

**Karl Hakanson, narrator**

**Anneliese Abbott, interviewer**

**September 26, 2023**

**KH** = Karl Hakanson

**AA** = Anneliese Abbott

**AA:** This is September 26, 2023, and this is Anneliese Abbott interviewing

**KH:** Karl Hakanson.

**AA:** So Karl, thank you so much for taking the time to do this interview. So why don't we start, tell us when and where you were born, and if you had any connection with agriculture when you were a child.

**KH:** Yeah, I was born in St. Paul, Minnesota in 1957, first day of summer. And I was a city kid, and I had no connection to agriculture except for the food that we ate.

**AA:** So you said that your family was involved with some of the food co-ops in the Twin Cities. Is there anything you want to say about that?

**KH:** Yeah, that was basically my introduction to agriculture. And kind of back to the previous question, I graduated high school in 1975. The seventies was just an expansive, wonderful period of the flowering of, realizing gains in civil rights and women's rights in the seventies. A lot was going on. There was experimentation all over the place in social circles. And I went to an open school, which is a whole other cool story. And I think the Twin Cities, we like to think that the food co-ops, there was a bunch of hippies we called them, back-to-the-landers. They weren't quite maybe back to the land then, maybe, but a lot of them weren't too far removed from farming. A generation or two. And anyway, everybody was poor and wanted good food, so they started buying clubs and co-ops and so forth. In high school I took a class called "Diet for a Small Planet," off of the book of the same name. And we comparative shopped at different grocery stores. So anyways, I was just into the whole alternative world, which was very exciting.

The main thing really was my family bought a property in Wisconsin in 1970. The old bachelor farmer stayed there, and he lived there. When I was just fourteen or fifteen I would spend summers out there and hang out with the old guy. The house wasn't really habitable for a while. He had an old tractor, and I was just fascinated with the whole thing. Then I started working on farms in '76. The year after I graduated. So that was really at that farm property. The old tractor, to me, was fascinating. He was an old World War I vet, and he didn't really grow much. It was sandy ground. We still have the property. And I still have the tractor. But those things were really my introduction. I just got so fascinated with the whole thing. And then my cousin came home from Sweden, and she wanted to work on a dairy farm. I thought that was cool. They hired her because she really knew cattle, and I just came along for the ride. But anyway, when I worked for my first farm in 1976, and then I worked on farms for the next number of years. And I just thought it was really fascinating. (3:56)

**AA:** So what sorts of different farms did you work on? What kind of crops did they grow?

**KH:** Yeah, they weren't organic or anything. Mostly dairies. It was Wisconsin, there were dairy farms everywhere. Which there aren't anymore. But bucking hay was the big thing. And picking rock and fixing fence and chasing heifers and milking cows and bucking hay and bucking hay.

**AA:** Did they pasture the cows much still at that time, or not?

**KH:** Well, the first one had a parlor, that was the old-style double six, I think it was. Those cattle were confined. They had 140 head, which was huge at that time. The heifers and dry cows and stuff were pastured. But no, it wasn't a pasture operation.

And so, yeah, I just got into organic. I started going to co-ops and buying organic food, and that whole thing. Those are my connections to ag as a city boy.

**AA:** So what got you interested in organic? When did you first hear about it?

**KH:** Back in the food co-op days. It was pretty funky. I tell people nowadays, young folks starting farming or whatever, that these co-ops were funky, funky deals. They didn't happen overnight. The last volunteer at night threw the money pouch under the couch kind of thing. And it was mostly bulk oats and honey and that stuff. The vegetables were crappy. I don't know, it was just part of the—I hate to cliché with anti-Establishment, but we just started realizing that pesticides and stuff were a nightmare. We never saw raptors when I was a kid, because of DDT. And now they're all over the place. We just knew it was nonsense. And we knew there must be a better way.

**AA:** So how involved were you with the co-ops? Did you volunteer at them?

**KH:** Yeah, mostly just volunteered. There was Mississippi Market, on St. Clair. Then I went to University of Wisconsin-Stout because I was working on farms. I stayed at that farm we bought and didn't know what we wanted to do, so I just started taking classes. There was the Menominee Market, funky, funky co-op in the basement of a church. Cutting cheese and stuff like that. Now it's—well, they're expanding to another store in Eau Claire. It's a fancy, beautiful place now. And then when I went to school at River Falls, when I figured out what I wanted to do and I studied agriculture, there was the co-op grocery store in River Falls. I was a lot more involved there because I was hanging out there a lot. And that was, the food co-op was kind of our gang, our group. That's where we got together. That was our peer group or whatever you call it. River Falls—I can't remember the name of it. Anyways, that's where I met my wife, so it all turned out right in the end. I wasn't on the board or anything, I just volunteered a lot, is basically what I did. You got a discount, which always was helpful. (7:55)

**AA:** So tell me more about UW-River Falls. When did you decide to go there? And what were you studying?

**KH:** So yeah, I went—Whole Earth Market, that's what it was called, although it was a different name back then. Then they had a restaurant in there for a while.

So I was at UW-Stout. And that's when I was working on farms, and going to Stout, and hanging out. There was a number of back-to-the-land communes, so that was a wonderful time, hanging out with everybody, going dancing. They had a cowboy hat, and pickaxe. It was great. But then I'm like, okay, I've got to get serious. River Falls had agriculture as one of their main things, so I went there in the fall of '79. Graduated in '82. And I took what they called General Ag. I had a soils minor. A lot of soils. Livestock judging, crops, I took everything that I could. Ag econ. I got a bachelor's in '82.

**AA:** You mentioned you took an organic gardening class there. Can you tell me more about that?

**KH:** Yeah, that was great. Louis Groub. He was a professor, and he called it "Organic Gardening and Farming," which was the name of the Rodale publication. Early on I subscribed to that, and then it became *New Farm*. So he had a class, and you could tell he was into it, but this was 1980 or whatever. And we made compost in the greenhouse. We did one with manure and one with nitrogen fertilizer as a comparison, kind of saying, "Well, it's the nitrogen thing." So it was interesting, he would say, "Well, I don't know if it can feed the world," that attitude was still kind of prevalent. But at least he was open to it. He later went on to breed quack grass, which isn't a great thing, but trying to make it a little less aggressive so that it could become a better pasture and hay forage. I don't know where that ended up.

**AA:** In your other classes, did you run into any anti-organic ideas?

**KH:** Not really. It just wasn't a topic, in a sense. Mainstream ag was full-on, like the crops class. There was not much going on with [what we now call] soil health and all that. I took some really great soils classes. So it wasn't organic or not organic, just soils. And the little chapter on soil biology was there. But back then, soils were chemistry and geology. Not biology and all. Yeah, "You need this much fertilizer," it wasn't anti-organic, it just was mainstream ag. I don't think there was much need to be anti-organic. It wasn't [mainstream like now]. "It will never feed the world" [was the mantra and that was that].

