

Selling Honey & Supporting A Cause with Dr. Christine Bertz

David Crabill: Welcome to the Forrager podcast, where I talk with cottage food businesses about their strategies for running a food business from home. I'm David Crabill and today I'm talking with Dr. Christine Bertz.

Christine lives in Memphis, Tennessee, and is a research assistant professor at the University of Memphis. She has a PhD in biology and is very interested in environmental conservation, which includes her interest in beekeeping.

About three years ago, she started beekeeping and she sells the honey with her cottage food business, [B & Bees Provisions](#). People start cottage food businesses for a variety of reasons, and I thought it would be fun to bring Christine on today to share her perspective on the importance of beekeeping in conservation.

And with that welcome to the show, Christine. Nice to have you here.

Christine Bertz: [00:00:47] Thank you so much. It's really nice to be here.

David Crabill: [00:00:50] So Christine, can you tell us what you sell? And, well, I already gave it away right in the intro that you sell honey, but, um, do you sell anything else? And how long have you been doing this? Take us through the start of your business.

Christine Bertz: [00:01:04] Right. So, so technically speaking, I also sell, bees wax and, jams and jellies. And this sort of started by accident. About 12 years ago I picked up canning. Partly because I was living in Oxford, Mississippi, surrounded by all these wonderful farmer's markets and local produce and CSAs.

And partly because I had great memories of making plum jelly with my family as a small child. It began with the standard recipes from cookbooks.

And then I started following Marisa McClellan's Food in Jars blog, and I got obsessed with making jam. I made more jam probably than I could store or give away or consume. And at the same time I was, uh, in my biology program and was becoming aware of the concern.

This was in the early 2010 when colony collapse disorder in honeybees became big. And we were very concerned with pollinator health and issues of conservation related to that.

So I was starting to come interested in beekeeping when all of this happened. I do education research and I have a desk job. And for someone who was very active and very outdoorsy to go to a desk job, was soul killing. It was terrible.

And I did a couple of things to compensate for this. One was, I started to research beekeeping because it was something I could do to continue to learn and grow in biology and to do something that was meaningful in conservation. And I took up running because I needed something to get, stay outdoors and physical. And there's a reason I tell you that.

Here in Memphis, we have St. Jude children's research hospital. And we have the St. Jude, Memphis marathon, I started to create gift baskets as thank you for donors who donated to my St. Jude fundraiser. And it finally gave me something to do with the jam.

I created the label after someone said, I would like to buy some jam from you, what would that cost? And I realized I had no idea what I should charge for jam from there. I like, I did that exercise. If you look up online, how to price your products, where they say factor in your time and factor in the markup that you would get in warehouse and that you would get, once you sent it to a store and.

But the number that I came up with was ridiculous. Like, I just don't think anyone's going to pay \$32.50 for a half a pint of jam. But, it gave me a starting place to look at things like materials costs anyway, and what it would cost me to make jam.

Um, then I wanted an, like a cute label to put on it. And that was really where it started. I knew at that point that I would have honey the next year and that maybe I could make a little bit of money there. And so it would be a useful thing for me to have in my back pocket. And it kind of came from there.

David Crabill: [00:03:51] So I did see on your Facebook page that you've sold jam in the past, but it seems like a lot of your business is focused on honey. So it sounds like it started with the jam stuff. And then has the honey just taken over because that's been the most lucrative part of your business.

Christine Bertz: [00:04:07] I think, I always knew that honey would be more appealing. I like jam and people like the jam that I make, but it's just not something that you, you can eat, honey, on your own people use honey for perceived health benefits. You can do a lot more with honey than you could do with jam. And I think that that is really appealing to people.

And beekeeping is, it's kind of cool right now it's we're in. So I think that the honey is a very attractive food item in a lot of ways.

David Crabill: [00:04:37] It certainly is. And I'm not an expert on honey, but I, I hear about the beekeeping movement a lot. I've heard a number of people speak about it. For people like me or other people who aren't as familiar with the importance of beekeeping. Can you talk a little bit about why there is this big movement towards beekeeping in the United States, probably in the world, but I know at least in the United States, it's been a big force in the last decade or so.

Christine Bertz: [00:05:05] Sure. So to start, and I get to put on my plant ecology hat, which is my favorite hat. 85 to 90% of the plants in the world require some form of pollination. And a lot of those are animal pollinated, insect pollinated, and the most, popular insect pollinator, certainly for humans is the honeybee because we also get something really good out of that deal, right?

