SEEDHEADS TRANSCRIPT

Episode 25: NIKI CLARK
English

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STEPH BENOIT: Hey, and welcome to SeedHeads, the cross-pollinating podcast, where our Canadian seed heroes tell their stories, share their how-to tips, and talk about the seeds they love. I'm your host, Steph Benoit, coming to you from Ottawa, Ontario, on the traditional unceded territory of the Algonquin Anishinaabeg people.

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STEPH BENOIT: If you find me growing rice this summer in a kiddie pool in downtown Ottawa, it will be thanks to today's guest. Niki Clark joined me to share her experiences growing rice right here in Canada. Niki, along with her partner Ian Curry, is one half of Nikian Gardens, a 25 acre farm, located in Mi'kma'ki, near Nova Scotia's western Annapolis Valley.

We talked about Niki's inspiration for experimenting with rice in a northern climate. The process of growing Patty Rice from seedling to transplanting to harvest. Selecting for hurricane resistance in the nick in 21, variety and building community through tending to this crop. I hope that by the end of this episode, you will join me in feeling equipped and inspired to start experimenting with rice in your own backyard. As always, thank you for listening.

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Introduction and Guest Welcome
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STEPH BENOIT: thank you so much for joining me today, Niki. It's such a pleasure to have you on the podcast, and I've been so excited to talk about this because this is just not a topic that I thought we would cover in the Canadian context is rice. And it's so cool to be able to chat with someone who's having so much success and so much, space for innovation with rice in Canada.

STEPH BENOIT: So thank you so much for being here.

NIKI CLARK: Happy to join you.

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Inspiration Behind Growing Rice in Canada
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STEPH BENOIT: Could you tell me a little bit about what inspired you to get into growing rice in Canada? Did you have sort of like a vision when you started for what this was gonna look like?

NIKI CLARK: Well, we've always been heavy rice eaters. Our diet is, rice is a major starch for us and we had been buying California brown rice and then discovered they were having a big problem with arsenic in their brown rice.

And we thought, oh no, where are we gonna get our rice from you don't know what they're using on rice there. So then we started looking around, maybe we could grow it. How do you grow rice? And that's when we discovered the group in Vermont, in the northeast of the US that was also experimenting, growing rice, at the same latitude.

And so we went and visited to see what they were doing and thought, yeah, we could do this. so we had a vision. My vision of course, was taken right out of those beautiful pictures in Laos and Cambodia of step terraces. Brilliant. Emerald Green. Rice fields terraced down the mountain slope.

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Challenges and Innovations in Rice Farming
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NIKI CLARK: So we started up high, but unfortunately up high we didn't have enough clay in the soil to hold the water.

The first year we ended up hauling water and that was ridiculous. So we started to kind of think about it as we learned more about just how these rice paddy things work. And we moved our patio operation down to the lower part of our farm where we had a farm pond and it was holding water and we could plant just above that and drain into it, and that all of a sudden worked.

It's been a long, innovative sort of haul uphill, but, we've been doing this 10 years now, and every year we get a little better at it. And if we get lax about something, we think maybe it's not so important, and then we find out, oh, that was an important, so we smarten up again.

It takes time to learn a whole new regimen of how to do something well.

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Overview of the Farm and Other Crops

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STEPH BENOIT: Could you tell me a little bit more about the farm that you and your partner Ian Steward, what that sort of looks like and what the other things are that you grow?

NIKI CLARK: Yeah. We have a 25 acre farm and we actually grow on probably 10 acres and that's, edible and ornamental gardens scattered around.

It's wild all around us. So we have a lot of weed pressure. Everything wants to grow here. But, we combat that mostly by mulches, trying to keep weeds down. We have a very large vegetable garden and we feed ourselves as vegetarians. That's pretty easy to do. The rest of it is two thirds of its forest and we have some orchards, nut trees, fruit trees, and big ornamental gardens.