**AA:** Yeah, so was the feeding the world thing mentioned a lot?

**KH:** Not a lot. I don't think it needed to be. This was back when a lot of students were still actual farm kids. Thinking back, a lot of them were farm kids. Organic wasn't emphasized, that's for sure. It was a lot of basic 101 kind of stuff for me. The stages of corn growth and all that sort of thing. And then you just need fertilizer. Things like no-till, which was just coming on. People were really skeptical [of no-till], I think—soils will never warm up, and all of that. But it was just full-on conventional ag. And just like the co-ops, organic didn't look great. You'd get some nice stuff from California once in a while, but there was no certification. It kind of made sense to most people that, yeah, that's never going to work. That's going back, that's old-fashioned, all that sort of thing. (13:12)

**AA:** You mentioned *Organic Gardening and Farming* magazine. Were there any other people or publications or books that you consider really influential?

**KH:** Well, I got *New Farm* when it split from *Organic Gardening and Farming*, and it was in that small format like *Organic Gardening*. And then it became *New Farm* in a bigger format. I just plowed through every one of those. I think I saved them all. And then a young friend of mine who was really getting into it, I sent them to him. I hope I still have them. But yeah, it was just validation that this is real. Mainstream farmers are doing it. I just ate all that up. And I found a job at a farm through *New Farm*. Put an ad in and got a job at an organic farm down in Missouri, which didn't turn out so great. But that's how you did things in the old days, with a letter and a stamp and an ad in a paper. But yeah, that one, and let's see, what else. I don't know when *Acres* came along. Yeah, I worked for an organic farm in '78-'79. I worked for Pete Edstrom [?] in Wisconsin, and he was organic. And again, there wasn't organic certification. But I think he's the one who turned me on to *Acres U.S.A.* I loved it, they would show the pictures of salted, abandoned irrigation land in California, and people with bad teeth from eating too much sugar, all kinds of [things like that]. And Pete Edstrom was in the paper one time. So yeah, *Acres U.S.A.* What else came along back in those days? Rodale was really the thing. They were the main organic source of information. I'm sure there was others. But yeah, anything I could get my hands on, that's for sure.

**AA:** So that organic dairy farm you worked for, that was before you went to college?

**KH:** Let's think. Yeah. That was, '76 was at the Pat and Helen Donahue farm, '77, '78 I went to Sweden and worked on dairy farms. So '78, yeah, then I went to college. So yeah, it was before then.

**AA:** So what kind of methods were they using on that farm at that time?

**KH:** Real conventional stuff. And that's why Organic Valley and dairy really fit into organic. Because you already had crop rotations with legumes. They weren't growing much soybeans. And you had manure. So that all, that's not too tough of a transition to organic, really. Yeah, it was corn. Pete Edstrom, did he grow beans? Yeah, he was a salesman for Vigortone Feeds, and I helped him refurbish an old feed mill. He had a soybean extruder, so he was extruding soybean meal, which was a really great feed. But yeah, really conventional, nothing crazy. Oats with alfalfa, oats as a nurse crop for alfalfa, corn for grain or corn silage. Sometimes they would grow barley and a few things like that. But pretty straightforward. (17:16)

**AA:** Is there anything you want to say about that organic farm in Missouri that didn't work out well?

**KH:** Well, yeah. I found this job and went down there. And they had bought this big place, and they were the kind of organic farmers that were really into it for religious reasons, you know, care for God's green gift and all that. I remember the neighbor was spraying some crops with a spray plane. [The farmer I worked for] said, "[See that] Karl, that's the work of the Devil." But they didn't live there. And they weren't around much, and they'd just bought it. There was an old guy—Dwight Hoover, which is a great presidential name—he was there. And we took his horses and did [some work, fencing]. But I didn't really do anything. And I'm just like, "Okay, I'm out of here." It just didn't work out. But I learned a few lessons.

**AA:** What did you do after that?

**KH:** That was—well, I went back to River Falls, to my girlfriend who graduated in '84. Worked on my cousin's farm and waited for her to graduate. Anyway, we moved out, and in '85 we got married and started a family.

**AA:** And at some point you went to graduate school at UW-Madison? Is there anything you want to say about that?

**KH:** Sure. At the Nelson Institute [for Environmental Studies]. We were working, my wife was a textile conservator in the Twin Cities. I decided I needed a little more education, and ended up at the Nelson Institute, which [was] just the Institute for Environmental Studies [at that time]. IES. I knew I didn't want to do straight-on agronomy or soils or something, so this program really fit, because it was interdisciplinary. We moved down [to Madison] two weeks after our first daughter was born. I hooked up with professor Pete Nowack in rural soc. That was another really exciting time. I met [many] folks that are still my best friends. We studied farmers. We studied how farmers received messages from the university and extension and others and how they adopt or adapt water quality BMPs or not, the [rational] reasons why [they do not]. So yeah, that was a great time. Rural Soc in Wisconsin is a great department. Now it's called something else. But Jack Kloppenburg was there, and Jess Gilbert was there. Really, really great [bunch of professors]. You might be really interested in Jess's book, *Planning Democracy*.

**AA:** Yes, I've read it, actually. For one of my classes I had to read it.

**KH:** Yeah, so there you know the history of Wisconsin Rural Soc, it's fantastic. Jack started the Open Seed Source Initiative. A lot of good radicals, a lot of [innovative work] going on. I met my good friends Kevin Shelly, and Michelle Miller from Farmers Union. They got me involved in the Farmers Union. We perfected some really great survey techniques [in Pete's shop]. We essentially figured out the two dozen or more [rational] reasons why farmers are unwilling and/or unable to adopt recommended BMPs.

**AA:** What were some of the top reasons?

**KH:** Well, [for one] you can't afford [the BMP being promoted]. You don't have [enough] information [to make it work]. You're not the decision maker. And it goes on and on. It's kind of a checklist for people that are trying to promote [Ag BMPs] to realize that scientists say, "Here, farmer, do this, it's the best thing ever." And they don't. And they think, "He must be a Luddite or something, [not a 'progressive' farmer]." No. First of all, everything I'm doing now is working, [says the farmer,] thank you very much. Yeah, there's a whole long list of reasons. Technology is complicated. There's nobody in the area that's doing it. Just a long list. You know, in survey work you're supposed to get over 70 percent so you don't have to do a non-respondent bias. And we would always shoot for that and almost always got it.

The DATCP, Wisconsin Department of Ag, Trade, and Consumer Protection got a bunch of money from the cigarette lawsuits—or no, was it the cigarette money or the oil money? Anyways, everybody across the country, I think. It was a big settlement by the cigarette companies. Anyway, they started the sustainable ag program at DATCP. Dick Cates, you might

want to interview Dick Cates. He's a great leader. He was part of that program. They had [a series of sustainable ag] field days all over the state and would give money to farmers to try to do [innovative practices] and have these great field days [showcasing their projects]. My project was gathering up names from those events and surveying all [the farmers who attended]. We had a bunch of partners. I didn't go to all the events. So that's how I just started meeting everybody. Dick Cates later [organized] the School for Beginning Dairy Farmers. I presented there. So there was just so much. And then the grazing thing started a little later. [Rotational grazing was becoming very popular]. There was so much going on. By then I was fully immersed. But yeah, there was a lot going on [with all things "sustainable ag"].