But the truth is that, the way that we do agriculture. In these large mono-cultures of the same plant that perhaps blooms for three weeks in a very intense period and needs to be

pollinated to produce our crop plants requires the honeybee. It requires an insect that we can box up and ship in and put there to pollinate those plants for us.

Certainly we could do agriculture without the honeybee, but we would not be nearly as efficient and. In a, in a world where our population is growing, we have to feed a lot of people. So the honeybee is very, very effective at that for a lot of our crops and not just the things that we eat directly, but things like alfalfa that need pollinating to feed our cattle are our, um, farm animals.

however, The honeybee, especially in recent years, we've seen a lot of declines and a lot of, a lot more depth in honey, honey bee colonies than we're used to. Historically say 40, 50 years ago, beekeepers would lose about 10% of their hives per year, just as a normal, that was considered an acceptable loss.

Some years now we'll see States report 35 to 40% losses and that's scary. And then we see things like colony collapse disorder, where entire colonies of worker bees are flying away and leaving their queen and all of the brood that is all of the baby bees that are growing for no reason that we can understand.

That's not what bees do. So I think that's really alarming for beekeepers and for food producers.

David Crabill: [00:07:09] And there's no known understanding of what is causing the collapse or causing the, the loss of the bees.

Christine Bertz: [00:07:20] There are a lot of things. Um,

David Crabill: [00:07:22] I'm sure there are a lot of theories.

Christine Bertz: [00:07:24] There are a lot of theories. There are a lot of different stressors. I should say there is colony collapse disorder, which is that specific thing, but these are facing a lot of other things that can destroy a hive. That's not CCD.

In addition to things like chemical applications, accidental pesticide kills in the past 10 or 20 years, we have had a lot of invasive pests enter the U S in particular that honeybees have not had to deal with before. And that beekeepers have not had to, battle before things like the Varroa mite, which is like a parasite, like a tick.

But it affects, honeybees, small hive beetles, which get in and can damage the honeycomb and compete with young bees for the materials in the hive, and a lot of the pathogens, fungus, and these things can be exacerbated by other things that stress out our bees. So when you lump all of those things together and then consider the fact that we mow our lawns so they're not full of flowers. And we, we have very intense land use practices because we have to feed humanity. It paints a very difficult picture for bees now compared to 40 or 50 years ago.

David Crabill: [00:08:44] I see. So what I'd kind of liked to do today is talk about if somebody is in that position where they have the property to accommodate a hive, See if it's

something that they would add on to their cottage food operation, and if they can understand why it might be important to start a hive,

And maybe we can just learn from you about why that might be something that someone wants to consider. So in that light, can you talk about what it took for you to start your hive and start beekeeping?

Christine Bertz: [00:09:21] sure. So, you know, it's interesting coming from an academic background when I decided I want to become a beekeeper. And once I had a house for the backyard where I could, my first impulse was to. Go to class and buy a book, right? That's, that's what you do when you're in school for as many years as I was in school.

And so, the most valuable resource that I could point anyone at would be, a local beekeeping club, which is what I did. We have a [Memphis area beekeepers association](#), and most cities have these, I did find value in the book. I bought a book on bee biology and read it, cover to cover and that's the way that works for me, it doesn't work for everybody, but ultimately what it took really was attending these workshops, getting out there and working with bees. It's something where that academic knowledge is helpful, but can only get you so far. I think it's really important if you're going to keep bees first and foremost, like these are the stinging insects and you have to be okay with being surrounded by them.

So one of the first things that I did was, make a beekeeper friend that would and buy a suit and get out there and just make sure that I wasn't going to freak out when these bees were surrounding me. And that was like, that was the one thing that. I was afraid would be a deal breaker for me because when I was a child, I had a phobia of bees.

If you had told, like, ten-year-old Christine, you're going to be a beekeeper one day, I would have cried and said, why would you curse me that way? But once you meet the bees and that sounds very anthropomorphic. But once you meet the bees, it changes your perspective about them as insects and every time you encounter a bee anywhere, it's very different.

David Crabill: [00:11:09] How so? I just saw a bee this morning on, on my grass. I looked at that be differently than you would. How would you look at that bee?

Christine Bertz: [00:11:17] So. A lot of people that I know, and this may or may not be true for you, look at bees and say, Oh, that's dangerous. I need to stay away from that. Or it will sting me. Once you have stood surrounded by beehive with a frame of bees in your hands and you see how much they don't care that you're there and they have more important things to do than to worry about you then, it changes your perspective of the danger.