We spent about eight years I think. Maybe 10 of having a business in organic gardening, landscape design and gardening business that was as successful as we wanted it to be. And that was my way of getting marvelous plants and growing my own garden. So now as I get old there, everything's maturing big trees, and it's just lovely. It's great.

STEPH BENOIT: That sounds nice.

NIKI CLARK: Yeah, and I kind of weed my way out from the house, what I can see from the windows that look bad. Then I get out there and I prim it up and so I'm working my way down into the yard and it's on a slope. It's a beautiful slope facing south, and it's really a little microclimate here. We enjoy just beautiful weather. Lots of good breezes, keep the bugs away and yeah, very nice place.

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Types of Rice and Farming Techniques

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STEPH BENOIT: So what types of rice are you growing?

NIKI CLARK: Well, it's paddy rice, so it grows in paddies, which are flooded for most of the season.

Upland rice is not much different except you don't grow it flooded. But there's a lot of weed pressure on upland rice and it's a grass so it's hard to keep it weed. And, if it gets too weedy, it just doesn't produce well, so Paddy Rice is very productive and, because it's flooded, not many of those weeds will survive in that kind of water.

We occasionally get some reeds and some cattails that try to move in and we pull those out, but weeding is minimal, hardly none. Patties are really amazing little ecosystems, Well what do you do about bugs and mosquitoes and stuff? Well, the dragon flies moved in and took care of those and the water birds and we got turtles and just everything and mud swallows are in there.

So it's just really a lovely dynamic place. We're trying to figure out how to grow fish in there, like koi or something. Then you drain it down in the fall when you're ready to harvest, you drain it down. And we have a dedicated little pond because rice is a heavy feeder, so we fertilize it with organic nitrogen, which is like pelletized chicken litter.

And we feed it four times when we first plant and when we first transplant and when it first tillers, which is when the rice puts out lots of shoots. Then when it heads up and flowers and produces its seed. That's the fourth time we feed it. And there we learned from our first experiment that a fair amount of that nitrogen stays in the water isn't all used.

So we don't wanna just dump it into the local waterways, we dump it back into our pond and we can always cycle it back into the rice paddies, but we don't let it go out into the river.

STEPH BENOIT: I'm just curious, I can sort of imagine this seasonality around this in Asia, but I'm wondering, on a shorter growing season in Nova Scotia.

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Seasonality and Growing Process
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STEPH BENOIT: *What are the months or what are the times of year where this actually happens? When do you start the rice, when do you transplant it? When do you harvest it?*

NIKI CLARK: Well, the only rice we can grow here is short season and cold tolerant. So that limits us to short rice. It grows between 90 and maybe 110, 120 days max.

And that's our season. So we start soaking our rice the 1st of April. It's being soaked. Now. as soon as it starts to germinate, put out, it's a little radicle, we will sew it into flats of, you know, about 128 plugs, or, you know, you can just broadcast it in a flat and then it'll grow up in that.

We put those flats right into tanks of water, right. From the first days they're sitting in water, and then they grow there for two months. So in June, early June, we transplant these seedlings out into wet mud, in the paddies. I get all my yoga friends out there planting rice. we give them a sort of string guidelines, but it's not critical that it'd be perfect

We plant those rice paddies in a half a day. They settle in and because that water is over dark mud, it warms up amazingly, it feels just like bath water. The rice plants grow quickly and they're happy and they start to double in size.

You can almost see 'em grow.

STEPH BENOIT: Wow.

NIKI CLARK: It's really quite fun and there's very little maintenance at that point. Ian will go out and broadcast the fertilizer at those critical times and he watches the water level. If we get a heavy rain event, we may have to drain some of the water out.

We keep it at about four to six inches. As the plants grow, they can take more or less. We really wanted to try to develop a rice that could. Tolerate less water. That year we had a drought. It didn't work too well. We couldn't really do a controlled experiment.

But, it is a problem, it's a challenge, with rice and one that people farming rice all over the world are dealing with, and that is, that methane is produced from these wet paddies because the organic material is rotting and putting out some methane.