In '92 I got my master's. We had a little baby girl, she was a few years old. Then I worked at, I met Steve Ventura, met my friend Denny Caneff, who was running the Wisconsin Rural Development Center, which is no longer there. So that was an exciting time at the Nelson Institute, in '92. (25:01)

**AA:** Did you encounter any anti-organic attitudes at UW when you were there?

**KH:** Not in the circles I was in. But yeah, we had—for example, my then brother-in-law (my wife's sister then got divorced)—Chuck Benbrook was at the National Academy of Sciences Board on Agriculture, and he came out with the book, *Alternative Ag*, which [was seen as a threat to some in the conventional ag world]. You know that book?

**AA:** Yes.

**KH:** He spearheaded that. He had a lot to do with FIFRA, Federal Insecticide, Fungicide, and Rodenticide Act, and was going on to do all kinds of things. He really knows his pesticides and GMO [science]. He was a radical. So they had him and the former head of CALS, College of Agriculture and Life Sciences, had a debate about alternative organic agriculture. That was pretty good. Because a lot of the people that run the university ag schools, they're usually pretty conventional, [to say the least. They know who butters their bread]. Anyway, that kind of thing was going on. Colleges tend to be pretty dynamic [places], [many of the professors and] the students were into it [and doing great research]. You can always tell a traditional ag professor, where they're coming from, when they say, "Oh, the niche." Grass-based, or organic, or whatever it is. "Oh, that's a nice niche." But in parentheses, "But that will never feed the world." But not so much in the Farmers Union. It wasn't aggressive, raise-your-fist anti-organic. But it was just kind of, "Well, ha-ha. Just look at the numbers. Most of the farms are conventional and we're feeding the world, so whatever."

I do remember, there was another meeting, a sustainable ag conference, and DATCP was there. The former head of DATCP. I don't remember his name. He was a good guy. He said, "The reason that organic costs more has a lot to do with the scale of the marketing." That was a really good point. They just [didn't] have the outlets and capacity that the conventional boys do [in the well-established conventional farm-to-market system]. I thought that was good. But yeah, it was definitely in the air. Definitely back and forth. (28:13)

**AA:** So then you mentioned that you worked with Extension. Was that right after you got your degree?

**KH:** Yeah. Let's see. We were living in Madison and made [many] great friends down there. A lot happened in '92. I was looking for work, and then I got this job in Sauk County with the Land Conservation Department. The Priority Watershed Projects [were a WI] DNR [initiative], there was a bunch of money for these priority watersheds. All about water quality. Joe Van Berkel [was a great County Conservationist], the head of the Land Conservation Department in Sauk County. I went to an event where they were highlighting [farmers that were rotationally grazing their dairy cattle]. These [were] farmers that I ended up working with. They were early grazers. And I met Joe, and then they hired me. I was [hired through] Extension [with DNR funds in the] CNRED [program], the Community, Natural Resources and Economic Development folks, not the ag folks. I don't know why. But it was DNR money, and it was working with LCD, so it was kind of a mix. I was the I&E guy, Information and Education. Then we moved to Baraboo. And we lived there for 20+ years. Raised the kids and went to high school there and all of that.

I worked [on] watershed [projects]. We had three watershed projects. Because Joe was really good at signing up for all [the various pots of funds that were available]. He was really great at [that, managing programs.] Whatever's happening, he's on it. My position [focused on] nutrient management. We did a lot of the manure management work, calibrating manure spreaders, [whole farm nutrient budgets, etc. I wrote] nutrient management plans, [called] 590 plans, 590 being the NRCS number for nutrient management. I [think I] did some of the first [590 plans]. Then grazing came on, and we were on it, and I started the Sauk County Grazers Network, with all the grazing stuff that was going on. That was really cool, [a really exciting time]. All of a sudden dairy farmers were talking about what's going on, what's happening, what's good, [how to make more net profit on grass, not just complaining about the price of milk and pushing for a higher rolling herd average]. It was really exciting. I just coordinated those folks. [I coordinated one of the new Graziers Networks. It was one of the more rewarding things I was involved in.]

[Many of us] got all involved with rotational grazing and grass-based ag. That was a whole fun thing that people were excited about. There was a whole network [of farmers across the state developing grazing systems]. There's still the group in Wisconsin, the school for organic dairy farmers came out of that, and then Joe Tomandl started the dairy business school. And then the big grass-based group in Wisconsin [Grassworks], that all started. So we were really into that. Then we started to get into whole farm planning and all of that. We hired a good ag agent, Paul Ditman. He worked for Compure, he worked for Department of Ag. But he's with Compure. *Fearless Farm Finances*, you ever hear of that book? He's an economist. Anyway, that was going on. So we were really just pushing the envelope.

Then I ended up on campus with Gary Jackson and the Environmental Resource Center group. I think the ERC is still around. I'm not sure. We did Environmental Management Systems, EMS. Grassworks, that's the name of the group. Grassworks, check them out. And I started doing organic certification, and I was involved with the Midwest Food Alliance and Wisconsin Healthy Grown Potatoes. These were all third-party certification [programs]. We [talked about] how to work *on* your farm and not *in* it, is what we would say. So I worked for the ERC. And then Gary Jackson started Farm-A-Sist, which was a pesticide management program with all kinds of information. So that was kind of the second phase of my Wisconsin [ag] world.

**AA:** Is there anything else you want to say about those certification networks?

**KH:** The ERC [programs were] grant funded. We did some really great work. I worked with Mrill Ingram on a SARE project. We did a contrast of six dairy farms, which let me share with you was super interesting. But then it started to fall apart, and so I started to pick up. I did organic certifications, and I got involved with the Midwest Food Alliance, which is no longer. I think there may be little vestiges of it in Oregon. But that was really cool. It talked about crop inputs and livestock handling and worker protection and habitat. It was really great. But it didn't take off. And then some organic ones. And then I helped with the Healthy Grown Potatoes. That's in Wisconsin. Everybody's trying, all kinds of surveys said consumers were looking for these kind of things. Organic was the premier one, for sure. We did a joint [project with] Cedar Grove Cheese, [which] was the first BGH-free cheese down there in Plain, Wisconsin, by Sauk County. Worked with them. So if you did Midwest Food Alliance and you're organic, then boom, you just checked off the entire cropping section, you were there. We tried to combine and work with MOSA on some projects.