The truth about all of these, these bees is that they don't want to sting you. Bees sting in order to protect their brood, to protect the hive and beekeepers, do things, to make sure that the bees do not perceive them as a danger. Now, obviously you're going to get stung, sometimes things happen, but, I've been stung once in three years.

And so now when I see bees out in the wild, I'm not afraid of them because I know that that bee is doing other things.

David Crabill: [00:12:16] you told me before the interview started, that you had to build up your hive for a year or so before it actually produced, honey, is that typically the case?

Christine Bertz: [00:12:27] I would say that what I've learned about beekeeping is that there is no typical. Someone told me early on beekeeping is agriculture. And so it's dependent on weather and it's dependent on a lot of things out of your control. But I would say there are things you can do to get honey the first year that I didn't do. You can start with, what's called a nuclear hive, which is essentially a queen and several frames of bees that are already producing brood and are sort of already built up. I started with a package of bees, which is just basically a big box of bees and a queen in there. And you empty them into your frames and they have to start building from scratch. I also started in a year that we had a really wet cold spring two or three years ago.

And, I didn't get my bees until late may. Normally, it depends on the region of the U S that you're in, but I could have started in a warmer year. Like this year I could have started in March and they would have had two more months to build up. But that first year, yeah, that first year it's all about, especially if you're starting new, bees have to build bees wax.

They have to build that comb. And, um, that takes some time they have to produce new bees because it takes a lot of bees to make honey. I think it takes, the factoid that gets tossed around is it takes one honey bee her lifetime contributes a 12th of a teaspoon of honey. So you need a lot of bees to make a little bit of honey.

And so my first year was about, mostly about making bees. my second year was about making honey and learning how to manage my bees. And this third year has been a lot more about maximizing bee production and honey production. And that's been really exciting and I still make mistakes. Like it's always a learning experience.

David Crabill: [00:14:13] And how many bees are currently in your colony.

Christine Bertz: [00:14:16] I'm going to, guess, I have not counted individually. I have two hives and I'm going to guess right now that that might be about, I'll say ballpark 70,000 bees.

David Crabill: [00:14:30] No I figured you probably hadn't counted them individually, but.

Christine Bertz: [00:14:34] They all have names and I know their personalities and they all get a little stocking at Christmas. Yeah.

David Crabill: [00:14:40] Well, the approximation it's helpful. I mean, I just am astounded by that number, I was familiar that it was in the tens of thousands and it just is amazing to me that one colony can have so many bees. Um, and then of course bees can be a nuisance. What sort of space requirements did you have to consider?

I mean, I don't know where you live. If you have a lot of property, is that required or what should people think about when they are starting a hive?

Christine Bertz: [00:15:05] Right. So, so definitely check with your city bylaws and make sure that you are allowed to have these, some, some cities don't allow it. Memphis does not

seem to have that sort of requirement. I don't have property. I have I'm in the suburbs in a very, like middle class neighborhood.

I have got a wooden privacy fence around my backyard and my neighbors behind me have got a trampoline that their kids jump on about 10 feet away from the bees. And like, there are no problems at all. Now I did check with all of my neighbors before I got bees, just to make sure no one had a terrible allergy and no one had a problem with it.

What some beekeepers will say is don't let your neighbors know you have bees and, and just everyone will get along. But I've found I've done just the opposite and I've found it's been really well received. My neighbors know I have bees every bit of got a little bit of honey at Christmas, which may have helped, but the response that I get, the reception I get, when I tell people I've got bees in my backyard, is that's so cool can I come and see them? And I love that. I love that opportunity to talk to them about the bees and to educate them.

David Crabill: [00:16:18] Going back to when you started, you started with the jams and jellies, and I know you sold those a little bit were you selling those at farmer's markets, or what were you doing to try to sell those.

Christine Bertz: [00:16:30] I really, I never did. Farmer's markets are difficult for me because, as a runner and now I'm a triathlete like Saturday morning farmer's market is peak training time. Primarily I was using the jams and jellies for St. Jude fundraisers, which is, I mean, if you want a test market. Like a fundraiser is a great idea.

See what people will donate to get your product as a gift. And if it's, you know, if, if you were not selling it, if you're giving it as a thank you for a donation to a charity, it's not really a sale. So I didn't have to sort through all of the legal ramifications of selling a product at that early stage, which was great.

David Crabill: [00:17:12] That's a fantastic idea.

Christine Bertz: [00:17:14] Yeah. I was selling to friends when they asked for it. And now, often someone will say, you know, I'd like to buy a jar of honey and can I also buy some jam while I'm at it? So it's almost become an add on product.

