Episode 489: Deanna Byck on Carbon Offsets, Climate Change and How Hemp Can Help Save Our Planet

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Katie: Hello and welcome to "The Wellness Mama Podcast." I'm Katie from wellnessmama.com and wellnesse.com. That's wellnesse with an E on the end. And this episode is all about hemp or more specifically the many extremely versatile uses of hemp, the carbon equation and how that comes into play, and, in some ways, how hemp can truly help save our planet.

I am here with the Deanna Byck who is the chief global engagement officer of a hemp company that's working to do some of this work worldwide. And she sees a lot other outward facing activities and she's very well researched in this area of hemp growth. And a lot of us understand hemp maybe in relation to cannabis, or in relation to CBD. But she explains, in detail, in this episode how its implications and uses are much more broader than that. How THC is only one cannabinoid out of hundreds present in the hemp, and how there are very many different uses for the other parts of the plant. She talks about how hemp can be used for everything from plastic to paper, and how right now our paper use alone is taking down several billion trees a year. And we're below replenishment, meaning, we're going to run out of trees in about 60 years.

She talks about plastic use and how bioplastics made from hemp can help reduce our oil-based plastic use. How hemp is carbon sequestering, what that means for the environment, and the reason we are growing enough hemp at scale right now. The reasons surprised me. I think they will surprise you as well. And she also talks about what it would take to make a change that would help actually start to reverse some of the damage that's being done. Very fascinating episode about a very important topic, let's jump in. Deanna, welcome. Thanks for being here.

Deanna: Thank you for having me today.

Katie: I'm excited to jump into what I think is an increasingly popular and important topic, which is the world of hemp. And there's a lot of intricacies here and a lot of different directions we can go, but I think to start really broad, maybe can you just give us an overview of what hemp is and maybe contrast that with cannabis? And I feel like often those kind of get confused in conversation.

Deanna: Sure. And first, I wanna say good morning, Katie. Thank you for having me on your show. I'm super excited about being here. So let me talk about hemp and what it is and what it isn't. So, hemp is part of the cannabis plant, and it's from the cannabis plant. It's actually the same plant as marijuana. And the only difference really is that hemp has less than 0.3 THC, which is one of the cannabinoids, one of the many cannabinoids in the hemp plant. So if you think of the cannabis plant, it could be split into three parts. There's the flower, which contains the seeds, and there's the stalk and the stem. And most people, when they think about hemp or cannabis, they think about the flower part, which is the health and medicine part. And that contains all the cannabinoids in it, and THC is just one of what we believe to be over 200 cannabinoids that we're starting to identify.

So when you think about the hemp plant you think about all these cannabinoids without the psychoactive parts of it, which are the THC parts. So you could think about CBD, you could think about CBN, CBG. CBG is an anti-inflammatory. CBN helps you sleep. There's even something called THCV, which is non-psychoactive, which is actually an appetite suppressant and it helps you lose weight. So there's many different cannabinoids in the hemp plant. Also, hemp has a lot of industrial uses. So what we're going to do is we're going to take the outside of the plant, the fiber and the hurd, and we're going to create products out of them that will help reduce our reliance on plastics and other things that will also help reduce our reliance on trees and other things in the environment.

Katie: I'm so glad you brought up the plastics component though as well. Because this is something I've spoken a lot about in the past, just the environmental implications and also, of course, the health implications looking at our overuse of plastic. And I think often hemp gets kind of mixed in with cannabis and often there's the controversy surrounding it because of that association. But like you just explained, we're talking about the non-psychoactive parts of this plant that have, from my limited research, you could speak to it a lot more, really profound environmental implications. And basically from my understanding, you can explain this better, but it's such a rapidly growing plant and it's an environmentally-friendly growing plant. And so this is a way

that in very far-reaching areas, we can actually start using these part to these plants to replace some of our non-renewable resources, but can you kind of delve deeper into that? Some of the ways that this is already being integrated?

Deanna: Sure. So if you think about the connection between hemp and the resources that we use for our everyday goods, such as trees for paper or oils for plastics, hemp can really take the reliance off of those things. First of all, hemp grows in a single season. So whereas you're looking at trees for paper that grow, you know, 20, 30, 40 years, you know, and we take, I think we are now taking down about 2 billion to 3 billion trees a year. And I think knowing that we only have a certain amount of finite trees in the world and that we're actually reducing our amount of trees every year and we're not growing them fast enough, we're going to run out of trees in this planet in about 60 years. So to reforest isn't going to get us there. So we really need to reduce our reliance on paper, hemp can help us get there. Hemp can help us reduce our reliance on paper.