And so we're trying to figure out if we can get somebody to gauge the methane in production and then see if we could try various things to mitigate that, lessen it. Anyway, we're always experimenting with stuff. And then in October we harvest it as soon as it starts to brown and hang heavy, dry, and we drop the water out and let it dry up and then we harvest it.

Dry it in our greenhouse. We have a rice polisher, a de husker that allows us to take the husk off and then it's ready to eat. We couldn't eat it for four years until we could afford to de-husker.

STEPH BENOIT: I guess the first four years we're just saving enough seed to be able to do it again the next year.

NIKI CLARK: Yeah. And being ever hopeful that this would work.

STEPH BENOIT: Oh, that's so wonderful that you stuck with it. I lived in Bhutan for a year. I think I might have mentioned it to you before. So I have been very lucky to be able to observe the whole life cycle of rice in my backyard, so to speak, for a year. And one of my most like memorable parts of living there was going out with a Bhutanese friend and transplanting the rice at his aunt's farm. And I got there and immediately they were like, oh, so this is your wife?

And I was like, hi, no, I'm just, 23, I'm just here to plant some rice, whatever. But it was really cool. And so what stuck with me was that the person who owned the farm or the paddies that were being planted, they never planted their own fields, it was like all of their neighbours would come by and help them plant their field.

And they were sort of on like hostess duty where they were making food. They were sort of checking on people. They were doing all this stuff, but they weren't doing much of the actual transplanting. And then once your paddies are done,

then you go the next day and plant someone else's paddies, and then you get to be on their receiving end of all of the hosting and the food and the sort of like merriment around it. So it just seems that there's something really beautifully community oriented about rice, it seems to bring that out, which is really nice.

NIKI CLARK: Yeah. I hope we can get people in our area growing rice. We live near the dike lands and they'd be perfect for rice paddies just even small, everybody have a small paddy and they could feed their family and it definitely is a community oriented activity, for sure.

STEPH BENOIT: So where did you source your seed originally?

NIKI CLARK: Well, originally we started looking for a short season cold tolerant rice, and we went to IRRI — International Rice Research Institute — in the Philippines. And, they would supply us with whatever we wanted from a lot of different places, but we had to go through our CFIA. The Food Inspection Agency here, and they were not sure about rice at all. They really didn't know. They were afraid it was gonna be dangerous. They wanted us to grow in a greenhouse and we talked 'em out of that. And then, we put together a phytosanitary permit and requested rice in just about eight different kinds.

And the only rice that the CFIA would let us bring in was rice from China, because there had been some research done on it, and that rice seemed safe to them. And, it would've cost thousands of dollars for us to look into other rice. I mean, we just caught them by surprise with this request.

So we started out with some rice from China. And of those varieties. We had success with about four out of eight, and then we requested some other different kinds. We went through this for about four years with the CFIA. We had to send the rice to them first and they would fumigate it and check it all out.

And then they'd let us plant it and they'd come and look at it a few times. After about four or five years of that, they finally decided it was safe and they would no longer monitor what we were doing. And then we were able to bring some seed in from other places. The USDA seed bank in Idaho had some good varieties from Japan that the Vermont people had been growing, so we got some from there.

Then we got some Italian ar, boreal rice, and anyway, we're always looking for interesting rice varieties. Recently we were contacted by a group in Switzerland that's been growing rice for about four years, and they found out about us from

a group in the Netherlands. Oh my gosh. we're becoming internationally well known more so than here in Canada.

And so we're trading rice seed all around the world to see what will grow where and just for fun stuff.

STEPH BENOIT: Oh, that's really cool. What is the risk or potential of all these different varieties cross pollinating when you grow them out?

NIKI CLARK: Well, the fun thing about rice is it's really self pollinating. Okay. So you, you have to make a real effort to cross it with something. And, you can grow different varieties right next to each other and they will breed true. So that's, that's not a problem. It's lovely to see different varieties growing and the same big paddy stretch because there'll be different types and colors and you can really tell the difference when they're maturing. But yeah, they're self pollinating, so it's, they're very, self-contained that way.

