

Matt Baum: Welcome back to another exciting episode of The Ministry of Hemp podcast, and I want to thank everybody that has been listening and giving feedback, it has been great. You can always tweet at us on Twitter, @MinistryofHemp.com. You can hit us up on Facebook\MinistryofHemp, or you can call us too, 402-819-6147. And you can leave us comments, questions, anything you want. I would love to play them on the show. Please, give me a call.

And of course you can always find that number in the show notes as well. But enough of all that. On March 29th, I was in Colorado for the two day Northern Colorado Hemp Expo, the largest hemp expo in the United States. The NoCo Hemp Expo started about six years ago, this was NoCo6. And just like anything else, it started pretty small. NoCo was put on by the Colorado Hemp Company, which is a division of WAFBA which stands for We Are Better For Alternatives, which I'm assuming means alternatives to wood, alternatives to plastic.

The basic idea was to get people that are excited about hemp and what you can do with it under one roof. To show it off, not just for industry people, but for people that want to know where this is going. It started very small, and now it has grown to huge size. 10,000 people plus attended NoCo6 this year. I was one of them, and today we're going to explore my NoCo audio [inaudible 00:01:48]. Let me tell you, I was not prepared for what I walked into.

This year's NoCo Hemp Expo took place at the Crown Plaza Hotel, just next door to Denver International Airport. As we walked in, we had to check in to get our media badges and whatnot, and there was this really long hall we walked down with a ton of people. Okay we made it we're in Colorado. Everyone seemed really nervous. I struck up this conversation with a very nice woman while I was walking down the hall.

There is a ton of people here. Are we going the right way?

Speaker 1: The expo hall's this way. I know it's really confusing.

Matt Baum: Like what's that huge line for? Do you know?

Speaker 3: To get registered for the conference passes.

Speaker 2: When I went to buy my conference pass they were sold out and I booked my arrangements at the end of February.

Matt Baum: Who you with?

Speaker 2: Black River Hemp Company.

Matt Baum: I'm Matt Baum, Ministry of Hemp. I'm recording for a podcast so I'm just getting some background audio right now. So what do you guys do?

Speaker 2: Seed to sell. So last year was our first year we could grow in Wisconsin, and my background is in natural therapies and holistic health. So I've been waiting for an opportunity like this to bring this plant medicine forward.

Matt Baum: That's what's great. She showed me how to actually get to the expo and she wasn't even set up there. She was just showing up to see what was going on. Now as you heard her say, she works for a CBD company that is seed to sell. That basically means she works for a CBD company that controls not only making the CBD, but actually growing the hemp from seed to plant, then extraction, then finally in the little glass bottles that you see CBD tinctures come in. I was there with Jessica St. Cyr, Ministry of Hemp's videographer, who was obviously doing video stuff with help from her husband Spencer. Great guy, helped me a lot too. And when we walked in, needless to say, we got a little overwhelmed.

As you enter into the hall it is complete chaos. There are so many people here it is out of control. [crosstalk 00:03:58]

Apparently, last year, people said it was in a smaller space, and there were too many people. We're in a much larger space this year, and there's still way too many people. This is crazy. There is hemp everything: hemp clothes, hemp makeup, hemp hairspray, hemp food and drink, industrial hemp, like farmers and industrial equipment, and tumblers, curing machines, of course there's aisles, and aisles, and aisles of CBD, and there is 100,000 people.

Okay, to be fair there was a little over 10,000, but I was overwhelmed. All walks of life too. I was kind of shocked. I thought this would be more, I guess, marijuana themed. I thought there'd be a lot of people wearing pot leaves and whatnot, the glowing marijuana leaf necklaces, but it's not at all. This is all walks of life. There's suits here- This was seriously not what I expected at all, and the first day was just industry people. So basically you had to be working in the industry or the media, like me, to get in, but it was all walks of life, everyone you can possibly imagine. And not just a bunch of hippies. There were business people. There was a huge European contingent. There were investors. There were lawyers. There were pharmacists. Every one you can think of was here to check out what was going on with the hemp movement.

Kit O'Connel: Hey.

Matt Baum: Hey what's happening?

Kit O'Connel: How's it going? Just going around giving out T-shirts and stickers to all our brand partners.

Matt Baum: Nice. Look at this. Where'd you get that guy?

Kit O'Connel: This shirt?