I think it's a really good thing. Farmers would tell you that going organic really helped them get their record keeping together, because they had to. And farmers hate record keeping. I don't care what kind of farm it is. I mean, I've worked with CAFO 2000-cow dairies and I've worked with half an acre urban growers. They just don't keep records! And you keep records, because that's how you make decisions. So I'd show up at these farms, and they'd have the [all the receipts in the] shoebox kind of thing. "Oh, what do you want to know?" Well, you're supposed to...okay, this is going to take longer than two hours. This is going to take all day. So people just didn't. Some did. "Oh, what do you want to know?" "Well, I want to see your records. You need to prove these things."

But anyway, that was a really good lesson. The farmers that do keep [good] records and do know what's going on. So really what it amounted to was—and I say this to everybody whenever I get the chance—you've got to have [a] continual improvement [mindset]. You've got to be constantly looking for information and going to field days and inviting people to your farm. Never sit still. Because if you're sitting still, you're falling behind. So that was the good thing about these [certification] programs.

Just as an aside, Minnesota has this water quality, Department of Ag has a water quality certification program, whereby if you go through all the [assessment] and you score well, you get a nice sign in your front yard, you get PR about how great you are, and then you get guarantee of no increased regulations for the next ten years. Which was, whatever. People a while back were so concerned that the EPA was going to shut down agriculture. I don't think that ever came to fruition! But people had to do their paperwork. And I keep asking the people running the program, they've proved, they have records, the people who do this program are more profitable than the average farmer in Minnesota. And they've got grazers and vegetable growers, they've got all kinds [of farms]. It's a good program. But my question is, is that because they took the program, or because they were that kind of people that wanted to take that program and [already were a good fit for the program]?

Anyway, that's just my take on third party certification and these things. A lot of people are [still saying], "Oh, organic is too expensive." Well, you mean, for four hours a year or whatever, and \$500 or less, and all the extra money you're getting, that's not worth it? Okay, whatever. "But we hate paperwork." Anyway, I digress. Sorry. (38:33)

**AA:** No, that's all very, very interesting. Is there anything more you want to say about your work with those grazing networks?



**KH:** Oh, well that was great. It's the entry into dairy farming [these days]. You can't start a 2000-cow [confinement] dairy. It's not happening. [It does not pencil] The grass-based dairy and beef, if you add up everything, it's just the way to go [to get a start]. But getting back to the conventional mindset, your production is nowhere near what it's going to be in a full-on feed situation. But people [often] don't quite get that it's the net returns that's important, not the gross. The vet bills drop off, fertilizer bills drop off, the machinery bills, you know. And it's a quieter place, it's a safer place, etc., etc. It takes a whole different kind of management. Yeah, check out Grassworks. Those are the leaders of grass-based, back in the day. Joe McNair was the editor at *Ag Review*, which is a newspaper that's—we used to have *Ag Review*, *Agriculturist*, and *Wisconsin*. Those three great ag newspapers. *Ag Review* is just a little corporate sheet now. They just have ads for big machinery and stuff. But he had the Milk Pail [section]. And he really helped get grazing going. He's got the magazine he and his wife publish, *Graze*. Ruth works for CIAS, the Center for Integrated Ag Studies. Ruth does or did work there. Anyway, *Graze* is the name of the magazine.

That makes me think of, another thing they started on campus was the Rural Soc department studying ag. A bunch of stuff going on. And the whole anti-BGH wars were in there. We had a good time. Atview, it was called Atview, and then they changed the name. Anyway, they studied the structure of ag, sociology of ag, and did a lot of reports. (41:46)

**AA:** Is there more you want to say about those anti-BGH wars?

**KH:** Well, it was a big deal in Wisconsin. Being, back in the '90s, the number of dairy farmers has just plummeted. I remember when I was doing that ag EMS work I did a PowerPoint, I think it was 16,000 dairy farms, and now it's below 5,000. Way back when in the '70s, it was a hundred-and-some thousand. Just crazy.

There was a big rally down at the Capitol. Monsanto was coming in. We'd get at Extension this great big folder, glossy, gorgeous thing, full of why BGH is the best thing since sliced bread, a lot of money [to produce]. A lot of dairy farmers [were] skeptical. They don't want to be shooting up their cows all the time. They love their cows. And the economics were shaky. Sure, they would give more milk, but they would eat more, etc., etc. And there's a lot of research on why that was the big mistake for Monsanto to really push that one. In Wisconsin. You're talking about cow's milk, which is kind of like mama's milk. It's wholesome and whole. The wholesomeness of milk was being challenged. People didn't like that. And that's when dairy farms were getting bigger and bigger. I don't know where BGH is at today. I think it kind of fizzled. I think there's some research on why. Monsanto, the same thing with glyphosate. Everybody hated Monsanto because their PR was just so aggressive. All kinds of other companies were making terrible stuff, but we didn't hate them as much as we hated Monsanto. And I think it just fizzled. It was just a hassle for farmers. I don't know what ended up with BGH, but it wasn't, from a strategic point of view, they launched it at the wrong place at the wrong time, I would say.

**AA:** Yeah, it seems like most of the milk, even just conventional milk in the store, always says, "No rBST," or BGH, or whatever.

**KH:** No, you're messing with milk, and people didn't like it. And I think the farmers didn't like it. Because you had to shoot them up every day or every week. And that's a hassle. So I don't know what happened to BGH other than that it just fizzled. (44:52)

**AA:** So then you mentioned that you've more recently done some work with urban agriculture. When did you start doing that?

**KH:** Well, after the ERC fell apart, I was on the road doing different jobs here and there. And then I got a job at the Cannon River Watershed Project [in Minnesota], and then this Extension job came along. The University of Minnesota Extension in Hennepin County. They hired me I think because I had a bunch of [ag] background, but also because I was interested in the urban bit, [and I grew up in the Twin Cities]. So that was great. I did that for nine years. At the time, urban ag was kind of an oxymoron in my brain. I hadn't paid attention to any of it.

I made some connections with folks in North Minneapolis, and eventually got my office in North Minneapolis. Basically, the African American community. I just plunged in and met everybody. There was the Minneapolis Homegrown Food Council, so I would meet with them all the time. I was a regular. They had guests, I didn't want to be on the board. I met a whole bunch of people there and learned a lot. They would meet all over the city in different places. The first meeting I went to was at a kind of a retirement home, and I remember looking around the table, and I think there was three or four white guys [in the group of two dozen]—and yeah, we're not in Kansas anymore, this is not rural Wisconsin. And they were talking about all kinds of [interesting things about the food system]. And I thought, "Wow, this is great." And I realized that these folks are pretty disconnected from agriculture, conventional ag. But people kind of knew that the food system was screwed up. Food justice, food sovereignty, food access—all these kinds of things were being talked about. It was very different than what I was used to. And I realized, "Wow, these circles are getting bigger, and it's going to start overlapping with regular ag folks." And I think that's what's happening.

