important for maintaining water cycles in the region and maintaining native flora and fauna, mitigating some of the effects of climate change because there is still forest as opposed to other parts of the state where all the forest has been cut down and which they have serious problems with drought and contamination of the soil.

So, for us, agroecology is working with these farmers that that although they may not see themselves as agroecologists are doing, are maintaining those practices, those traditional practices that mean that a farm is a sustainable entity, really, that that supports forest conservation and water conservation and biodiversity conservation.

**AS:** The more I listen to both Erin and yourself speak about agroecology, the more it just it really kind of describes the relationship between the people and the land. Right. And this is this is the bridge for the northern food systems. And the work that we're doing in the Northwest Territories is that, you know, taking care of the land and the land takes care of you is something we talk about a lot. And it seems that's just the way that agroecologists or, you know, Indigenous communities in the north or whatever people identify as just the way they kind of operate, right? So, I just find it really interesting that it's just a different way of producing food that kind of takes care of the land and stewards the land. And I think that's I think that's really the message that kind of speaks across a lot of the communities that we work with as part of this project is, you know, everyone's trying to make a livelihood off the land in some way. And agroecology is a way of taking care of that to make sure that future generations can also kind of take care of the land. Right. And also have that livelihood.

**VN:** Thinking about the future and future generations, I think is actually kind of an important point about agroecology, is that a lot of the farmers that we talk to, they're very concerned about what's going to happen, what the legacy they're leaving for their children.

We were speaking with a farmer last week, and he said, you know, what I'm doing right now on the farm isn't necessarily for me. I might not benefit from this, but my children will. And it's really important to remember that we have to kind of get out of the mindset of, you know, short term gains, long term decimation, right? And I think that's what agroecology does. It makes us think more long term.

So maybe a farmer would make a lot of money off a soy crop for five or six years. But what happens next? What will happen to that land for his or her children? Right? And so, I think that thinking about the legacy and the legacy that we that farmers in what we do as researchers and practitioners, what we can help to do is to start thinking about those long-term impacts.

And how to help farmers to navigate the pressures of the current conventional food system. Because often their resistance to conventional agriculture is seen as outdated and backwards and not modern and really frowned upon by a lot of agricultural researchers and agricultural institutions. And so creating those networks of people that that they can recognize themselves as allies, not just as us as researchers, but other farmers and in civil society organizations and creating that community of people, I think is really important that solidarity, because it helps people to realize that they're not alone and that they're continuing the work that their grandfather or their great grandfather did isn't backwards. It's not outdated. It's actually very future looking.

**AS:** I reflect on that is valuing that kind of traditional knowledge and that kind of knowledge that exists in communities. And I think this is, again, one of the reasons why we're trying to do this whole project, this whole Voicing Change, is to really kind of amplify those voices because it is it is a system that works and is a system that regenerates, a system that is resilient.

And I think this is, you know, the conversations that we want to have in the communities that we work with is about how they're really kind of fostering this change as a way of making this kind of like whole societal change towards being more sustainable in the face of all the kind of climate change impacts and other pressures that are kind of deteriorating our kind of natural systems, right?

And we think, you know what? How do we feed so many people in the future? And it's a bit more than that. It's about how do we how do we live in the future and how do we have clean water in the future? And it's all kind of linked together. And I think agroecology, you know, has a lot of meanings, but it is this kind of term of people living sustainably with the planet, right?

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**CS:** And thank you for listening to this episode of Voicing Change.

{[Outro music begins- low level]}



Editing and sound design for this episode is by Narayan Subramoniam. Our music is composed by Ali Razmi. Voicing Change is produced with support from the Laurier Centre for Sustainable Food Systems, Wilfrid Laurier University, the Centre for International Governance Innovation, and the Balsillie School of International Affairs.

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