Matt Baum: That's me bumping into Ministry of Hemp's editor-in-chief Kit O'Connell, who was actually moderating a hemp and media panel. We'll get to that in a little bit, but first let's talk about the show floor. Started on one end with industrial hemp. Outside there was a bunch of farm equipment. From there it moved into extraction equipment. Next up, you bumped into textile people, and then aisles and aisles, like I said, of CBD. After that, there were lawyers. There were real estate agents. There were backyard hemp farmers. Of course there was people selling all manner of hemp food and drink as well. Kit was with Drew De Los Santos, who also works for Ministry of Hemp. She's in sells and sponsorship, and she had just been at a farming talk that sounded absolutely amazing, and they were gushing about all the stuff they had seen on the expo floor as well.

Drew De Los San: They were just talking about the standard of farming, and making sure that the farming is equitable, transparent, has integrity, is giving back to the land. Just like making sure that there's cover crops. Somebody covered no-till organic farming.

Matt Baum: Very cool, Very cool. That is awesome.

Kit O'Connell: Yeah we really like, we were just over at the RE Botanicals booth, and they had this new roll on oil that smells and feels amazing.

Matt Baum: Oh yeah?

Kit O'Connell: Yeah I put it all over my neck, and Drew was putting it on her temples, and oh it feels so good [crosstalk 00:07:13] It's like ginger lime scented, it's really nice.

Matt Baum: Oh I'll have to check that out. [crosstalk 00:07:20] I know I'm starting to sound like a broken record but you would not believe how many different vendors were at this convention doing everything that you could possibly think of with this plant. The first day that I was there I was bewildered. I literally wandered around like a lost child, wide eyed just marveled at all the different aspects of hemp that were represented.

There's a bunch of hemp pet treats, CBD for your pets, drinks, all manner of bath soaps, bath and body bombs, literally anything you can think of hemp is here. Maybe it's just because I'm new to this, and of course I'm aware that hemp is a huge market that's burgeoning, there's a reason I'm doing a podcast about it, but I could not believe how many people were here, and how excited they all were for every aspect of hemp and what it can do for society. And not just that, but the responsibility behind that. It really was incredible.

More than 200 different companies signed up to come and display here. Thank God there's a cash bar cause this is a little overwhelming. Oh, pardon me. Sorry guys. Excuse me. It is very crowded. I have no idea. They told us to expect 10,000 people, and I would bet every bit of 10,000 people showed up. After finally gathering my wits, and getting my bearing for the show floor itself, it's

time to start talking to people, and oddly enough one of the first guys I talked to is from Nebraska just like me. Nebraska just like me.

Jeff Pascal: Jeff Pascal.

Matt Baum: P-A-S-C-A-L and you're with Sand Hills Hemp?

Jeff Pascal: Correct.

Matt Baum: What does Sand Hills Hemp do?

Jeff Pascal: Coming soon, we essentially want to convert family farm to hemp production. It's been corn forever. Been in the family for a hundred plus years.

Matt Baum: And you're out in the panhandle of Nebraska basically?

Jeff Pascal: Atkinson, do you know where that is?

Matt Baum: Atkinson. Yeah, of course. I'm, Omaha.

Jeff Pascal: Oh okay. So Atkinson, and down near McCook, also. So there's lots of lands. There's expertise. So the question really becomes, legislation in Nebraska's difficult.

Matt Baum: What's the challenges you're running into right now?

Jeff Pascal: They're pretty much stonewalling applications, and/or the barriers to entry are really high. Last year was ridiculous. The barriers to entry were about \$100,000 for five plants.

Matt Baum: Oh God.

Jeff Pascal: To the [inaudible 00:10:05] so they've got to really get off of that and then make the move, in my opinion, to sustainable agriculture, end of monocropping in Nebraska, and then regenerate that soil.

Matt Baum: Yeah cause it's a desert out there right now.

Jeff Pascal: Exactly, a wet one.

Matt Baum: Corn. Well yeah. It's bizarre. Corn and soy beans have like robbed all the nutrients from a lot the farm fields out there. Now, are you a farmer or are you an advocate? Or both?

Jeff Pascal: Both.

Matt Baum: Both. Okay.

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Jeff Pascal: Essentially, I mean right now I'm not farming, but-

Matt Baum: How much land do you have that you want to plant hemp with, roughly?

Jeff Pascal: Probably just start like 120, 130 acres, and then up to 1100 acres potentially

Matt Baum: Is there any hope with legislation? What do you think?

Jeff Pascal: I think eventually. I mean the legislation's there in the farm bill where [inaudible 00:10:56] Nebraska has to come up with their own program that is inclusive.

Matt Baum: And the farmers out there are seeing the money that's coming out of Colorado, and they've got to say, "This is so much better than fighting with the Chinese and Trump over my soy beans." You know?

Jeff Pascal: And corn.

Matt Baum: Yeah and corn.