The first year, I think I just had coffees with people and tried to figure out what's going on. So I made all kinds of connections, started a couple networks for the Sustainable Farming Association. Did all kinds of things. We started a composting training, because that was always a weak point in these community gardens. We started [a project to address the fact that] the pipeline to the university doesn't go through North Minneapolis. We worked with university professors and students. We had university students and North Minneapolis youth and North Minneapolis elders, as we call them, [manage] a bunch of gardens. Project Sweetie Pie [and Michael Chaney, who was the pied piper of North Minneapolis, ran several] gardens. We just tried to get people [from the community] involved with gardening and food [and the connection to health], figure that all out.

There's a lot going on now at the [Minnesota] Department of Ag with the Emerging Farmers Working Group. The [Assistant] Secretary of Ag is a Black guy from Harlem, of all places! [Fantastic.] In this working farmer group there's Big River Farms, which has an incubator farm and [hosts the] Emerging Farmers' Conference, which you might like attending if you're ever up this way in November. [There are all the immigrant farmers], with Somalis [and other Africans]. The Hmong [of course] have been here since the Vietnam War, and they revitalized the farmers' market scene big time. The Hispanics, the Hmong, they know how to grow stuff. But the land access thing and the marketing thing [are huge] challenges. And then there's all kinds of others that are getting into the act, [farming and growing food for their

communities]. It's happening. [A whole bunch of new farmers are coming on line.] There's still a great need for education. And of course the land access piece is huge. A bunch of people are working on that in different ways. And then marketing. So it's tough for anybody, but if you don't speak the language very well...? So that's a brief history of all of that.

And then I just recently, in January, started with NRCS, working with them. I'm an urban ag specialist. Helping them—they're pivoting, NRCS is, and FSA. FSA has an urban ag office [now]. They hired a woman to run that, and she's hiring somebody so that people in the Metro can have easier access to the USDA programs instead of going [far] out to the suburbs somewhere. There's a [cadre] of NRCS staff that have "urban" in their name now. We just had a meeting last night. So I'm bringing people together and working on this urban ag, urban soils, [bringing in] people at the U. We work in our silos, and that's okay, but we had a really fruitful first meeting yesterday, so we're going to keep going on that. I'm helping NRCS staff figure out this urban—and small scale, not just urban, but two-acre vegetable farm. You know NRCS, they've been around for 88 years, but a lot of their programs and policies evolved with conventional ag and just kind of don't fit this new agriculture. So we're adapting things. (51:35)

**AA:** How many years have you been involved? What was the first year you started the urban agriculture?

**KH:** With Extension?

**AA:** Yeah.

**KH:** I got hired in '14. And then I just ended up in December of '22.

**AA:** And so have you seen during those—what would that be, eight years, nine years?

**KH:** Yeah, let's call it nine years.

**AA:** So have you seen the number of urban farms increasing over that time, or has it been more stable?

**KH:** Tons of interest. Not a whole lot of actual market gardening [to scale]. Lot of community garden work. But people that are actually selling for market in truly urban areas, it's happening, but it's tough. Like I said, the marketing piece and the knowledge piece. There's a certain amount of naiveite, everyone has their farm dreams, and these community gardens—there's open community gardens, where everybody shares the whole thing, and then there's the closed one, where you have your little plot. So there's a lot of that. And people love it, and people are growing for themselves. They end up with a lot of food, and so they give it to the food shelf. A lot of it is really educational and community development and youth development oriented, and not maximum yield or maximum profit oriented. But compared to twenty years ago, yeah, it's a whole new world. And a lot of people aren't on the radar, they don't necessarily promote or whatever. But there's definitely a lot going on. And people are figuring it out. And this is what I try to emphasize, "Okay, you're not going to make a living on your half acre, your eighth of an acre in your backyard or someplace. But it's a good training ground to figure out, do you really

want to do this? Because to do it right takes a lot of work.” Farming is just not for everybody. It’s a lot of work. There’s new tools and technologies that are helping.

For example, California Street Farm was [operated by] a young couple. There had been a couple people coming and going, they tried different things [and been through a few iterations]. And then this young couple really got serious. Less than an acre. And with marketing at the farmers’ market, and doing it. They even had a feature in the John Deere *Furrow* magazine. And then they moved out to a more established farm, Loon Organics out of Hutchinson. And then this young [woman]—and I think her boyfriend or something—took over this farm and really succeeded. They’re really great. They’re young and don’t maybe need a lot of money, so they’re making it work. And if they want to do it some more—if you really want to do it fulltime, you need scale. You need production. And it’s hard to do that on a half acre. People can do it, you can make pretty good money. If you have another job and it’s not fulltime, hey, that’s great.

I know another one—sort of the idea that it’s a training ground—a Somali woman [and her husband]. She laughs, says she started growing [microgreens] in her bathroom. Then she went out to Big River Farms and was at their incubator farm and really liked it. Through their just unbelievable hard work, they finally found a farm to buy. She’s quitting her day job and they’re going to be fulltime farmers. They’re really into it. You can’t just start farming. You have to get educated, have to know what you’re doing. You have to know what you’re getting into. [They did their homework].

Another farmer couple on urban lots, they took over this [small urban] farm from this other fellow who went up north. And it’s literally on parking lots. Plastic covered with compost on parking lots. And they’re really into it. [They made a go of it.] They really worked hard to figure out soils and marketing and had a CSA. And they’ve now bought some property in western Wisconsin, not too far from our place, actually. I went out and visited them. And so that’s what I like to get across to folks. It’s just like the co-op [grocery stores in the twin cities]. They didn’t start with these [big] beautiful grocery stores. It started with the funky little thing in the basement. And when you’re young, you can, as rural sociologists say, self-exploitation. You’re young, and you can do it.

I think that the whole urban gardening scene is bringing people together around gardening, around soils. It’s environmental education. Seeing these kids, some of these gardens don’t look great because they’re all volunteer. People kind of don’t know what they’re doing. But [a kid can] can hold a tomato he grew. Then [when] he goes to a store and sees a tomato, he or she can say, “Wow, I know something about tomatoes now.” So I think we’re not necessarily growing farmers, but we’re doing all kinds of things, and food is the thing. It’s the gateway to environmental awareness, I would say. And culinary careers, natural resources careers. Not just being a farmer. There’s all kinds of things. (57:41)

**AA:** Does that happen often, that people just start with the urban gardening and get bigger at it and move out to the country, like those three people you were talking about?