And it grows seasonally. We can grow one or two crops in a season for hemp. In terms of plastics and taking the reliance off plastics, you can create something called bioplastics with hemp and we can even reduce plastic production by about 25% by an additive called hemp bioplastics. So, even if we reduce our plastic production by 25%, that's a significant amount of plastic reduction in our world.

Katie: Absolutely. And like I've talked about before, we are now finding plastic chemicals, even under many feet of ice in the Arctic circles, and this has become so widespread and is truly saturating our planet. And then when you look at the renewable or non-renewable resources we have to use to create traditional plastics, it's a really negative cycle for the environment. My personal care company, Wellnesse, we looked into and now use bioplastics for that exact reason is that this is a way that as a company, even though it's right now still much more expensive, we're able to help start to transition away from the reliance on oil-based plastics, which have such negative environmental and health consequences. And like you mentioned, so hemp can be grown even up to two times in a season, I guess you can do two crops within one year. What does that look like on a wide scale? Like, how much is this being done worldwide and what does the runway look like for that?

Deanna: So hemp in certain climates could go two crops a season, some climates, three crops a season. The further you go north, it's usually around one crop a season, but on a worldwide scale, the fact of the matter is that we really need a lot more hemp. Hemp is a very fast-growing crop. However, we're not growing enough of it for industrial use. And in order to be a significant plant, we need to be growing a lot more. In terms of use for health and wellness and CBD, we probably have enough, but in terms of replacing plastic products, paper products, in terms of producing biochar, and advanced carbons, and building products, and having a significant impact on our environment, we need to be growing at scale. We're talking about millions of acres. And also, hemp is one of the most carbon-sequestering plants on the planet. What that means is that it draws carbon out of the atmosphere and it helps put it back into the soil where it's needed. It is very deep roots and it actually helps refurbish the soil and makes the soil healthier just by growing it.

And so, if you were to create these big hemp fields, you're actually creating carbon sinks where we're taking carbon out of the atmosphere where it's out of balance and putting it back into the ground where we need it and sequestering that carbon. So it's really better for the environment that we're taking hemp, we're growing it on a large scale, and then creating products with it like bioplastics, like building products that will continue to sequester carbon for years to come.

Katie: So you mentioned we're not doing this at scale yet. I'm curious, why are we not seeing a wider use of this with all of these advantages? Like, what are the roadblocks that are keeping us from growing more hemp right now?

Deanna: So that's a great question. So one of the roadblocks is just like we talked about. So people don't understand that there's a difference between hemp and cannabis. That's the first thing. And that's one of the major barriers. The second barrier is that we need to have better legislation. We need our key policy decision-makers and our key opinion leaders to understand, and we need to better educate them about the benefits of hemp. We also need to educate them about the connection between hemp and climate, and carbon and climate. And once they understand this connection that hemp can actually sequester carbon and create the offsets that they need, that they desperately need in this world to offset, then we'll be in a better place to grow a lot more hemp.

Katie: Can you explain a little bit more about carbon offsets and what that means? I think people have probably heard the terms like carbon negative or carbon positive or carbon offsets, but I don't even think I have a very good understanding of what that actually means from an environmental sense. And also, I know companies do a lot with that in carbon offsets. Can you explain that picture a little bit?

Deanna: Sure. And it's actually a great question because people don't understand and we are bombarded every day as society. You know, we are bombarded with images, we're going to be carbon positive. We're going to be carbon negative. We're going to be carbon neutral by 2050. What does that mean? First of all, in my book, 2050 is way too late. We need to do something right now. But what does it mean to be carbon anything? So first, I'm going to back up and I'm going to tell you that carbon is not a bad thing. We are all made of carbon. We as human beings, we're made of carbon. The earth is made of carbon. Everybody's made of carbon, and everything around us is made of carbon. And the problem is that right now, carbon out of balance. There's more carbon that's put into the atmosphere by things that we have done than there is in the ground where it should be sequestered. And so, it's that balance that is the problem. And because we're out of balance because there's more carbon in the atmosphere, it's created greenhouse gases, which is a problem for us that heats the atmosphere and that's what's heating the planet and causing climate change.