Jeff Pascal: And, by the way, all the pesticides and fertilizers being sprayed. There's soil- it is a desert to that point because of monocropping.

Matt Baum: Jeff I appreciate talking to you man. Jeff was one of a hundred different farmers, and not just farmers, but CBD companies that were there that grow their own hemp. Jeff's a gung ho guy fighting the good fight, and yeah he's doing it right here in Nebraska where we really need hemp, and it's really just a matter of convincing not just the government, but the farmer, that they should be growing it too. But there were much more than just farmers at NoCo6.

Okay so what do we have here?

Speaker 4: This right here is a full spectrum hard candy.

Matt Baum: Okay it's a hard candy?

Speaker 4: Yeah that's a lemon full [inaudible 00:11:59] How we did it is we took our suckers that we brought to the show-

Matt Baum: Melt them?

Speaker 4: Just smashed them into pieces.

Matt Baum: Fair enough.

Speaker 4: But yeah, it's some potent stuff. I don't know if-

Matt Baum: How are you getting the CBD into the candy itself?

Transcript by [Rev.com](#)

Speaker 4: We have an emulsification process that prevents vaporization. That's the thing that's really hard to do. I'm not going to give away all our trade secrets, but I will tell you this, when we say 50, we mean 50. You know what I'm saying?

Matt Baum: Fair enough. You can taste it.

Speaker 4: Oh yeah if [crosstalk 00:12:30] you would be having a [crosstalk 00:12:31] Chill the [inaudible 00:12:31] out.

Matt Baum: Awesome, thanks man. I appreciate it. Let me tell you, if you want evidence that you cannot overdose on CBD, go to the NoCo convention. Everyone is giving out samples, samples of everything CBD, and I tried all of them. I had a pretty good day I got to say. Felt pretty loose. Felt pretty good all day long, and let me tell you right now, these people have figured out how to get hemp into anything. For example, Nick French from Colorado Hemp Honey... Tell me about Hemp Honey. How does this work?

Nick French: So I've been beekeeping for 12 years producing raw honey that entire time. The last four years I've been producing Colorado Hemp Honey, which is raw honey infused with a full spectrum hemp extract. So we take the whole plant extract which contains CBD, so CBD's naturally occurring in hemp, but we use a full spectrum hemp extract. Meaning that we're putting more in it than just CBD. You're getting terpenes. You're getting phytonutrients. You're getting flavonoids. You're getting the whole contents of the hemp.

Matt Baum: Now I'll be real honest, I didn't know what some of that meant, but I will learn about it in the next episode. And where does your extract come from? Where are you getting that from?

Nick French: We're growing it.

Matt Baum: Oh no kidding?

Nick French: Yeah years ago, I mean when we started four years ago, everybody told us, "You got to buy from Europe. That's the only way it can be legal," and so we did. And then we realized that Colorado was producing a lot of really good

Nick French: Quality hemp, and so we go, okay, we'll start to ... We were buying from a guy out of Pueblo, and then last year, we said, we're going to start growing ... we've been sitting on 27 acres for, you know ... all this time, so we grew half an acre. We only grow for our own products. We're not growing and making oil and selling to other people.

Matt Baum: Okay. It's strictly for the honey?

Nick French: Strictly for the honey.

Matt Baum: Wow.

Nick French: That way we can control what goes into the plants, and also because we're beekeepers, we're conscious about what we do with our hemp plants.

Matt Baum: Okay.

Nick French: You know, I love walking down my rows of hemp seeing crickets to grasshoppers and lady bugs, and there's even a big snake that lives on the farm-

Matt Baum: Yeah, yeah.

Nick French: ... that comes out there. I mean, that's part of the environment. And then, our bees.-

Matt Baum: Right.

Nick French: ... Right? The bees are out there as well.

Matt Baum: So, the bees actually pollinate the hemp? I mean ... I don't know if that's a dumb question or not.

Nick French: It's not a dumb question at all. Bees have evolved over millions of years to go from the male part of the plant to the female part of the plant-

Matt Baum: Right.

Nick French: ... to transport pollen, which results in fruits and nuts and vegetables. The bees do it. I had 20 hives on 70 acres of industrial hemp in 2015, in North of Denver out in Lochbuie. The bees love the pollen but there's no nectar in Cannabis and hemp.

Matt Baum: Oh, okay. Well, that makes sense.

Nick French: So, you can't produce nectar or honey directly from hemp.

Matt Baum: Because there's no ... I mean, there's a flower-

Nick French: There's a flower.

Matt Baum: ... but not the traditional flower that we're thinking.