STEPH BENOIT: I guess that gives a lot of opportunities to try a bunch of different things right next to each other. Still a relatively small paddy area.

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Breeding and Selecting Rice Varieties
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STEPH BENOIT: So I know that you've been breeding rice a little bit or selecting at least for a few different qualities. Could you tell me about the Nikian 21, is that how you pronounce it, Nikian?

NIKI CLARK: Niki and Ian. We figured no one would ever want that name. This was a sport that just showed up in our fields in 2021 when we were growing. I said, look at this plant.

It's huge. It just had huge heads and it was really beautiful. So I cut it and I brought it in as just an enjoyment over the winter as a, in a vase. And then after the winter I thought, I should see if this seed is viable and it germinated a hundred percent. So I said, let's plant this out. We planted and it grew really well. It was really interesting, lots of diversity. So we collected it and then we planted half of our paddies, and grew that out. And it had an amazing amount of genetic diversity. So yes, we're starting to select from that collection for different qualities.

And that's, when we had a pretty good hurricane that year and we thought, well, let's go for short plants that'll sustain that kind of wind and not lodge. and so, now we're selecting for a landrace virtually. It tends to be very easy to take it genetically in whatever direction you want by just selecting the plants you like that all maybe look the same or have big heads.And we're, like I said, selecting for. thick plants with lots of tillers, lots of heads, and fairly short so that they're really strong in hurricane winds. Yeah.

STEPH BENOIT: Wow. Yeah. Just another thing that I never thought I would cover was hurricane resistant rice in Canada, but I'm so glad that someone's doing this 'cause it's fascinating.

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Community and Global Connections
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STEPH BENOIT: I think there's a lot of applications as we become more aware of local food security and what we can grow around us. I think COVID was a big revealer of that, of how vulnerable our globalized food systems are. So I imagine even more interest around this sort of work. Is that what you found?

NIKI CLARK: I've always imagined that the rice is so productive that if we scale it up, we could definitely feed this province on it. In fact, my husband was talking to our local MLA yesterday and he was just blown away by the productivity and the fact that it was a completely different crop that we could grow here.

It doesn't seem to have. Any enemies. We've had no predation yet, although that's always a potential. It is just really versatile. When we have these heavy rain events that just flood gardens and wash everything out. Well, the rise doesn't even miss it. You know, it just thinks it's a monsoon or something.

STEPH BENOIT: Right.

NIKI CLARK: It can handle cold because that water is so warm, it makes kind of a protective envelope. It's just an amazing crop. And people all over the world know that. We in Canada import everything. I'll give you some numbers we looked up for Ian's meeting yesterday that Canada imports $492 million worth of rice – 581 metric tons of rice every year – and we could be growing it. When you're talking food security and eating locally, it has a lot to say for it. And most of that is from the US.

STEPH BENOIT: Interesting. Especially timely, given the current context of tariffs and all of that mm-hmm.

STEPH BENOIT: Adds another layer to it.

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History and Future of Rice in Canada
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STEPH BENOIT: Do you know any of the history of growing rice in Canada? Surely you're not the

NIKI CLARK: No. I think there's another man in BC growing rice, he's a Japanese Canadian and he brought in what he needed to grow rice for making saki, and we've not ever been able to really connect with him.

That would be a different kind of rice. If you're in a rice growing culture, there's a whole world about rice varieties, how you grow them, how you cook them and how you prepare them. I've had a couple of my Japanese friends use our rice to make things here.

A family did an open field day and we had rice treats for people and they went through a lot of rice just getting it perfect and it was just so funny to listen to them. Talk about how they would do it differently. There were two different generations and from different parts of Japan and they definitely had different views on how you would do all of this rice.

And I was just amazed because, a red rice now. That's lovely. And it definitely tastes a little different. but most of the other rices, we can't really hardly tell the difference because we just aren't schooled in the fine parts of rice. That would take growing up with it, I think.