So now that we understand that, the question is, how do we get carbon back into the ground? Is that being carbon neutral or carbon negative? Essentially, we want to be carbon negative. We want to put carbon back into the ground. We want to sequester it back into the ground. And hemp is a great way to do that.

So when we talk about companies purchasing carbon offsets, the first thing that we have to understand is that carbon offsets need to be created. So how do you create a carbon offset? Well, technology could get us some of the way there. There's people that are creating great, huge turbines to pull carbon out of the atmosphere. I'm not sure what they're doing with it. And there's certainly renewable energy using technology, but the best way to actually initiate or to create a carbon offset is a nature-based solution. And there's only two ways to do that. You either do it in oceans or you do it in the earth. And the only way to do it in Earth is to actually plant things. Well, you can plant trees, but it's gonna take 20, 30, 40 years to do that. And we're actually taking down trees faster than we're growing trees. Or you could do something like plant mangroves or better yet, plant hemp, which is one of the best carbon-sequestering plants on the planet. And it has many uses that will continue to sequester carbon for years to come.

So now what do we do with these offsets? So now once farmers are generating these carbon offsets, companies that are taking carbon and putting it into the atmosphere need to offset that in some way. So they will buy these offsets of people who are generating carbon and then kind of wipe out, or it's kinda like eating a Diet Coke and a candy bar, right? It Xs out that calorie, that net-net. So if you are putting carbon into the atmosphere, you need to find a way to generate carbon offsets to offset that production into the atmosphere. And that's what carbon credits are.

Katie: Okay. So this is basically almost like think of like a virtual scorecard of our carbon and getting it hopefully back closer to balance and what companies are doing from their own perspective to do that.

Deanna: That is correct. So if you hear of an airlines company that's trying to go carbon neutral or carbon negative, what they're doing is they're buying carbon offsets from companies that are actually growing carbon...or not growing carbon because you can't really grow carbon, but they can sequester carbon back into the ground.

Katie: And I'm glad you explained that carbon in and of itself isn't bad because I think anytime something...a term is wrapped up, especially with climate change right now, there becomes this immediate negative perception without understanding. Whereas if we look from a chemistry perspective, like, the word "organic" actually in chemistry means made of carbon. Like, we're all made of carbon. Carbon is part of everyone's existence. But like you said, it's the balance of those things. And I'm curious then to compare and contrast, for instance, hemp and its carbon implications with some of these mono-crops that we're growing. I've talked about on this podcast before the negative environmental consequences of everything we spray on those crops and how getting back to regenerative agriculture and having animals interacting with the soil can undo some of that damage. Can you compare and contrast hemp versus like corn, wheat, and soybeans that are mono-cropped and grown with tons of chemicals?

Deanna: Well, first of all, I love the idea of regenerative agriculture and I love the idea of using even hemp as a rotational crop because if you take a mono-crop and you till the soil, you're actually destroying the microbes in the soil. And I'm sure you've talked about this on previous podcasts. But if you take animals and graze on that land in between, or if you take a crop like hemp and use it as a rotational crop in between, you're putting microbes back into the soil. You're giving the soil an opportunity to grow and regenerate. We've actually killed our soil in the United States, and it started with the great Dust Bowl. It started, you know, in the 1920s where we were over tilling our soil, we were overplanting, and we were overgrazing. And in that sense, we've actually created these huge deserts. And now we're doing it again in the middle swath of our country, where we're over tilling the soil again with mono-crops. Spraying them doesn't help. You know, all it does is that put chemicals back into the ground, puts chemicals into the air and it exacerbates the problem.

So what we want to do is we want to put things back into balance. We want to be able to put rotational crops back in, hemp is a great one. It sequesters carbon. It heals the soil. It puts microbes back in. Using cows or cattle and grazing them in a conscious and ecological way where they can go from paddock to paddock and actually let the soil regenerate in between, you get the microbes and you get the bugs and you create these little tiny ecosystems that regenerate the soil. It's this beautiful ecological system that can actually regenerate our planet and regenerate our Earth.

Katie: It's funny to me that now in, you know, this age of technology, all this great science and research is pointing toward, "Oh, we should actually just do what nature does." Like, we just need to go back to letting nature work how nature is supposed to work.