David Crabill: [00:17:28] Do you wonder though? I mean, you were fundraising for your runs, right? So it's almost like are people buying the jelly? And paying a certain amount. It's hard to validate, right? Because you don't know what the motivations are.

Christine Bertz: [00:17:42] Yeah. So yes, and I, I definitely realized I was shooting myself in the foot because if you are, if you're trying to cover your materials cost, but all of the money is going straight to a charity, then, I can't ask for the same price as I would, when I'm asking someone to donate, like it doesn't make sense. So if I spend \$2.50 to make a jar of jam and I sell it for \$5 and put away 50% of the profit, like I haven't spent money doing that. If I spend \$2.50 making a jar of jam and I ask someone to donate \$5 to St. Jude, then I've, spent \$2.50 to make \$5.

David Crabill: [00:18:23] Right. You know, it's your donation as well.

Christine Bertz: [00:18:26] Right. It's my donation as well. And that's fine, but it means like my, my calculations were all about how much do I spend to raise a certain quantity of money, versus covering your costs and then maybe making a little bit of extra to take back.

David Crabill: [00:18:39] Right? Well, so conversely with the honey, as you've ramped that up, How have you sold that? Did you start with the same fundraiser model and what have you been able to sell it for?

Christine Bertz: [00:18:53] I did. I started including it in my jam baskets as sort of a, like a raffle reward for a donor every month. And, I found that the baskets with honey in them, I got a lot more donations. this is, this is one of those places where I am very new to cottage food. And I've discovered like really recently that I haven't done this the best way possible.

I price my honey, based on what I know other small scale hobby beekeepers are asking for a jar of honey, because I came out of the, sort of the world of jam, I think in pints and half pints, that's not how most people think of quantities of honey. Normally you buy a 12 ounce jar of honey or a 16 ounce jar of honey.

I have pints and half pints and I worked out what other people were charging for those. At my scale. A lot of beekeepers in my clubs say, well, I'll ask for \$20 for a pint of honey and no one has ever blinked. If you look at what larger scale, even local commercial-esque beekeepers will charge, they, they ask a lot less, it might be \$15 for a pint.

so I was dealing with sort of the guilt of asking for what I felt like the time and effort that I was putting into the product warranted. And my solution to that, my crutch was well, pay me \$20 for this jar of honey. And for every jar I sell, I will donate \$5 to st. Jude. I've now talked to my accountant because I realized this year I'm going to sell enough honey that I really need to be filing it under income and discovering that what I've set up for myself is this is a situation where I pay taxes on money I'm about to turn around and donate directly to a charity. And our tax structure doesn't really reward that anymore. So I'm going to have to rethink how I, balance the fundraising aspect of it with the cottage food aspect of it. And that's a challenge that has really just recently become something I'm wrestling with.

David Crabill: [00:20:57] Have you found it's been very easy to get rid of the honey that comes or do you have to market it? Do you have to, in order to make a sale? I mean, I know, I don't know. What percentage are you giving away for your fundraiser versus are you selling any, I just, I'm trying to get a sense for what you're doing with your business.

Christine Bertz: [00:21:17] so last year, I, this is a small sample size. Last year I bottled, like throughout the entire year, maybe 82 pints of honey. At the price that I was asking for it, if I had actually sold it all, that could have been about \$1,600, not bad for like the first year, like really producing honey. around here, I get a spring harvest, a summer harvest and a fall harvest this year, my spring harvest was 64 pints. So three quarters of what I got the entire year last year.

I'm set up to make considerably more honey this year than I did last year. I just pulled 64 pints and three quarters of that is already spoken for I'm sitting on maybe two gallons of honey left that I haven't sold. I haven't announced to anyone that I have honey to sell yet,

because so many people came to me beforehand and said you gave me some last year, I'm out.

When can I buy more? So that's been really, really great. And there are marketing options, I think, available to me that I just haven't utilized because I haven't needed them yet.

David Crabill: [00:22:22] Well, one of the great things about honey is that you don't have to worry about shelf life, right?

Christine Bertz: [00:22:26] Right. It's wonderful. You don't have to worry about shelf life as long as it's, mature, honey, if you pull it too early and the water content is too high, then it can ferment. But fortunately the bees know when that time happens. And so they, they will put a wax cap on the honey when it's ready. And then you say, Oh, thank you.

David Crabill: [00:22:45] So you had a huge growth in the production this spring. And is it expected that you'll get the same amount in the summer and the fall? Or is there going to still be considerable growth over the course of this year?