Nick French: You're right. It's not an alfalfa. It's not a buckwheat or clover. They have a lot of nectar to produce lots of honey that we know. Right? But, there are benefits to the bees. The bees are collecting off of the hemp. They value that resin for some reason.

Matt Baum: Does that affect the flavor of the honey they produce at all?

Nick French: Well, the resins don't go into the honey but-

Matt Baum: Right.

Nick French: ... Yeah. Yeah, it's more-

Matt Baum: But, I mean, just being there around it. Does that affect anything? Flavor?

Nick French: We didn't notice it because they weren't producing ... there's no nectar.

Matt Baum: This is basically just being polite and telling me I don't know what I'm talking about. And, to be perfectly honest, I didn't, but I'm trying to learn.

So, how do you get the CBD into the honey? Is it literally just mixed in or do you cook it in?

Nick French: Yeah, we got a unique process we've developed over the last four years to blend the two together. I mean, it's a challenge blending oil and water-

Matt Baum: Sure. Sure.

Nick French: ... based products. The hemp oil being oil-based and the honey is about 15 to 18% water. And so, it takes a unique process to do that.

Matt Baum: I know. Fair enough. Hey, I appreciate your time Nick. This is great.

Nick French: Yeah.

Matt Baum: This and the honey [inaudible 00:16:43]

Nick's honey was incredible and of course, I'll have a link to his site in the notes, so you can pick some up too if you'd like to.

But one of the more interesting hemp-infused products I saw was actually a Seltzer water. This is Lindsay Davidson from Queen City Hemp.

So, tell what we got going on here then.

Lindsay: So, we have CBD-infused Seltzer water.

Matt Baum: Okay.

Lindsay: We got five milligrams of full spectrum CBD per can, four different flavors. Blood orange, passion fruit, guava and lemon lavender.

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Matt Baum: How do we get the CBD into the Seltzer water? How does this work?

Lindsay: So, we make a submicron emulsion. We process that in-house ourselves, so ... Yeah.

Matt Baum: And where does your CBD emulsion come from?

Lindsay: We make that in-house, however-

Matt Baum: Oh, you make it?

Lindsay: ... Yeah, yeah.

Matt Baum: Oh, that's great [crosstalk 00:17:29]

Lindsay: We're out of Ohio, but the hemp comes mostly from farms from Kentucky, Colorado, North Carolina, Oregon. They don't have a hemp program in Ohio currently, so ...

Matt Baum: I'm from Nebraska. We don't either.

Lindsay: Okay. Oh, yeah. Yeah. So ...

Matt Baum: Let's do a tasting.

Lindsay: Awesome. We got no sugar, no calories, no carbs, no sodium.

Matt Baum: Fantastic. So, it's like LaCroix with CBD in it.

Lindsay: Exactly. Yup. Zeros across the board, that's really important to us.

Matt Baum: Am I going to taste anything CBD-related? Like some of the tinctures I've tasted have been ... they kind of have that earthy, grassy flavor.-

Lindsay: Yeah.

Matt Baum: ... Is that going to be in there?

Lindsay: So, at the end, you definitely get the slight bitterness from the hemp.

Matt Baum: Okay.

Lindsay: Flavor is very important to us. One of our co-founders, his background is in flavor chemistry from the food packaging world.

Matt Baum: Okay.

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Lindsay: So he's very ... very important on that and we don't want to add a bunch of sugars or artificial flavors-

Matt Baum: Right.

Lindsay: ... to the product. It's kind of right outside five milligrams-

Matt Baum: So, it's unavoidable.

Lindsay: Yes.

Matt Baum: So, what am I starting with?

Lindsay: We're going to start with the blood orange. This is our very first flavor.

Matt Baum: Okay.

There's no trace of smell, I notice.

Lindsay: The passion fruit, you'll get a little more smell out of it.

Matt Baum: You do get a little hint in the end.

Lindsay: Right at the end.

Matt Baum: It's definitely there.

Lindsay: Yes.

Matt Baum: It's not like, offensive but-

Lindsay: Right.

Matt Baum: ... it's there.

Lindsay: Yup, yup.

Matt Baum: But that's not bad.

Okay, what's next here?

Lindsay: Alright. I'm going in order release here so ...

Matt Baum: I've talked about hemp cocktails before on this show. See episode two for more on that. But these Seltzers already had hemp infused in them, and would work really well for making cocktails with bubbles.

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I got to say the Queen City Hemp guava flavor was absolutely outstanding.

Lindsay: [inaudible 00:19:07] dried grape as a mixer. Also good between drinks. Also good-

Matt Baum: Oh, I like that.