Deanna: That's exactly right. Nature does know best. It's incredible.

Katie: And I'm curious, so I agree with you that probably for some of these problems, 2050 is too late and we're seeing, like, I've read numerous opinion pieces and studies across the board on how short of a time we actually have if we don't start correcting some of these problems. What does a positive roadmap look like for that? Like, what would it take at scale to actually start reversing some of this damage?

Deanna: Again, an incredible question, and we do need a roadmap to get us there and we need a roadmap to get us there quickly. And what it's going to take is solid and extraordinary leadership from all of our leaders. We're looking towards COP26, which was the original UN Accord that happened 26 years ago, which was starting to put together these roadmaps. We knew that if we got to 2.5 degrees Celsius change in our Earth's atmosphere in degrees that we were in trouble and we are a quarter of a degree away from that. And we've gotten there extraordinarily fast and the trajectory shows that we're getting there even faster than we thought. Climate is shifting. Our currents are shifting. The Gulf Stream is now shifting. We're seeing hurricanes, fires, storms, tornadoes, we've seeing tragic results. Soon we're going to start to see food insecurity associated with that.

We're going to start seeing more coastal flooding in magnitudes that people haven't even dreamed about. We'll start to see migration and climate refugees on scales unheard of. And so, I think we're faced with a lot of issues that people are just starting to get a glimpse of. Again, I said, it's going to take leadership, but it's going to take big business in conjunction with leadership. So we need to work together. We need to work together from all angles. We need to work together from the top key opinion leaders, policy decision-makers, and the bottom grassroots. We need to all be climate advocates. We need to do everything that we can to save water, to take the steps that we can do to reduce climate change, whether it's reducing our personal consumption of plastics, whether it's advocating for things like hemp or other biomaterials that are going to increase our carbon sinks, but we need to change the balance between carbon going into the atmosphere and carbon going into the ground. That's going to be the only thing that saves our planet. It's really about soil regeneration, soil regeneration is the key. And we need to be on top of our policy decision-makers, whether that's writing letters or whether it's personal decision-making, but everybody has a role to play in this.

Katie: Yeah. And I think, like, when I've had people on here before to talk about regenerative agriculture, for instance, I think when we start hearing the actual statistics of what's going on, it can seem so ominous and almost hopeless. But when you actually look at the data, it is reversible at this point, from my understanding and that, like, we just need to make these big changes. Or like we can stop the progression, we're just not doing it is my understanding.

Deanna: I hope it's reversible, I assume and hope that if we all play a role that it can be reversible and that we have an opportunity to regenerate our soil and our planet. And that again, if each one of us takes a step, but it's going to take a lot of education and a ton of thought leadership to really get us there. And we each have a role to play. And if everybody steps up and plays a role and understands, and really just tries to read every day or, you know, play a part in this puzzle, in this piece, then I think that we could actually get there, but we can't ignore it anymore. And we have to teach our children too. You know, there has to be conversations within our own family units. We have to encourage our children to learn about climate mitigation. We have to encourage our families to learn about it. And we have to encourage our friends to learn about it and to take the steps. Everybody needs to take steps. So again, it starts with thought leadership, it starts with education, but everybody needs to play a vital role. We all need to be climate advocates.

Katie: So to take like a positive roadmap perspective for a second, what if we were able to grow hemp, like, overnight, just grow it at scale and reverse some of this, what would that look like? Like, how quickly could we make change if we were able to flip that switch and start doing that today?

Deanna: You know, it's fast. I think that, you know, if we could grow a million acres by next year and 5 million the year after, or 10 million, or 20 million, we could make significant change. And, you know, again, it's that in conjunction with policy decision changes. It's going to be policy leadership that's going to be 2030, which is nine years from now. And it's going to take significant and determined leadership to get us there. We need to shorten the roadmap. We need to take significant steps now to get us there. We need to recognize hemp as a crop in the United States and policy legislation needs to happen. We need to change legislation so that we can use hemp as animal feed, that would change things, that we can use it as an industrial crop, that we can

change the nature of our paper, that, you know, every box in the United States should be made out of hemp and not paper, that we can replace 25% of plastics. Just think of all the change that we can make. It's extraordinary. If our buildings were made out of hemp, they'd be sustainable. It would be incredible.