**KH:** I think for the ones that are really serious, like “this is what I want to do,” I think that’s what they end up. Because you can’t, there’s some folks that will do it on an acre, like Curtis Stone and some of these rockstar kind of [growers] that you see on the internet. You can do it. But you really have to have your act together. What it amounts to is that you really need scale, [eventually]. Especially if you want to grow corn or squash or stuff that takes up a lot of room. You can’t grow a bunch of sweet corn. I don’t know the extent to which it happens a lot, but I

think it does happen. And a lot of people started, the more prevalent pathway is to go work on other farms. [As more people get started and are successful, the more pathways for others to work on other farms will open up.] That's what almost every farmer who is now a farmer will tell you, just go to work on a couple other farms and see if you even like doing this. Because it's a success if somebody says, "This is not for me." We don't want to talk people into long hours of hard work with low pay and low benefits. I think the more common way [is to enroll in beginning farmer classes]. There's a bunch of classes [now], LSP has lots of [beginning farmer] classes, [for example]. Wisconsin, too, has organizations that have farmer training. The mentorship, the dairy school I mentioned. Yeah, go out there and work on farms. That's what I did. I figured out I would never be able to start a farm on my own. I didn't go down that path. But anyway, I couldn't say how prevalent that is. That would be a good question though, for sure. (59:39)

**AA:** So could you tell me more about your involvement with the Land Stewardship Project?

**KH:** Sure. We moved to Stillwater after—we got married, and then I worked with my friend who had a small carpentry contracting business, so I was a carpenter for a number of years. We built houses and remodeled and all that fun stuff. Then we lived in Stillwater, Minnesota. And I got to know Ron Kroese, who is a good friend to this day. He started Land Stewardship Project. And Patrick Moore was there. I met with Ron. I was looking around [for ag work]. I was doing carpentry work, but I didn't want to do that, and I was looking around, I wanted to get back into ag. I followed him Ron out to the Land Institute, Wes Jackson's place. And they had their big fall festival and Angus Wright spoke about this dread of pesticide use in Mexico. And I hung out with LSP [staff as it] was getting rolling, helped them with some field days and stuff. They had been involved with the Wilder Foundation, which owned the property which is now the Big River Farms incubator farm. I worked out there, just volunteering on their board, helping them think about what to do with that farm. The Hmong were just coming into town, so to speak, at that time, and growing out there. They had this little setup, [sort of an educational petting zoo] where kids could pick the eggs and do this fun [farm] stuff. But anyway, got involved with LSP and have [been big fans] ever since. And they have grown and just become a fantastic [organization]. It's a credit to Ron and everyone else. This is their fortieth year, for crying out loud. They have a whole political action section, and their beginning farmer school, which is great. They're just great. I've followed them ever since and been a member. It's just part of my network. I've paid attention ever since. So yeah, it's a good group.

**AA:** And then you also mentioned you'd been involved with the MOSES (now Marbleseed) conferences. Is there anything you want to say about those?

**KH:** Well, I just mostly attended [their conference]. I remember going to one of the very first ones, and then they expanded to the Sinsanawa Center in Wisconsin. Then they outgrew that, and they've been in La Crosse ever since. They're kind of outgrowing that, but I think COVID and all kind of clipped their numbers. That kind of became my gang and my cohort. We'd go, and I brought my daughter there one year when she was getting involved with these things. Learned a lot. It was the kind of annual event to connect with everybody. All the presentations about all the particular things, how to do this and that, and then the trade show was awesome. It's just the

place to connect. Haven't been the last couple years. It's always the same time as the Porcupiner ski race, and my family's been doing that. I have to choose. But I haven't gone the last few years.

Now it's [called] Marbleseed. I don't know why they changed the name. I guess MOSES was too—they didn't like MOSES or something. But they're still, many years later, it's still "Marbleseed (formerly MOSES)." But they're pivoting, like everybody else, realizing that there's a whole part of the world we haven't been paying attention to, with the Native American ways of doing things and African American [ways and all the rest of it]. The world is changing. And we realized [that for many people], "Oh, you haven't felt welcome? Oh, that's no good." So [Progressive organizations are] pivoting to make sure we're all involved together. So that's a big part, I think, of the name change and all that. And it's interesting—Naima Dorr, that I mentioned, she was involved with the emerging farmer conference when I was on the planning committee. She said, "Yeah, I went there, and just didn't feel comfortable." She felt out of place. And to me, it's homecoming for me, so to speak, so I was surprised at that. I wanted to say, "I'll take you next time, these are good people." There are some barriers that everybody's working out. Not everybody, but a lot of us are working on it, to make everything welcoming. You know, you see the same thing [with going] outdoors, [visiting] National Parks, the outdoor world. [Many have not been welcomed. We are, I hope, changing that.] So that's happening.

I just came across this ATFI [?], which became whatever it is now, the rural soc center. Brad Barnum [?], I think he's still at the U, in rural soc. Frederick Buttel, he passed, he was a good rural soc guy. Jackson Smith was a colleague of mine. This is from '95. Just wanted to throw out those names. I don't remember what the center became. But anyway, that was a bunch of good radicals at rural soc, like there always has been. Anyway, I digress again. I'm sorry, I have a habit of doing that. But yeah, involved in LSP since the get-go. And then that spun off the networks, which became SFA, Sustainable Farming Association. And that's where my two networks that I started were in cooperation with the SFA on those. (1:06:24)

**AA:** So what is your perspective on the relationship between the land grant universities and the organic farming community? And how has that changed over the years?

**KH:** Yeah, little by little. I think it's a legit thing. They've all hired—we've got Mary Rogers that does organic pesticide research and organic crop management research for foods. We've got Extension specialists that do organic. We've got Julie Grossman. There are people that are all about organic, and they're regular [full] professors. That's all changed [from years ago when I was the U]. There's Erin Silva at UW-Madison, [who] started the whole OATS program [Organic Agronomy Training Series]. She's fantastic. Just a whole world of people, getting row crop, big farmer folks into organics. It's totally legit [now]. Partly because all of a sudden there's a bunch of money involved. All of a sudden it's real because it makes money. It's expanded.

The creation of the USDA organic certification, I think we all kind of knew that was going to be a dance with the devil, so to speak. But it's really helped to have this one standard across the country, it's meant a great deal. Now, of course, a lot of big corporations are buying up little ones, and it's the whole debate with hydroponics and can that be organic, and do these massive chicken and dairy farms, are they really organic? There's a big struggle going on because it's gotten so big and there's [lots] of money.

You might be familiar with the Real Organic Project. I think that's the founders of organic saying, "Hey, wait a minute. A massive CAFO in the desert with the door open so they have access to pasture, that's not really what we had in mind." I think that was maybe the

Achilles' heel of organic, coming off the '50s and '60s with the pesticide nightmare, but we didn't put in there anything about the human aspect. The labor involved in organic. Some of the scale, family farm kind of things. We just assumed, because in the '70s it was all family farms. So I think that's changing. But is it organic or not? Okay, it's great that they're not spraying all [the pesticides, to be sure]. I wouldn't say I'm ambivalent, but in the long run I think it will be okay. People are learning how to grow things and produce things and process things without all these chemicals. [But it is about entirely different farming systems, not just "conventional" ag minus chemicals.]