Lindsay: ... when you're hungover.

Matt Baum: That one's my favorite so far.

Lindsay: The guava?-

Matt Baum: That's really good.

Lindsay: ... That makes me so happy.-

Matt Baum: Yes. That one's great.

Lindsay: ... Guava love. Great. We got lemon lavender. This is our newest flavor-

Matt Baum: I love lavender.

Lindsay: ... We launched this last year.

Matt Baum: Well, the Seltzer water was wonderful, and I definitely needed to be hydrated at the time.

I think, one of the tastiest things that I happen to run into and ... it's not just because I'm a chocolate junkie, but it was in fact a chocolate.

Jessica and I were all but too happy to talk to David Little from Incentive Gourmet. They're a candy company that works with LifePatent CBD who is one of the more impressive CBD companies out there right now.

Jeff Pascal: We are a manufacturer of multiple edible items with CBD.

Matt Baum: Okay.

Jeff Pascal: And we're located in the East Coast.

Matt Baum: East Coast? Where?

Jeff Pascal: New Jersey.

Matt Baum: New Jersey?

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Jeff Pascal: Yes.

Matt Baum: Oh, there we go. Product placement.

Jeff Pascal: I understand. We work with LifePatent. It's our side group. We probably have a very large breadth of edible items. We come from the chocolate and candy manufacturing industries, and it was drawn in to CBD.

Matt Baum: So, you started in chocolate and candy-

Jeff Pascal: We've been in it for 25 years.

Matt Baum: Okay.

Jeff Pascal: We work with corporations like Piaggio, Bacardi. We make chocolates for them, and then people have asked us to do private label chocolate-

Matt Baum: Okay.

Jeff Pascal: ... for [inaudible 00:20:34] seed companies and others who wanted to separate from manufacturers.

Matt Baum: And that's how you came into this?

Jeff Pascal: That's how we came in, then we developed our lines, and we expanded to four or five different edibles. We have coffee pots. We have cookies. We have hard candy. And, we are an FDA-inspected facility, as we've been for many years.

Matt Baum: Okay.

Jeff Pascal: So, we know that side of the manufacturing process.

Matt Baum: How did you meet these guys. How did you find LifePatent? Why them?

Jeff Pascal: We met them in the show.

Matt Baum: Oh, yeah?

Jeff Pascal: And, they looked like they knew what they were doing and we teamed up, and we work pretty well. They make us the CBD because we don't want to deal with that end.

Matt Baum: Right.

Jeff Pascal: It's hard enough manufacturing a product [inaudible 00:21:16].

Matt Baum: Right.

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Jeff Pascal: And, a lot of people in the industry are not food [inaudible 00:21:22]

Matt Baum: Sure.

Jeff Pascal: We have to be because we know the game. It's very sort of simple.

Matt Baum: So, the nature of the extract itself; is it hard to get it to bind with the chocolate? Do you literally just mix in to the chocolate? How does that work?

Jeff Pascal: Chocolate ... what you need to do is you need to get an oil that could be melted or mixed in [inaudible 00:21:40]-

Matt Baum: Sure.

Jeff Pascal: ... it's liquid in liquid. And, in order to correctly work, it has to mix for a long time. And, you have to have pretty good equipment. A lot of people make it by hand. We have chefs. They have part-time [inaudible 00:21:54]

Matt Baum: Sure.

Jeff Pascal: So ... I mean, people do it in small batches [inaudible 00:21:58] but in order to test out, like we have to test out, we have to have the right machinery.

Matt Baum: Right.

Jeff Pascal: Just like we need the right machinery to make chocolate without CBD.

Matt Baum: Yeah. Sure. Of course.

Jeff Pascal: But CBD is an interesting element because it takes a while. Before you realize it, you're making like, a cup of CBD into a hundred pounds of chocolate.

Matt Baum: Right.

Jeff Pascal: It needs to mix for a long time [inaudible 00:22:21] goes out ...

Matt Baum: David went on to explain because of the nature of CBD, you can't just introduce CBD oil into the chocolate. They will reject each other. You got to figure out a way to make them combine and come together, and do so without imparting that grassy flavor, that herbal kind of flavor that you get from CBD and tinctures and what not. And, you mask that, of course, with sugar. It works pretty well with their chocolate.

Jeff Pascal: [inaudible 00:22:50] 200 milligrams.

Matt Baum: 200 milligrams? Dude, that's a dose.

Jeff Pascal: Yeah. We decided that we want to do full spectrum because our view is that, if you're going to try our product, it's got to work for you.

Matt Baum: Sure.