Katie: What right now is keeping that change from happening? Is it a cost barrier or is it like financial incentive on the part of big companies? Or what's keeping that from happening?

Deanna: I think it's probably a combination. You know, I think that, you know, we're facing the same challenges that we faced 100 years ago. There's big businesses that probably are resistant to change. You know, something like when the electric car came out, you know, there are certainly businesses that would be threatened by that. I think that even big businesses are starting to understand that everybody has a responsibility to save the Earth that we live on. And if they don't, they should. And we need to make it socially unacceptable for those big businesses to not play a vital role in saving our planet.

Katie: And as we've seen in the past when change actually happens, it actually is a both/and, it's never an either/or. We need big companies making the change. We also need individuals making the change. And I'm a big proponent, people have heard me talk on here before about moms, especially have so much purchasing power in our country so that when the average moms decides to make a change societally, that's when big societal waves happen. And that's why I love being able to have this opportunity to talk to other moms and to bring awareness to different issues like this because I really do believe that moms have so much power in creating that wave of change. But you mentioned the business side is important as well. And I agree, businesses at scale can move that needle much more quickly because there are bigger supply and demand, more purchasing power. And I know you're involved on the business side of hemp as well. So can you kind of give us an overview of your involvement there and what you're doing there?

Deanna: Sure. But before I answer that question, I'm going to go back to what you said about moms because I think moms play a vital role in this whole thing. And Katie, you know, I'm a mom too, and it's so crucial as a mom for us to really engage our families and our children in this conversation. Because if not us, who's going to do it? If not now, when is it going to happen, right? And so, if they're not going to be engaged now, they need to be foot soldiers basically in this whole process. They need to understand that this is part of their legacy. This is part of their life. They have to grow up knowing that we all need to make a change together. So I'm going to just say that part and kudos to all of us for encouraging our children to, you know, be those climate advocates and, you know, be those grassroots leaders. And there's lots of things that they can do. There's this great organization called CAVU, and it's cavu.org. And they have a beautiful curriculum for kids on climate change and steps that they can take to help save the planet. So a shout out to CAVU. So back to big business.

So, I personally am involved in a hemp company. I work for Santa Fe Farms and I'm the chief global engagement officer. I've been with Santa Fe Farms since the very beginning. And at first, you know, when we very first started at Santa Fe Farms, we just bought a 250-acre farm thinking that we were going to go into the

CBD business like everyone else. The Farm Bill passed in November 2018, in January of 2019, we bought a 250-acre farm looking at the numbers. And we quickly realized it wasn't about CBD. CBD's wonderful and cannabinoids are wonderful. And the medicine and wellness that goes along with that is extraordinary. And there's a lot of great people doing fantastic things in that field, but we wanted to go a different direction. We were more interested in the bigger story. We wanted to know, what could we do as a company to really have an impact on this Earth. And we started looking at the climate-carbon hemp connection, and it was an aha moment for us. Once we realized that hemp was one of the most carbon-sequestering plants on the planet, and that we had an opportunity to make this change, we really became a carbon company.

And so we are a hemp company, but we're really a carbon company. And we really are a company based on the regeneration of our planet. And if you look at our mission, which is “Regeneration is our mission. Carbon is our focus. Indigenous peoples are our partners”. And hemp is our vehicle," it really explains a lot about who we are and what we do. And so we've talked about regeneration. We absolutely believe in regeneration of the planet. We talked about carbon. We believe there's absolute imbalance and that we need to bring balance back to carbon, bring it out of the atmosphere, and put it back into the soil. Let me talk to you for a second about our social mission, which is "Indigenous peoples are our partners." We work very closely with Indian country in the United States.

And one of the key people at our company is a gentleman named Roger Fragua. And he works with Cota Holdings, and he is from the Jemez tribe in Northern New Mexico. And Roger is instrumental in bringing us together with the 574 federally recognized tribes in the United States to work one tribe at a time to tell this beautiful story and really work with partners to create circular economies and work with tribes to grow hemp. And to understand the benefits of the plant, to understand the carbon story, and to understand and work together as farm partners in this entire process, and to help these communities build their own processing facilities and their own economies so that they can create their own carbon sinks. So we at Santa Fe Farms are working very closely together to tell the story and to work with our native American partners to help save the planet.

Katie: I love that.