Now, could you have a squeaky clean organic system without very many people involved? Well, yeah. With robotics coming online [and other technologies]. So that's a problem. What about the people? Which is the main idea of anything we do, I would think. There's never not going to be fights [and struggles]. I think this is where the consumer dollar and all that comes from. But it's a catch-22, no doubt. Is it great that there's more and more organic and you can get it everywhere? Sure. Is it what we had in mind? You've seen the big circle chart of who owns organic that Cornucopia Institute puts out, and others. Okay, maybe that's not what we had in mind. What about the farmers? That's an open question. And now climate change is a whole other thing. And the idea of regenerative and soil health. We put a lot of stock in soil health. Conventional farmers are figuring out that their soils are crap. And the no-till folks are figuring out cover crops. There are good things going on [all around] for sure. But the overall structure of who owns things and who controls things, which is what the rural soc folks in Wisconsin were studying, that's still a big question. (1:11:28)

**AA:** So what is your philosophy of organic farming?

**KH:** Well, the pesticides are killing the planet. The insects are disappearing. Which means the birds and the bats and everything else disappearing. It's a nightmare. It's awful. And we can grow food without that. We know how to do that. Okay, sure, there's some situations where it's handy. I use glyphosate to cut and treat buckthorn. And then Wendell Berry's question, "What are people for?" What is economics for? What is the stock market for? Just to make more money? What's the purpose? So that's where I come down on the family farm thing. Land access—before the '70s, I feel like I got the taste of the end of traditional American family farms. There was just a whole culture of family farms. FFA and all that. Prior to that in the '70s, the only people who bid on farmland, [in the Midwest anyway], were farmers. That kept the price affordable for farmers. But now the world's different. You have recreation property and investors and mega-ag, foreign investors, I don't know what. And Wall Street is involved. And there's more and more people, maybe is the main thing. So nobody can afford farmland anymore. Same thing with housing, by the way. If you're going to buy a house, you should have to live there. Take all this investment [profiteering] out of the equation.

Anyway, so what's a family farm? Well, they live there. It's their capital at risk, and they provide the majority of the labor. And the scale changes from Vermont to New Mexico, but that makes rural communities vibrant. And organic, yeah. Now we know how much fertilizer contributes to climate change. And organic has another Achilles' heel in tillage. You need tillage to kill weeds. Weeds are always a thing. It's easier for folks to do cover crops when they can just kill them with glyphosate, for example. But that's happening. I mentioned Erin Silva back there, she's doing some great work on that. It can be done. [It is being done.]

And back to grazing, maybe we just don't need so much milk and meat. My idea is to spread the livestock out across the nation, with people taking care of them. Here in the Midwest, we talk about graze obligate landscapes. Back to one of my heroes, Wendell Berry said, "You know, we had a perfect system, and then we screwed it up and [created two problems] by separating the crops from the animals." And farmers will tell you that. I've talked to many old [farmers]. "Yeah, when the cattle left the farm, that was it." Because that was their fertility and soil health and different avenues of income.

So organic, yes. I think that means way more. It's not—there's a list of prohibited sprays—organic is not a list of what you can't do. It's what you should do. It's not a bunch of constraints. It's a huge opportunity to mimic nature and to be productive without killing things, killing the planet, so to speak. It forces you to integrate livestock, it forces you to think about crop rotations, it forces you to be a better manager. And I think again, the circles overlap with the soil health thing. And I think conventional farmers are going to organic farmers for weed control. Annual crops are essentially weeds. Weeds are annual crops. Nature abhors a vacuum. Bare soil is not natural. So weeds are doing their job. We're supposed to have weeds. They're not weeds, except that they're getting in the way of our crops.

So my vision of organic has evolved. I really like what the Real Organic folks have to say. We need local markets. And people all across the planet, the nightmares in China and Africa, these big corporations coming in—no, no, no. People need to feed themselves. It's not that complicated. We just need to pivot. We can do it. I mean, in this country, the corn—you know this—a huge chunk of it goes to ethanol. Okay, that's not feeding the world. A huge chunk of it goes to high fructose corn syrup. That's not feeding the world. That stuff's awful. And then it goes to feedlots, with beef and dairy. Okay, they're ruminants, they're not supposed to eat [grain]. I mean, think how many acres can be devoted to growing food for people. We have the capacity, we're just not in control. What did I just read? If five percent—somebody did a study. If 0.5 percent of the farmland in this country was devoted to food crops, it could solve the [federal] deficit?

Anneliese, we go on and on about left and right in our politics. It's up and down that's the problem. It's not left and right. The concentration of wealth, etc., etc. My vision of organic is expansive. The lunatic fringe has come to sit at the center of power. So they're not going to let much happen. I don't expect much from this Farm Bill. We'll see. I don't know.

Anyway, yeah, work with nature, and keep your eyes on the prize. No pesticides for sure. Okay, maybe a little here and there, if you absolutely need them. They are useful for some purposes. You know, glyphosate is one of the safest herbicides ever invented. But when you spray it across the whole country year after year after year after year, that's a different story. As we like to say, it's not the what, it's the how. We need to think about that. (1:18:58)

**AA:** So what's your perspective on the connection between organic farming, the environmental movement, the back-to-the-land movement, or any other social or political movements?

**KH:** Well, I don't know. It's all kind of related. Back to the land, you know, in the '60s and '70s, I was younger than most of the folks at these communes that I hung out with. They were just fed up with all the BS and wanted to get back to nature. And people—what did E. O. Wilson, the great biologist, the one who studied ants? He's a professor down south, grew up in Alabama or Georgia. He wrote that book, a great book on all the species on the planet, and how we haven't even begun to catalogue the species, when you talk about bacteria and fungus and all that. But he



coined the phrase, I think, “biophilia” or something like that. The innate connection with nature, with the planet. People have that. They’ve done all kinds of great studies where they plant two trees in the middle of downtown, and people sit there. People that are [used to] pure concrete, they’re strictly pavement kind of people. Nature heals. Well, duh, we’re part of nature. It’s not surprising. And sometimes it’s expressed as, “Oh, it’s a pretty view, people want to live by the lake.” They figured out that people like to live by golf courses. Most of them don’t golf, but it’s just peaceful... Besides being sprayed to death.

But anyway, I think it’s all in the mix. Once people say, “What’s this stuff we’re eating? What’s this high fructose corn syrup? Why are we sick? Why are we obese?” I think farming—again, LSP has its farm dreams afternoon session, where they say, “You really want to do this? Okay, let’s just talk about this a little bit.” It’s kind of their pre-class, “I’m thinking about farming, what do I do?”

It’s interesting, for example, the pollinators, when it came out that the bees were dying, somehow that really hit a chord with people. We kind of innately knew that birds and bees are important. We have to have flowers, for crying out loud. And that monarch thing—oh, we have to have monarchs. We can’t not have monarchs. I mean, there’s no economics there or whatever. It just really struck a chord with people. So now they’re putting in pollinator gardens and rain gardens. I think that’s an interesting thing, why that particular issue struck a chord with so many people that it’s now just part and parcel of our vocabulary. It’s a good thing.