Christine Bertz: [00:23:00] Oh, it's so hard to know. It depends on the weather and how well I manage the bees. I could still end up with a third hive this year. And if I did that and they built up quickly, that could improve my yield as well. Last year, my summer harvest was twice as big as the spring and fall harvest, just because of the way it worked out in the region that I'm in.

And I think the fact that my neighbors plant a lot of flowers, So I would expect, I'm hoping that summer will be big again, and the fall will be like spring, but in the midst of my excitement and my triumph that my spring harvest had been so great last year, one of my hives swarmed, which was very embarrassing from a management perspective and which has the potential to reduce my spring or my produce, my summer harvest.

David Crabill: [00:23:55] And explain what that means. It swarmed.

Christine Bertz: [00:23:57] So, honeybees, they're a social insect, right? They form these big colonies and we talk about honeybees as a super organism in a way like one hive is one individual swarming is how hives reproduce. So when bees swarm it's because they're crowded in the hive. So I had, I had a hive that built up very quickly this spring. I did things to try and keep it from getting too big, but. Sometimes that doesn't work out very well. So when bees swarm, the queen takes between say 60 and 70 to 75% of her workers and they fly away and they look for a new home. She leaves the existing hive with all of the resources there to her daughters and the workers that remain create a new queen, that will then was like take up the mantle of producing eggs. So the, the, the problem with the honey harvest is that that break in production of new workers means that they're going to be less efficient for awhile.

David Crabill: [00:25:08] Interesting. You would think that the queen would just kick the daughters out and send them off with, with 30% of the workers.

Christine Bertz: [00:25:16] Yeah, get out well, so this is what's interesting. So only the queen can lay eggs, right? Workers have to produce new Queens and to do that, they need that existing honeycomb to build what are, what are called queen cells. So they look different, they're bigger. And they feed a young larva differently in order to prompt her to develop into a sexually mature female, which is the queen.

So I'm sure that mama would kick daughters out if she could, but, like they need that, that home to raise their young Queens and then it just gets brutal. They produce multiple queen cells and the first one to emerge stings her sisters to death and announces that she's the one in charge.

Yeah. Nature isn't always pretty.

David Crabill: [00:26:04] So with this honey business, has it taken off. Like, has it created a life of its own, almost that you didn't see coming, or did you see this coming? Has it surprised you in any way?

Christine Bertz: [00:26:18] It is, it has surprised me in every way. I really started all of this like out of a sense of conservation thinking, I will have bees and raise bees and therefore I'm doing something ecologically helpful. The irony is that I come from a background of native species conservation, but the honey bee is not native to North America.

Really the value of my honeybee for those like the honeybee for conservation for me is that I, people are interested in talking about honey and I get them to branch off and talk about our native pollinators as well. And people love, they love to talk about bees. One of the things that's happened because of this cottage food business is that I've become a public speaker about pollination and plants and in ways that I really didn't expect and that I wasn't looking for and it's been great. But in terms of product production, I, I didn't expect that I would get as excited about making honey as I have. And I didn't think I would make as much as I have. I think that the limiters now are space in my backyard and time. It does, it does take time, but I would love to do more with it.

David Crabill: [00:27:42] If the cottage food industry didn't exist, let's say you just needed a commercial setup in order to produce honey and sell it. Do you think you would have still done the same thing and just given away your honey, or has the cottage food industry, been a motivator for you to start your honey business and grow it as much as you have.

Christine Bertz: [00:28:06] Yeah, absolutely. No question. coming into honey production, as someone who had looked into the possibility of ramping up jam production, and knowing about the cottage food industry and the laws that existed, which was how I found Forrager by the way. so thank you for that, because that was like Forrager, that website was the first resource that I found with anything about how I would legally sell jam out of my kitchen.

Yeah. If, if the cottage food industry didn't exist and I was producing honey, I would probably use it exclusively for fundraising, give it away, barter it to friends who are crafty in exchange for other things that they make. I, I am sure that there are people that sell products under the table.

I am not comfortable with that, especially with anything that could be potentially hazardous. Fortunately, honey is not one of those things, but knowing that I'm doing something legally and that I can advertise and that I can potentially grow this into something down the road, if I want to changes my perspective entirely.

David Crabill: [00:29:17] I just wanted to get a sense for what sort of process it is on a daily basis, or maybe a weekly basis for you to manage a hive. What are you having to do? What kind of effort is required to maintain your beehive?

Christine Bertz: [00:29:33] Right. So it depends on the season. Spring is very busy. Typically in the spring, I am on a weekly basis, suiting up, lighting my smoker, going into the backyard and opening every colony that I have and looking to see, do they look healthy? Are there a lot of hive beetles that I need to worry about managing, trying to reduce the pest load?