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And I'm curious because when we explain all the benefits of hemp, both from the health and environmental side to carbon offsetting, all of it, it seems like a panacea of sorts. So I'm curious, are there any downsides to hemp production or anything that we need to mitigate against when it comes to growing hemp, or is it like largely usable in every stage of its production?

Deanna: Hemp has over 1,000 uses quite honestly. You know, if you look, again, at the top of the plant, which is the flower, you have, you know, the health and wellness part of the plant. And if you look at the seeds, that is one of the most complete proteins that we have. It's amazing for not only human protein in terms of hemp parts, which has all the amino acids, all 6's and all 3 omegas, but it also has all the amino acids in the proteins of the hemp seeds. But it's also an extraordinary replacement for animal feed as well. There's no psychoactive properties in the seeds. And we're trying to work very closely with the government to pass federal legislation so that we can start using hemp as animal feed and grain. That would take the reliance off of growing corn to feed cattle, it'll take the pressure off the land, take pressure off the water. In so many ways, it would be beneficial for our Earth. If you go down the plant and look at the stalk, first of all, it has incredibly deep roots into the ground. So we're creating a situation in the ground from microbes and fungi and, you know, an incredible opportunity for regeneration of soil in our ground.

But let's go to the middle of the plant for fiber and hurd. If you take the outside of the plant, which is the fiber and you strip it away from the plant, this is where if you burn it low and slow through something called pyrolysis, you can get something called advanced carbons. And the first advanced carbon is called biochar. And, you know, tribes have been using this, you know, in the Amazon for centuries to help grow other plants. If you use biochar and you put it back into the soil where you're planting plants, it's an incredible material that reduces your reliance on water. It takes less water to grow plants if you use biochar than it would take if you didn't use biochar. It also helps for a natural-growing environment, and it helps put carbon back into the ground. So biochar is this incredible substance. We could also talk about the science of multi-advanced carbons, like, graphene and other advanced materials. But if you take the inside of the plant, which is the hurd, you can use that for building materials, and bioplastics, and other things. So hemp has numerous materials.

I don't know if you know this, but our nation's first flag was made out of hemp. The original Declaration of Independence, not the one that you see in the Smithsonian, but the original ones were all made on hemp paper. You know, it's incredible. All the farmers of the United States were all growing cannabis. There was no differentiation at that point, you know, almost 300 years ago in our country, but farmers were required to grow hemp and cannabis. And, in fact, for the first 200 years in our country, you could pay your taxes with cannabis.

Katie: Wow. I didn't know that fact. And so literally, we're talking about a plant that doesn't have any wasteful byproducts or harmful environmental consequences, and that has what seems like literally almost infinite numbers of uses. Like, it can just be reused continually. Why did we see this fall out of favor? Like, how did we go from the founding fathers growing hemp to now we can't?

Deanna: So it's a great question. And, you know, in the 1920s, there were a few businesses as we were moving towards the more petrol-based materials and paper-based materials, there were several very large companies that stood to lose multi-billions of dollars had hemp become the single most productive plant. And this would include our reliance on trees and oils. I'm not going to say which companies those were, but those heads of businesses got together with the heads of Congress and outlawed hemp, created the Reefer Madness movement and made hemp and cannabis a federally Class I drug. And so hemp and cannabis were outlawed in the 1920s. And so, it wasn't until 2014 when hemp was...and it was actually in Kentucky and I believe it was Mitch McConnell but don't quote me on this was instrumental in looking at the research uses of hemp in 2014. So that legislation passed that we were able to now look at using hemp for research, but in December of 2018, the Farm Bill was passed, which basically said that you can cross state lines with hemp.

There were four or five states that stood out on that and basically said that you couldn't cross those state lines, but it was that legislation that led to the opening of hemp again in our country. And then people were able to make CBD basically prevalent in the United States for sale, and people started looking at hemp again. So once that happened, the floodgates opened. So we lost hemp for about 100 years.

Katie: Wow. That's incredible that that actually happened, but glad that we're are able to start reversing some of that damage now. For people who maybe this is a new concept too or they're just starting to understand the importance of this going forward, what are some good resources to continue learning?