Jeff Pascal: If it doesn't, you'll never going to buy our product.

Matt Baum: Sure.

Jeff Pascal: We do get a lot of people asking us what the records make ...

Matt Baum: We tried a milk chocolate and a dark chocolate version of David's chocolates, and they were wonderful. And, I got to say, even at a 200-milligram dose, there was no trace of that flavor, that CBD herbal flavor that I was telling you about and the tinctures, which is important if you're selling this to someone who is unfamiliar with, or looking for that flavor and just wants to enjoy the benefits of CBD without that kind of earthy, green thing.

I know it's sounds like it, but I didn't just eat and drink the whole time. One of the more impressive things that I saw there was what everyone was doing with hemp on the industrial side; whether it was making concrete with hemp or composite woods or plastics with hemp. In fact, there was one guy I met that made a bike frame out of hemp.

This is Patrick Flaherty and he's doing amazing things with hemp.

Patrick: PF Design. PF Design Lab.

Matt Baum: And what do we do at PF Design Lab?

Patrick: PF Design Lab. We are an innovator in natural materials, and experts in the application of those materials in consumer products and building materials, and all kinds of other things that customers want that have a natural material component in them.

So, we come from an engineering background. Also, experienced in processing of materials and developing specs and quality control of those materials to get them in formats that people could use in their end-use products.

Matt Baum: Patrick, you have a bike frame made of hemp.

Patrick: I do have a bike frame made of hemp.

Matt Baum: How the hell does that happen?

Patrick: That happens from a lot of hard work, a little ingenuity and some creativity.

Matt Baum: Fair enough.

Patrick: So, I was approached by some guys that made a carbon frame, and they said,

"We want to make a hemp frame" or natural fiber frame really.

I said, "Let's do it on a flax fiber. It's a pre-brake. It's similar to the carbon that you're already using."

They said, "Well, we want to do it on hemp."

And I said, "Well, that material doesn't material doesn't really exist."

So, they said, "Okay. Well, let's do it anyway." So ... I ... Yeah ...

Matt Baum: That's how the best ideas happen.

Patrick: Yeah, exactly. So, I told them, "Okay. Well, we have have to develop a material that not only will work for us and manufacture, but will work in your manufacturing system." So, I spent some time working on getting some fabrics that I thought would work and some resin systems that I thought would work. Did some experimenting. Made some trials. Sent them a couple of pieces. The initial ones worked in their prototyping. We made a bunch more material. I went there and we did a layout, and then we end up with a bike frame made out of hemp. The first one that I know of.

Matt Baum: How does it hold up compared to like, carbon steel? Is it lighter? Heavier?

Patrick: It's going to be ... so, the advantage of natural materials versus synthetics or things like that ... Light-weighting and damping properties. Now that one was designed purely, "can we do it."

Matt Baum: Right.

Patrick: So, it's only got about two layers of materials in there. It weighs about what a carbon frame would weigh.

Matt Baum: So, this is like a proof of concept basically.

Patrick: This is a proof of concept. Right. That's why you see that it's not completely finished, has some spots and whatnot, but hey, we did it. It works. It could be ... with a little bit more engineering, we could actually make that so it was rideable frame. It would increase the weight a little bit, probably about 30% and that frame would end up being around probably 1400 grams or so, 1500 grams maybe.

Matt Baum: So, real similar. In ways.

Patrick: Similar. Similar. But, better damping properties and made from rapidly renewable materials, including a bioresin.

Matt Baum: Possibly stupid question.

Patrick: What?

Matt Baum: When I'm done with it, if I bury it, will it melt down to nothing?

Patrick: It does not.

Matt Baum: Okay.

Patrick: It does not. No. So, actually I want to talk about that actually a little bit. So, people talk about biodegradability or recyclability and biophase stuff. So, it's only recyclable if you actually recycle it.

Matt Baum: Right.

Patrick: Right?

Matt Baum: Right.

Patrick: And, it's only compostable if the microbes that actually can compost it, gets the oxygen and things that they need to actually compost it. If you go bury it in a landfill then, it's not going to.

So, the ... really what you want to do is on the front end. You want to put as much bio-based materials on the front end of your stuff-

Matt Baum: Right.

Patrick: ... that offsets your other traditional synthetic materials because ... then, it doesn't matter what you do with it. At the end of the day, if you don't recycle, if you don't, you know ... if you just throw it away ... like the same thing you did with the other stuff, but you have lower energy input at the beginning of it. So, you won upfront. You didn't wait till the end of the day.

Matt Baum: Makes perfect sense.

Patrick: Yeah.

Matt Baum: Patrick, I appreciate your time, man.