STEPH BENOIT: I should say also, I asked that question about sort of the history of rice in Canada, but of course First Nations People have been growing and tending wild rice here for a time immemorial. So I should make that caveat that when we're talking about rice in this context, we're thinking of some of these imported varieties, while acknowledging that rice has been a majorly important crop for a lot of the First Peoples of Canada.

NIKI CLARK: Not the same plant at all. Rice that we grow as a crop in field or flooded, is *Oryza sativa.* And the wild rice grown in lakes is a completely different genus and species.

NIKI CLARK: A grain, but it's dark, brown and long and narrow and not related at all.

STEPH BENOIT: Wow. A bit of a misnomer then.

NIKI CLARK: Common names. They do that.

STEPH BENOIT: Okay.

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Scaling up and Diversifying Rice
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STEPH BENOIT: Where do you see rice fitting into a diversified farm in Canada?

NIKI CLARK: We originally really wanted to encourage people to grow. Just whatever was what they would want to eat. And we have gotten friends started with little 10 by 10 paddies that they can grow just enough for themselves you know, you can grow it.

Now we wanna scale up to, if we develop an acre, we figure then we could. produce two metric tons of rice.

Yeah. So, we'll probably scale up to that. And we'll need to get a planter 'cause we won't be able to get enough yoga practitioners out to do that.

STEPH BENOIT: maybe after it launches and lots of people hear this, you'll have yogis from the corners of the

NIKI CLARK: Maybe we could have a yoga retreat and rice planting party.

STEPH BENOIT: Yes, I would sign up. Yeah, certainly.

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Growing Rice Overcoming Challenges
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NIKI CLARK: So, you know I think it could be grown once people get over that learning curve of growing in water.

And you know, the way rice works is different from any crop that we're used to, but it's not difficult. It doesn't take an awful lot of tending and, it's a matter of whatever scale you wanna grow on now. You do have to grow the seedlings up for two months before you transplant them out.

We do that in an unheated greenhouse, just in tanks with water in them, and we just put an insulated blanket over the top every night, you know, to protect 'em from frost and they grow just fine. We've also sold and given away seedlings so people can just get it and plant it. You know, there's many ways to do it.

The biggest challenge is that husking machine and the one we bought was not cheap, but it's very good and there are, I saw one man in Vermont with a bicycle husking machine where he could pedal it to spin the wheels, and it worked pretty well, something in progress. So that's the biggest challenge. But otherwise it can be grown really at any scale. And, it's a wonderful community crop. It could be potentially grown on a large scale with big machinery, but I kinda like the idea of keeping it sort of small and producing a lot in a lot of different communities and being able to just feed people all across the province and potentially, the country.

We just gave a pale of rice away to a group that's started here feeding local food. Insecure families they're starting to deliver some meals and we donated a five gallon pail of rice to them and they were very pleased. 'cause they know our rice, they eat our rice mostly.

We're just very local now. But we're really looking at how can we scale this up to the point where we can take care of some of this food insecurity as well as, producing something locally that is a really good food and make people proud to produce Nova Scotia Rice.

STEPH BENOIT: Oh, that's wonderful. If you were, I guess for someone trying to start out on a relatively small scale, what is the most important pieces of infrastructure or tools that they would need to start out?

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Preparing and Planting Rice Seedlings
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NIKI CLARK: The first thing you have to do is prepare a paddy. Like I said, that can be a little kiddie's waiting pool with mud in the bottom of it.

Preferably not a lot of rock, so it's just really muddy. It needs to be maybe four to six inches deep for the roots to really anchor. If you think of that in terms of outdoors, that would be like our friends that did a 10 by 10, he got it perfectly level, we just fill it full of water and see where it needs to be dug out more, until you get it level.

And it has to have enough of a raised edge that it'll hold that water. And then, you start your seedlings, just by putting 'em in, flats, like I said. in an unheated greenhouse, you can put 'em in tanks with water. Our tanks are just four by eight, raised bed sort of construction lined with plastic and filled with water, and the flats just float in there. And we have four of those plants a 16th of an acre and gives us 200 kilos of rice. We've got rice in storage.