When do I need to add a box so that they can produce honey? When is it time to split my hive? Because in the spring, typically, one of the things that we do to prevent bees swarming, the way mine did, is make a split. So like, if you have two boxes stacked on top of each other, which is a very traditional sort of Langstroth beehive you can separate them. And the one without the queen will make a queen. So then you have two hives instead of one. So, so like once you have your first hive as, as a beekeeper, not only is it very easy to make more, it's hard not to make more. So all of that's happening in the spring, and then you start checking to see, when is honey ready to produce?

Like when, when are those frames of honey capped and mature and ready to pull out of the hive? Honey production is a whole other process in the summer. You can check on the colonies less often, but it's still recommended. I would say I go and look in there every say every 10 days, just make sure everything is okay.

Fall a similar process. And in the fall, you, you're going to start checking to see, do they have enough honey for the winter, because that tells you how you're going to manage them in the winter. Now winter management is going to differ depending on where you live. Here in the Southeast, we have very warm winters.

And so my bees are gonna stay active all winter, which means I might need to feed them because they don't go into sort of a quasi state of hibernation. So there will be days it's warm enough to still check on them. I don't know a lot about managing bees in colder climates, but I know a lot of places, you know, you wrap them up and you don't see them until spring.

David Crabill: [00:31:39] So in general, it sounds like if I'm reading this right, it sounds like. It's a not super labor intensive process, or am I misunderstanding that?

Christine Bertz: [00:31:51] For one or two hives. It is not super labor intensive. Mostly they'd take care of themselves unless there is a problem. And then there may be short periods where things get very busy and very intense while you address that problem. Whether it's I have too many hive beetles, or there has been, a pathogen I have to deal with, which can be disastrous.

In the winter, there is normally also some pest treatment that goes on. But yeah, I would, I would say it's, it's not labor intensive until it is. And the more hives that you have, the more that labor is going to increase, but the more your yield increases as well.

David Crabill: [00:32:28] You were talking earlier about the difference between the pricing that you can command a little bit higher pricing that you can command as a small scale individual honey producer, versus what a commercial honey producer is charging. And this might be an ignorant question, but I'm wondering, I know there's different flavors of honey based on the flowers or a variety of things I'm sure. But is there any difference really? I mean, honey, is honey, is there any difference between the honey that you're producing versus a commercially produced, honey, is there anything better that would be associated with the higher price?

Christine Bertz: [00:33:09] For me and the people that buy from me, I find, what what's better to them is that they know the bees and they hear what's happening with the bees. They see pictures of the bees. I invite anyone who wants to, to come and put on a spare suit and meet the bees. [Michael Pollan](#) talks a lot about our relationship with our food and that being something that we've lost, and I truly believe that. I think people love to buy honey knowing something about what's happening with the hives. And they like they'll contact me and say, how are, how are my girls doing? Do they have any honey for me yet? And I think that's a relationship that people enjoy. And it does seem to affect what I can ask for the honey.

Now, that's, that's very touchy, feely personal just in my situation. And also because I do use social media to talk about my bees, that's part of the appeal for me, just in terms of, of any small scale cottage type operation. Compared to large commercial beekeeping, like there can be differences in quality.

Of course there was the controversy recently about honey that has been, has come from overseas and whether it's really pure, you know? And is there high fructose corn syrup mixed in, is it true, honey? And I think when you're buying from a local beekeeper, You're you are ensured that you are getting local honey, depending on where it comes from and the flowers that those bees are visiting there are differences in flavor. I, I have differences in flavor from season to season, depending on what's blooming. And, um, you know, I have a preference I could tell you. I think my, probably my summer honey is my favorite. So that just depends on where the bees are being kept. And then there are differences between, you know, how heavily has the honey been processed? If you believe that eating honey on a daily basis is helping with your allergies. And you probably want honey, that has not been heated, which would denature the enzymes that maybe is helping your immune system. if you believe in the health benefits of honey people typically like to buy from local beekeepers because they know it's going to be filtered less heavily. They, they know it hasn't been heated the way some industrial sort of store bought honey would be.

David Crabill: [00:35:30] So the difference between raw honey and heated honey, is that just something that the, the commercial producers use to make their product more consistent? I mean, what's the point of them heating it up.

Christine Bertz: [00:35:43] So I believe I'd say don't quote me on this, but it's a podcast. I believe my understanding is that heating honey to a certain temperature, which does destroy those enzymes also makes it less likely to crystallize and improves that perceived shelf life. Now, if you have a bottle of honey and it's crystallized, it's fine.