I worked a lot with the goat and sheep people on land restoration, using animals, retrain livestock to the land. Trying to educate people, “You know, these woods here in the Twin Cities, they’re really a mess. They’re degraded landscapes, big time.” Just teaching people what they’re looking at. It doesn’t take too much of an awareness for people to pivot and go down another path. Which is similar to North Minneapolis with kids and gardens. They’d never gardened. I remember when these kids came out the first time, we handed them some hoes. Obviously they’d never had a hoe in their hand before. They had no idea how to work the darn thing. To me or another, it’d be like, “Oh, what do you mean?” So yeah. We’re starting from zero with a lot of things, you might say, [with ecological awareness and land management skills]. But I think it just innately makes sense. I think somewhere in there is the connection between these things.

**AA:** Were you involved in any social or political movements that overlapped with your organic farming interests?

**KH:** Well, I got involved with Farmers Union, and they’re big supporters of all things organic. I’ve supported the Cornucopia Institute. Mark Kastel’s got his own group now, a watchdog group, Organic Eye. Kind of watchdogging organic to point out that corporate interests aren’t necessarily helping. Yeah. I’ve been involved in a few things like that. Mostly supportive of these kind of organizations and nonprofits. In my professional world, just kind of uplifting some of these things, as we now say. That’s just always been where I’ve been at. (1:25:11)

**AA:** So what do you think are the most important aspects of organic farming history to preserve and pass on to future generations?

**KH:** Well, we stand on the shoulders of those who came before. And you mentioned at some point something about relearning things. If you forget your history, you’ve got to relearn it. So I hang out with a bunch of young folks—you know, people in their 20s and 30s—who don’t know

the history, and they're saying these things, and I just roll my eyes and say, "Yeah, we've been there." [I guess all generations sort of think they are the first to realize these new ways.] I've always been a big fan of institutional knowledge. The guy that headed up the watershed project at DNR, Wisconsin, the whole watershed project thing, we did fantastic stuff. And it's just going to be forgotten. And if you forget your history, you have to relearn it. It's so true. I was talking to some of my Extension colleagues, this young gal, before the '90s—you know, they're strictly internet. They don't do paper. And so anything pre-internet just doesn't interest them at all. It's irrelevant.

It's important that the Wisconsin Historical Society, all the work they've done. They've got this incredible collection of International Harvester material, the tractor company. There's family farm history there. You see a picture of "A big farm for modern farmers" and it's a 40-horsepower tractor. That was a big farm for the modern farmer. That's good stuff to know. And what it took to become organic, and some of the pioneers, like some of the people I worked for, and all the crap they had to put up with. And that's what's happening now. People are just creating things out of nothing. And the pioneers are our heroes. I applaud the work you're doing big time.

I mentioned my friend Ron Kroese and the interviews he did when he was at the Minnesota Institute of Sustainable Ag. He was their endowed chair one year. I think I mentioned that. People like Wendell Berry. They're not going to be around. You need to get [information] from the original source. More power to you. I think people need to know where we came from so that we can keep moving forward. Who knows where we're headed. But I think organic, [regenerative ag] is going to so inform the climate change [dialogue]. If we mimic nature, biomimicry, if we get livestock in the system and crop rotations, we don't need nitrogen fertilizer, which is a massive contributor to greenhouse gases. This is not niche little cute things that some people can do. (1:28:46)

**AA:** So is there anything else you want to share before we end the interview?

**KH:** I'm just kind of rambling my thoughts here. But when I started, there really wasn't organic. A bunch of hippies and outsiders and some farmers into it. A lot of times the farmers that I worked with, somebody had died of cancer because of the chemicals. And that was one motivator. But there wasn't organic certification, there wasn't LSP, there wasn't SFA, there wasn't MISA, etc., etc., etc. The list goes on and on. If you want to start out—I'm envious of the twenty-year-olds now who want to get into farming, because they have so many resources. Tax breaks, and training, [grants and programs of all kinds], here's some easy money for you. And the grazing, the fencing technology and stuff, there's a huge difference. And now people are getting technology from Korea, Japan, and Europe. These little Jang seeders and two-wheel tractors and drip tape. There were no vegetable farms [when I started out]. I could have worked on a vegetable farm, but there weren't any, that I knew of. There was Gardens of Eagen. They were early pioneers. Did you ever read *Turn Here Sweet Corn*? Atina Duffley talks about her journey and meeting Martin, who was a farm boy from Eagan. Took on the Koch Brothers and won, because they were going to put a pipeline right through their damn farm. It's a great story. It's a very personal story. They eventually had to move because the suburbs just engulfed them. That's a great read. And they're true pioneers. If you want to interview some heavy hitters, I would suggest Martin and Atina Duffley, because they could tell you way more than I can about the actual farming and setting up the whole organic world.

Yeah, there just was not vegetable farms. I didn't know of any. That was California. So we've come a long way. And we have a long way to go. I think if we focus on biomimicry. It turns out those crazy primitive natives were right. Out in California they interviewed some, I don't know what tribe it is, "Well, we used to run livestock through here, but you stopped the fires, so now it's a disaster." Native Americans weren't just running through the woods picking berries. They managed the landscape. When the Europeans came, it was [a] managed [landscape]. They managed fire, and they managed the bison herds and stuff. They lived in such harmony that we can't even imagine. So that's something that we have to do. We have to listen to all the voices. And I think livestock is key, despite what the vegans have to say. I mean, if you're just sitting at a desk all day, you just don't need that many calories. No wonder we're overweight [and unhealthy]. But you can't live on lettuce.

I think what we're learning about the gut biome in relation to the soil biome—you know about Project Drawdown? They've laid out the mega and gigatons of carbon from this industry and that industry, and they've laid it all out, and here's the solutions. And it's everything from agroforestry to educating girls. It's all this stuff. If we stopped all the carbon going up in the air, that would be a miracle. But we still have to drag it back down. And it's plants that does that. Besides some magic technology they might come up with. So agroforestry, agriculture, land use, check it out. They've got a whole section on how much we could save.

There's all these capitalist guys jumping in with their carbon markets and all this. And as far as I can tell, most of that's kind of hoey. Yeah, cover crops are great, but I don't think [it's] storing carbon long-term. You can increase the carbon at the surface, that's great, there's nothing wrong with that. That's what we need more of.

So anyways, I think organic is labeled as "No pesticides." That's good. But it's evolving. The [realization about] soil health, [that soil is biology not chemistry], is really a fantastic [turning point]. We've just realized that we've beaten our soils to death for the last hundred years, and that it's biology, not chemistry, I think is a good thing. The struggle continues, but we've come such a long way, I'm hoping just in the nick of time. Definitely the political struggles that the organic industry's had, and the farmers, it's so important to realize, for young folks to realize, and people who aren't even born yet, that they've been through this. Yeah, the Farm Bill is a disappointment. But the way things are is not by accident. It's policy. And the big boys, they camp out there in Arlington, Virginia, in all the hotels, 24/7 lobbyists. Suitcases full of money, they win. It's hard to compete with that. So that's our challenge.

**AA:** Thank you so much for taking the time to do this interview!

**KH:** Yeah, thank you for your work. (1:35:28)