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Local Rice Distribution and Community Impact
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NIKI CLARK: We're starting to sell it now. We're actually selling it in a little store here in our village, and we sell it to our local community. People get hooked on it very quickly. We feel like we're dealing in something illegal because they're, knocking on the door, meeting us in parking lots, things like that. They love our rice. It's a nice food.

STEPH BENOIT: Does it have a distinct taste? 'Cause I know even just going from red rice to a white rice to brown rice have totally different taste profiles.

NIKI CLARK: Yeah. And different textures. It's really quite nutty. We tend to let our rice, sit in age for a year before we, de-husk it and cook it. It just has a great flavour of a lot of good texture and like I said, kind of a nutty flavour. It's very different than the wild rice.

STEPH BENOIT: Mm-hmm.

NIKI CLARK: Certainly, it's certainly different from the brown rice that I am accustomed to getting commercially. Mm-hmm.

STEPH BENOIT: Now, it does feel like an illicit item 'cause now I'm like thinking of the things I would do to get my hands on some of this. Right.

NIKI CLARK: Yeah.

STEPH BENOIT: Following that, I was gonna ask, you mentioned selling it a little bit as a food product. Do you sell it or are you distributing it at all as a seed for other people who are interested in starting to grow their own rice?

NIKI CLARK: Yeah, we really just sell it as seed trying to get people to grow rice. And we've had inquiries from Switzerland, from Bulgaria, from England, of people who are looking at rice as potentially a crop that can be grown in this era of climate change and political chaos, just for security of having a staple food like that.

So yeah, we encourage people to grow rice and we sell quite a bit of seed even in small quantities. I just got an order from Ontario for three grams. And that's enough to get started, you know? And we did start just selling a little bit here in our neighbourhood 'cause we haven't found the right kind of package that the CFIA would approve.

We were selling it in cotton bags and they said, well, you know, those aren't really. you should probably use the plastic. We said we don't wanna use plastic, so. Now the little store where we're selling it is, got a bulk bin. You could bring your own container or put it in a paper bag and weigh it and take it that way.

STEPH BENOIT: That seems like a nice solution to that.

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Surprises and Lessons from Growing Rice
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STEPH BENOIT: What were some of the biggest surprises, sort of good or bad, when you first started growing rice in this climate? And what have been some of your biggest takeaways?

NIKI CLARK: Well, we were really surprised. just the whole operation, that the pond that we'd need to have a pond that would warm the water and that we

could put water from the pond into the paddies, and they had to hold water and our first pond and paddies didn't hold water.

We had to keep adding more and more water and it wasn't warm enough. We also were quite surprised that it developed its own ecosystem and we didn't have to worry about having a lot of mosquitoes around or anything like that. We were surprised too at just how beautifully it grew once it settled in and it settles in immediately, you know, right after you, we just kind of screw the plants down into the mud and some of them might float and you have to stick 'em in again.

Once they settle in, they take off and they're just, so free of any problems for the whole growing season, really that surprised me and how productive it is. The negative surprises were, one year we had rice that started to head up. Before the plants had really filled out, and we contacted our mentor back in Cornell and asked her, this is Dr. Susan McCouch and she's the world renowned rice expert. She said, oh, well, that's the Hayayuki variety of Japanese rice. it expects to be planted out when it's still really cold. She said she'd seen it with snow on it when it's young and it's very cold tolerant. So we were having a very hot summer and it just started to head up early, but not all of it did, just some of it.

NIKI CLARK: So we still had a successful harvest, but we were getting concerned like, what's going on? Why are these plants developing so fast? She solved the mystery for us that They were very short season and very cold tolerant and thought the season was over,

STEPH BENOIT: Yeah.

NIKI CLARK: Because it got so hot that summer, so.

STEPH BENOIT: Wow.