Pop it in some warm water, heat it up again. Like it will like those crystals will dissolve back out all that means it's just like making rock candy. Something has dropped in there. A tiny particle that is forming tiny, tiny crystals, but no, one's going to buy crystallized honey from a store shelf. And so I think a lot of commercial producers heat it up to slow that process.

David Crabill: [00:36:29] Hmm, that makes sense. So honey is kind of a unique cottage food item. They're typically different requirements about honey. And then there are some States that their honey law is completely separate from the cottage food law. What did it take for you to start your honey business legally in the state of Tennessee?

Christine Bertz: [00:36:52] So I had, to do some research, but honey falls under Tennessee's list of non-potentially hazardous food items. So I really didn't have to do anything though. No, I take that back. I did have to, legally in Tennessee, you are supposed to register your hives with the state department of agriculture and that that's really beneficial to you and to the state.

Because it covers you. Like if my hives were destroyed in a storm, I could file for insurance and get a little bit of money back. I can call the state apiarist and request an inspection if I'm concerned that my honeybees have a disease. And it lets them track how many beekeepers are in the state.

And so like, in addition to all of those large commercial operations that have other licenses, how many other bees are out there?

But, you know, that that filing did not cost anything. I, I think I sent an email or a web form and said, Hey, I'm a small beekeeper. I have two hives in my apiary. I'm not even sure I'm included in the statistics, but they know. And if I needed to call up the apiarist and say, Hey, I think I have foul brood. Can you send someone out to check then they would.

David Crabill: [00:38:06] So it sounds like it's pretty easy to start a honey business in Tennessee.

Christine Bertz: [00:38:10] Yeah, so it is very easy. I would, I would say what you need is, it helps if you know that you're not allergic to bees because that, I mean, that's a serious, can be a serious issue. I would say that you need the space to keep the hives or someone who will house them for you. You need probably \$300 or \$400 outlay for equipment.

Unless you are buying used from someone or in a situation where you inherit some equipment and, some basic knowledge that gets you started. And then just, you just, you continue to learn as you go along and local beekeeping clubs are great for that.

David Crabill: [00:38:48] I wanted to go back. You were touching a little bit on it earlier when we were talking about what surprised you in your business, but I watched a TV

interview you did a year ago. And you talked about how you initially started because you thought it was very important for, um, like the bees were endangered, I guess.

And that you've changed your perspective on that. Can you share a little more about what that transformation of your thinking has been like and what you now see as being the most important reason for keeping bees?

Christine Bertz: [00:39:26] Yeah. I definitely started beekeeping because I thought we needed more beekeepers.

There is a lot of information in the media and, a lot of marketing around the importance of honey bees and how they are threatened. What I learned. Partially through keeping bees is that we are capable of creating more honeybees, but what we're not capable of as easily is managing and producing more wild bees.

So we talk about honeybees and they get so much attention, but we have over 4,000 species of native bee in North America. And many of those are critically endangered in ways the honeybee is not. So the rusty patched bumblebee, for example, used to be very, very common. And I think it is the first bumblebee to be put on the endangered species list.

The difference with the honeybee is when honeybees start to decline, because we're very connected to the honeybee. We can see it happening.

For me then the honeybee has become extremely important as an ambassador for all of the bees and other pollinators that we can't monitor as easily because they don't live in a box in my, you know, in my backyard, and the things that are threatening the honeybee in many cases are the same things that threaten a lot of our native pollinators.

And the fact that people like to talk about the honeybee gives me an opportunity to talk about those other things too. And that's been, really powerful and really exciting for me.

David Crabill: [00:41:02] Yeah, that's very interesting to hear. I've never heard that perspective before, but it makes sense. I did want to ask if there have been any memorable moments you've had over the last two or three years of running this business.

Christine Bertz: [00:41:16] Oh, gosh. There have been a lot of them. And I think that they all have to do with sharing the bees with my friends and family. I love being able to put someone in a suit and hand them a frame of bees. And they in many cases have never had that experience before. I love being able to invite my neighbors into the backyard because they've just discovered that I have bees.

Last week I was pulling honey and my neighbors were across the street and I walked over there with a frame of honey that I had taken the bees off of course, and just handed it to them and said, have you ever seen one of these and they were very excited. For me, there, there are many great moments with the bees and every time I'm in there, it's a really like in the, in the, in the hive working with them, it's a really cool experience, but the memorable moments are in connecting with others, with the bees as something that we can share our love of.