Deanna: So that's a great question. So we're starting our own thought leadership and educational platform. You could go to santafefarms.com. And I'm going to encourage you, we have a poem right on the front of our website. It's called, "Imagine if..." And it's really based on the notion of what if hemp had been legal for the last 100 years? You know, how many forests might we have saved? How much plastic might not be in the ocean? You know, think about it, think about where we would be now if hemp had been legal for the last 100 years. So I'm going to encourage you to start there. There's the National Hemp Association, which has lots of

great information. And then there's other, you know, great non-for-profits out there that you could just look up and have wonderful information on hemp.

Katie: Perfect. I will make sure those links are in the show notes as well. And I know that you guys have resources and I'll make sure that some of those really important ones...you mentioned a curriculum as well. I think awareness is the first key of this. And so I'm excited that this conversation is now happening at a wider scale and people like you who are doing the work on making that conversation happen. A little bit of a deviation, but I wanna make sure we have time for this. A question I love to ask toward the end of interviews is if there's a book or a number of books that have had a profound impact on your life? And if so, what they are and why?

Deanna: So one of the books that I love is a book about Paul Farmer that's called "Mountains Beyond Mountains" by Tracy Kidder. And one of the reasons why I love this particular book is my background is actually public health. And Paul Farmer was a medical student when he started and he used to basically steal equipment from Harvard Medical School on the weekends, and go down to Haiti to basically save people from...you know, just go door to door and really provide medical care, which is really the antithesis of the public health model. The public health model is not going door to door, it's really like have everybody come to a clinic. But Paul Farmer, Ophelia Dahl, and Jim Kim, who eventually went on to become the president of the World Bank were renegades. And the reason why this story is so inspiring to me, the three of them would go down together and go to Haiti and really treat people with HIV, AIDS and other illnesses and saved so many lives just by their tenacity and their courage. And because they didn't believe anybody could stop them, is I feel like we're in that place now.

I believe that we're in a place where we're just doing what we're doing nose to the ground, and we're not waiting for anybody to say, "No, you can't do that." We're just going full force ahead and forging the way. And I like to believe that just like them, we can really make a difference in this world. They went on to found a beautiful non-profit in Boston called Partners In Health, which has been instrumental in helping people worldwide and saving millions of lives through their efforts and really having an impact. And it really stemmed from three people who are really just renegades in their field. And that was such an inspiration for me in my life. And so I believe that if we keep our nose to the grindstone and just keep forging forward that we can hopefully have an impact on this planet.

Katie: That is a new book recommendation. I'll make sure that's linked in the show notes as well. And another question I ask often in the research phase of podcast is if you were going to give a TED Talk in a week, what would it be on? And I loved your answer because you said optimism in the face of disaster. And I think that's so applicable to what we're talking about today because it seems ominous, it seems like we're facing a lot of really disastrous potential outcomes. And so I would love to hear just some of your high points about encouraging optimism at times like this.

Deanna: So I think all of us have our own personal stories and every day we're faced with stresses and every day we need to have to learn how to overcome whatever it is our personal story is. And I want to remind everyone that you have to remember what is the most important thing in your life, and that starts with you yourself because if you don't take care of yourself, no one else is going to take care of you. And then maybe it's your family, you know, the most significant other in your life, and perhaps your children. And that's really the core. That's the core of everything. First, it's you. And then it's your family. And if you could remember that in the face of disaster, in the face of everything, and that being the most important thing in the world, and meditate on that, and meditate on that unconditional love that you can give to yourself and to your family, that is ultimate optimism to me. And then you bring that to the table, right? So it doesn't matter if you had a stressed-out day, or your day's not going right, or maybe, you know, we're facing some disaster at work or we're facing some whatever crisis it is that, you know, we're possibly facing, the most important thing is you, your health, and your family. That's it. That's it. Once we have that, then we can face everything else.

Katie: I love that. I think that's a perfect place to wrap up a podcast that really went into some deep topics and brought up some important issues. And I'm very grateful for the work that you're doing and for your time today. Thanks for being here.

Deanna: Thanks, Katie. It was great to be here. Thanks for having me.

Katie: And thanks as always to you guys for listening and sharing your most valuable assets, your time, your energy, and your attention with us today. We're both so grateful that you did, and I hope that you will join me again on the next episode of the "Wellness Mama Podcast."

If you're enjoying these interviews, would you please take two minutes to leave a rating or review on iTunes for me? Doing this helps more people to find the podcast, which means even more moms and families could benefit from the information. I really appreciate your time, and thanks as always for listening.