NIKI CLARK: Yeah. Yeah. We've had lots of surprises with it, but. It's just a really fun crop. You know? I think we need to just make it our own, make it Canadian rice and encourage people all across the country to grow it. Because if you can grow anything in 90 days to 110 days, you can mature rice, you know?

STEPH BENOIT: Yeah. It just also seems like there's something inherently fun about trying something that you wouldn't expect to have here. Like that element of surprise and novelty and the curiosity that you bring to it is different than tomatoes.

I'm getting sort of excited just by this possibility. 'cause it's, yeah, it's fun just to see, to experiment, you know? it is, and when you're met with such positive results, like it sounds like you have been, of course, over many seasons of trial and error. It's just all the more encouraging to know that it can be done.

NIKI CLARK: Yeah. And, you know, we've got so many people moving into our country from all over the world, and a lot of the parts that they're coming from are rice eating areas. Of course, most of them eat very white rice. And white rice does not have the nutrition that brown rice has.

My background is anthropology, so I'm real curious why people would tend to go toward white, heavily polished rice. It has no germ in it. Very little left except starch, you know? And that would be the high status rice. It just doesn't make sense that the high status would be the poorer quality. So we gotta turn 'em onto brown rice. Brown rice is where it's at.

STEPH BENOIT: I wonder how rice production or potential rice production would be impacted by climate change as Canada experiences, some maybe longer growing seasons, but also less predictable growing seasons.

NIKI CLARK: Well, the biggest problem would be drought, right? Because you haven't got enough water, any plants are gonna struggle,

STEPH BENOIT: Right.

NIKI CLARK: But rice is very. Able to cope with heat and excess flooding, it can handle all of that. So drought is the only problem. We had one droughty summer where our pond was down a meter and we were a little bit concerned, but

You know, still the paddies were wet, they were muddy, and they still grew fine. It will be a very resilient crop for the future, whereas a lot of things are really limited to our usually cool seasons. And, rice is a lot more tolerant of a variety of things.So quite excited about the potential for its resilience.

STEPH BENOIT: I guess on that note, how do you see rice production fitting into Canada's farming sector in the next sort of 10 years? And what do you think needs to happen to make small scale rice, a thriving part of a lot of local food systems?

NIKI CLARK: Well, I've never been very interested in large scale farming. I think the majority of the world is fed from small farms. Most large-scale farming is producing food for animals anyway. I would just like to see people who grow

food to also add rice to their variety of what they're growing and share it with their neighbours and they collect your own seed and then you grow your own seed.

Hugely rewarding and gives you a great sense of not only food security, but accomplishment that you can really take care of yourself and your family and your neighbourhood. We're hoping with our expansion that we'll be able to donate a large portion of that to feed Nova Scotia and food banks.

STEPH BENOIT: Wow.

NIKI CLARK: And, really get people started appreciating what we can do here in Nova Scotia.

STEPH BENOIT: Wow. You're doing such incredible work, Niki. Thank you so much for sharing all of that. It's exciting, it's inspiring, it's energizing, and I'm so excited to see what it looks like as you continue to expand on your farm and also as. Rice as a crop expands across Canada and more people dabble in it.

NIKI CLARK: Yeah, well, I'll send you some seed and you'll have to plant a small pot of it or something.

STEPH BENOIT: Well, my backyard is like a postage stamp. I'm in a town home, so I have maybe like 15 feet by 15 feet or something, I have a kiddie pool that my dog hated. I got it for her in a particularly warm part of the summer, and she took one look at it and she's like, I'm a husky mix. I have no business going in water. I will not. So now I'm like, you mentioned a kiddie pool. We do have some options.

NIKI CLARK: Yes.

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Scaling up: Equipment and Infrastructure
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STEPH BENOIT: There was one question I was just gonna go back to, So if you start out, on a small scale, you're probably not gonna need a whole lot of machinery, but once you get a little bit bigger than what can be harvested by hand, what are those next pieces of, equipment and sort of infrastructure that you need to scale up?