David Crabill: [00:42:17] Christine before we jump off is there anything else that you feel like people should know that we haven't covered yet in this interview?

Christine Bertz: [00:42:26] just that I would say as a cottage food business goes like there is another aspect of complexity in beekeeping, because you cannot always control what the bees decide to do. You're going to make mistakes. You're going to misinterpret what you see happening in the colony. And that's part of the process and it continues to be a learning process.

So I guess what I would say is if you start. And something happens and it seems disastrous realize that that doesn't make you a poor beekeeper and that it is worth continuing to keep going and just being ready to learn and grow and persevere,

David Crabill: [00:43:11] Well, that is a problem though, right? Because if you only have one, hive or, or even two hives, and there's a problem, like you're talking about pathogens, that could be a big risk to your business. Right. So do you recommend, are you looking to expand your hives? Or do you recommend people have more hives than just two.

Christine Bertz: [00:43:29] What most associations actually recommend is when you start, don't start with one hive, start with two. Partially because if something happens to one, you have the other. And partly because you can compare what's happening within them. And if something is wrong with one, you have a standard for comparison.

There are plenty of ways to get more bees and some of them don't cost any money. But after I lost my first hive, I felt like two wasn't enough. I really wanted a third hive for that, that safety measure. When I just had one, I thought everything was fine. But as soon as I lost one, suddenly I realized how frightening it was to only have two.

Um, if you have the space for two or three, I think it's a great place to start.

David Crabill: [00:44:12] Looking into the future, would you like to expand your hives? Do you have the space for it, or, or if you don't, would you like to eventually get to the point where you can do a lot more beekeeping or have a lot of hives.

Christine Bertz: [00:44:27] Oh, bees are addictive. I would love to have lots and lots of bees. Right now, practically speaking this spring, I would put one more in my backyard. After that you do reach sort of a critical mass where there's kind of a cloud of bees and I want to be a good neighbor. Eventually, if I had more property or was in a situation where I had more time, you know, that pesky day job, right? Yeah. I would love to expand. I think this year, just this spring has taught me how much potential there is for making some significant supplemental income off of something that to me started as a hobby based in my love of biology and conservation.

David Crabill: [00:45:12] Well, you were talking about the numbers earlier and I figure it's. if your production stays the same in the summer and the fall, you could be making around \$5,000 of product this year. And, um, that's just what two hives. Right? So if you were to scale it up and, and with the amount of labor it takes, it sounds like you could scale it up, not with the day job, but I mean, it sounds like it could be a pretty lucrative business, right?

Christine Bertz: [00:45:42] Yeah. Yeah. I, I think I know there are people who do it full time, but typically they're also doing things like producing beekeeping equipment or selling new, like selling hives, like selling actual bees to other people. And at that point, I think you you're, you've left cottage food industry, but. I think I live in I'm living in an interesting space right now where I see a lot of possibilities and I'm waiting for them to gel.

Like there could be a future where perhaps I have a part time job and do beekeeping as something that is a significant portion of my income. I don't know if I'm there yet, but it's out there and that's really exciting.

David Crabill: [00:46:29] Thanks so much for sharing all that information. You, I know you're more of a new beekeeper, but you are still very much an expert on bees, and I appreciate you sharing all of that valuable information and hopefully it will encourage people to consider if they're already a cottage food business, consider adding honey to their list of foods.

And if they're not, maybe consider doing a honey business from the get go.

Christine Bertz: [00:46:58] Yeah, It is easy to fall in love with.

David Crabill: [00:47:01] Well, thank you very much, Christine, for coming on. If people want to reach out to you, how can they get in touch?

Christine Bertz: [00:47:09] yeah, this is easy. I am on Facebook at [B & Bees Provisions](#) is the sort of the business website. I have a blog where I write about all of my mistakes at [thebeeblog.net](#). And there's an email bees@thebeeblog.net where I can be emailed. And, you know, those would probably be the best options. I have an Instagram and a Twitter, but they are occasionally updated.

David Crabill: [00:47:33] Well, I'll include a link to all those in the show notes. Again, thank you for coming on and sharing with us today.

Christine Bertz: [00:47:41] Yeah. Thank you so much.

David Crabill: [00:47:43] That wraps up another episode of the Forrager podcast. I really enjoyed hearing Christine talk, not only about the business side of beekeeping, but also the important conservation aspect as well.

If you are thinking about starting a cottage food business, like a honey business, head on over to [forrager.com](#) to [check out your state's cottage food law](#).

For more information about this episode, go to [forrager.com/podcast/11](#). Thanks for listening, and I'll see you in the next episode.