Patrick: Alright. Thanks a lot, man.

Matt Baum: Let that just sink in for a second. Patrick who is admittedly an engineering genius and nerd, made a bike frame out of hemp.

Not long after I talked to Patrick, I sat in on a panel that discussed hemp usage in construction and building, and they were talking about using hemp-infused lumber, using hemp-infused concrete; literally making concrete and building materials out of hemp. A plant that grows in a hundred days. It's completely renewable.

Instead of cutting down trees, you can grow this plant in a hundred days and make concrete out of it, make composite woods, strengthen plastics

Matt Baum: It was incredible what these people were doing. And, the one thing that everyone there had in common was a sense of responsibility, not just to the public and to the people that were buying the stuff, but to the earth. I mean, listen to the way that this guy that I talked to talks about the way that they're fighting mites that attack hemp plants. He's not doing it with poison. [crosstalk 00:28:24].

Speaker 5: So it's all good, and we've run tests in Colorado on hemp on russet mites where the growers were having trouble. They had tried a number of different materials to control russet mites, they weren't very effective, so we said, "Here's another option." So, our product was somewhat unique, so we ran the trials, multiple replications, we controlled russet mites about 99%, which, previously, they were hoping to get 50%.

Speaker 6: Right.

Speaker 5: So, it's a huge opportunity for our company, and for growers to deal with a pest that's a major issue.

Speaker 6: The russet mite, is that the biggest issue?

Speaker 5: It's one of them. Hemp, actually, it's a strange story. These mites are actually released by the state of Colorado as a bio-control for tumble weed, Canadian thistle, and some other issue.

Speaker 6: Oh, so they attack weeds?

Speaker 5: That's correct.

Speaker 6: Therefore, hemp being a weed ...

Speaker 5: Surprise.

Speaker 6: [crosstalk 00:29:25] russet mites come from.

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Speaker 5: Yeah, guess what?

Speaker 6: That makes perfect sense.

Speaker 5: Right. But, there's not any real controls out there that are effective until this came along. So.

Speaker 6: So, how is your chemicals different than, say, like, other pesticides that kill things?

Speaker 5: Yeah. It's [inaudible 00:29:40] mode of action. These are botanical oils that suffocate pests, and, also ...

Speaker 6: So, not poison at all?

Speaker 5: Totally not poisonous. There's no residue left on the crop afterwards. These are actually not registered with the US EPA. They're exempt, because they're food grade materials.

Speaker 6: So, you could drink this if you wanted to?

Speaker 5: Well, you wouldn't want to, but ...

Speaker 6: But, you could.

Speaker 5: Theoretically, it wouldn't kill you.

Speaker 6: Okay.

Speaker 5: And, it wouldn't do any permanent damage.

Speaker 6: I see you don't put anything in it to make it taste good.

Speaker 5: That's correct.

Speaker 6: Okay.

Speaker 5: That's right.

Speaker 6: We don't want them enjoying it. [crosstalk 00:30:15].

Matt Baum: [crosstalk 00:30:15] lost his name in the shuffle, but even the people that were there pushing pesticides were coming from a very responsible place, and thinking about how these pesticides would affect the environment.

Now, I admit, I don't go to a lot of agricultural expos, but I'm assuming that most of the people that are at these other agricultural expos don't talk like this. The

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[NoCo 00:30:41] expo wasn't just full of vendors, there were several great panels, as well. One of which was Kit's panel, Hemp in the Media, and I will definitely figure out a way to get that up for you to listen to, but one of the best panels that I went to was the Indigenous Peoples panel, and it was Native American tribes that were growing hemp on their reservations, and they had some really incredible things to say about the nature of the plant, and how we view big agricultural farming today.

I'm going to leave you with some comments from [Marcus Grignon 00:31:20], and I apologize if I'm mispronouncing that, and Winona LaDuke. Marcus is from the Hemp Stead project, Heart, and Winona works for Winona's Hemp, both of which grow hemp on Indian reservations, and they had a whole different idea of how we should even think about these plants. I'll let them tell you about it.

Marcus:

Yeah. So, back in 2016, we were down in Westminster at the HIA conference, and Alex and I were on a panel there, as well. Afterwards we had somebody come in, and, I think it might have been Doug Fine that was recording us. We were sitting in there in a room, and we were talking about patents and genetics, and doing patent genetic and whatnot, the question was posed like, "Do you patent your own genetics?"

Because, Alex has his own seed. He thought about it for a while, and he's like, "You know, make a lot of good money out of it." But, then, he consulted his elders, and the elders said, "You patented genetics, you're going to have those genetics in the afterlife, and that plant is going to be your slave." And he didn't want that.