NIKI CLARK: Well, when we moved to a 16th of an acre. We bought a small harvesting machine, and that is, like a tricycle. It's got two big wheels. And it also came with wheels that would work in mud. Those are just these big, diamond sort of things. And, a front set of wheels too. And then, it would just walk behind like a lawn tractor, you know, and it harvested the whole thing in half an hour and, wow. But it wasn't cheap, it's very poorly made, rattle trap sort of piece of Chinese engineering.

STEPH BENOIT: Mm-hmm.

NIKI CLARK: wouldn't take much to reverse engineer it and come up with a functional piece of solid equipment.

STEPH BENOIT: And then what about the husking and the processing once it's harvested?

NIKI CLARK: Yeah, well, that piece of equipment was expensive and it's real high quality. But like I said, you can go online and see all kinds of, makeshift sort of polishers because it's not unlike what you would use for wheat or other grains. So, you know, some of those can be, calibrated down or up to the size of grain you're trying to polish.

You just need to take the husk off. And, then if you really polish it down, you get white rice. to just de husk it, you really need something to help. ours has like three wheels that are about 10 centimetre diameter and they roll against each other and the rice goes between them and it just strips off the husk.

And, so we have a great amount of debris that is also useful. And, to make bococci and things like that. Yeah. You know, there's just a whole tradition over how all of this works.

STEPH BENOIT: Yeah. I wonder what you can use all of the husk for.

NIKI CLARK: Yeah. It makes great pillow fillers.

STEPH BENOIT: Yeah. If you've had your own livestock, like if you had chickens or something that might make some nice chicken bedding and then you can use the chicken to really close the whole loop.

NIKI CLARK: Yeah, for sure. And our chickens, they get a lot of rice because, when you first, get it and you have to wash it a lot and take off anything that's

floating. Those are less than full and they're lightweight and that's just extra fluff. So that all goes to the chickens. They love it. Yes.

STEPH BENOIT: Oh, they must be very grateful.

NIKI CLARK: Yeah.

STEPH BENOIT: These chickens have a very worldly palate,

NIKI CLARK: Yeah. They're getting some papaya.

STEPH BENOIT: Wow.

STEPH BENOIT: Now I know in a next life. It wouldn't be such a bad place to come back as a chicken on your farm.

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Community Model for Rice Farming
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NIKI CLARK: The best model for growing rice is that community model of small holdings, people growing their little vegetable garden and their little rice paddy and then getting together to do it.

NIKI CLARK: I loved your story about Bhutan. I think that makes complete sense. It's like barn raising and you just do it in a neighbourly way, and then have a picnic then you only need to own one piece of harvesting equipment and one piece of polishing equipment in the neighbourhood.

NIKI CLARK: and that's easily mobile and portable and affordable that way. So,

STEPH BENOIT: I think that's

NIKI CLARK: definitely a good way to go.

STEPH BENOIT: It's such a beautiful crop when in the fall, when it's very full, the seed heads are all leading over and it's got that golden colour. I actually have a tattoo of a rice plant because I was so moved by my year in Bhutan and how rice was just such an important piece culturally, but also the community around it was really a big piece of what inspired that.

STEPH BENOIT: So to say that I'm a rice enthusiast, I guess is maybe an understatement, but it's a beautiful plant. delicious, nutritious, and I think what you were saying about the way that we can cultivate rice and community is just a really great metaphor for a lot of things that could, ideally evolve in our food system to be more dispersed, and decentralized to involve a lot more community aspects, a lot more self-sufficiency.

I think these are all bigger lessons that we can take away from just this one crop.

NIKI CLARK: Yeah, for sure. it is teaching us a lot too. You know, we're learning all the time from it. It's an age-old crop and people all around the world have learned to love it and learned to grow it.

NIKI CLARK: So I guess it's Canada's turn.

STEPH BENOIT: Yeah, absolutely.

NIKI CLARK: Who would've thought, huh?

STEPH BENOIT: Thank you so much.

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