So, he didn't patent his genetics. In my mind, when I look at what's going on in the industry of certified seed, Europe has patented everything. It's like, man, I just look at it and I'm like, "Really? I have to sign all this paperwork in order to get you a seed so I can plant it?" This came from [Coco Ma Sihiki 00:32:48], it didn't come from some lab. We should be able to grow this no matter what, and be able to cross breed it and change it, and make it better than it is right now.

In my mind, it's been a real honor to learn from Alex, and also an honor to be on a stage with Rosebud. We shared a stage back in NoCo3, I think. You spoke first, I spoke second. So, it's nice to have her back to sit and talk with us and converse, so.

But, I mean, yeah, if anything you take away today is, fight with the patents and the genetics, because, really, that's what's going to really hamper the industry, and it's going to hamper jobs more than anything. Yeah.

Speaker 7:

Anybody else on that at all?

Winona:

[inaudible 00:33:34]. So, my tribe grew and I grow now for three years. So, originally they got some European varieties, and then they all went feral. So, I

feel like they all came home to us. You know what I'm saying? We've got a little bit of this, and they've got some Nebraska hemp. We call it the [Tridell 00:33:56] hemp collection in honor of John.

So, I just feel that hemp really grew well in our territory. That's why we have 11 hemp bails. We need those northern varieties, like we do best with those varieties that are northern European varieties, because we're super far north.

I feel, like I said before, a plant's not a slave. So, I feel confident growing that. We're growing fiber hemp, so it's not THC. I don't got to worry about that stuff in it, but I really feel like those plants belong in that territory, and they do good in there. So, I'm in that same ... I had thought about patenting them, and they just seem to, they all reseed. So, I feel like they're happy.

They belonged to somebody once, but that was a long time ago.

Speaker 7: Exactly. Yes. You've all kind of touched on this [crosstalk 00:34:57].

Matt Baum: The last part was a little hard to hear, and, well, that's my fault, but what Winona said was, "These plants may have belonged to somebody once, but that was a long time ago." And at the end of the day, everyone at this conference had so much respect for the hemp plant itself, it was amazing. I've got to say, coming in as neophyte, I left as a believer.

I didn't just drink the Kool-Aid, if you will, I saw the evidence. I talked to people that believed in this stuff. I met so many incredible people working in this industry, and working to not just educate the public in what hemp can do, but bring it to the public, force it on them and say, "Hey, we need to make a change. We need to do better, and there's a way to do it, and we can do it with hemp."

I got to say, NoCo6 was incredible. I had an amazing time there. I met so many wonderful people that are working so hard to bring hemp to people in so many different ways. What you heard here doesn't even begin to scratch the surface of what was at this convention.

Ministry of Hemp's videographer, Jessica, has a bunch of videos up on the website you should check out, as well. I had an amazing time, and I learned so much, and I cannot wait to go again next year. I just hope they can find a bigger space, because with this much interest and this many people showing up, there is no way they can do it in the same convention center.

So, that was my NoCo6 diary. It was an amazing time. There was so much more I wish I could tell you about, but this would end up being a four to five hour show, and I'm not going to ask you to do that. But, if you find yourself in Denver in the last weekend of March next year, I highly, highly suggest you check it out. It was incredible.

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Next time on the show we are going to be talking about extraction. The science of how you get cannabinoids out of a hemp plant, specifically for CBD, and I've lined up a bunch of really smart people that are going to tell you about all the different ways that cannabinoids are extracted.

In the meantime, I would love to hear from you guys. Again, you can hit us up on Twitter at Ministry of Hemp, or on Facebook, backslash Ministry of Hemp. You can call us at 402-819-6147. Leave us a voicemail with a question or a suggestion for the show, anything you want, and I will play it on here. I look forward to a day where I have enough questions that we can just have a whole show playing your questions with a professional answering, not someone like me. I'll get somebody smarter, trust me.

You can also send your questions or reviews to matt@ministryofhemp.com. That's M-A-T-T at Ministry of Hemp dot com. And don't forget to subscribe to our show on iTunes or your favorite podcast app.

By the way, if you liked this show, and you really want to help me out, leave a review on iTunes. It seriously helps in search results and it just takes a second of your time. As always there will be a full written transcript of this show in the notes including links to everybody that I talked to at the NoCo show. Like I said, I will be back in a couple of weeks here with a show about extraction. It's going to be really cool, and I can't wait to tell you guys about it, but for now, this is Matt Baum with the Ministry of Hemp reminding you to take care of yourself, take care of others, and make good decisions, will you?