

Hemp

Joe Cornely [00:00:02] There is a lot of excitement over industrial hemp. You'll hear that it's a miracle, healthy, a superfood, the next raw material for everything from clothing to concrete, now that it's legal to grow hemp in Ohio, you're going to hear projections that for farmers, the crop is either going to make them rich or bankrupt their farm. Today, we're going to take a broad overview of Ohio's burgeoning hemp industry as we're joined by a farmer, regulator, educator and entrepreneur camp. This week on Town Hall Ohio.

Joe Cornely [00:01:03] Industrial hemp is now a legal crop. Thanks first to changes in federal law and then changes to Ohio law. On the heels of those developments, some so-called experts have claimed that hemp was the silver bullet for Ohio agriculture, that this new alternative crop is going to bring riches to any farmer who chose to grow it. Well, Dorothy Pelanda is Ohio's director of agriculture and is responsible for regulating Ohio's hemp industry. What is her take on the future of hemp production in Ohio?

Dorothy Pelanda [00:01:37] Well, you hear everything from it's going to be the third largest crop after corn and soybeans to, Kentucky's website, which says do not invest in hemp more than you are willing to lose. There's the spectrum. You know, right after Senator Huffman introduced this bill, I began traveling the nation with my team, looking and studying states who already had a hemp program through the pilot program of the Farm Bill 2014. And those states have just revealed to me that the growth in the hemp industry from one year to the next year to five years has doubled, tripled and quadrupled. So what's the appetite for Ohio farmers? We'll see.

Joe Cornely [00:02:20] Today, we're going to spend most of our time talking about the issues that farmers have to consider when deciding whether hemp has a place on their farm. But first, let's talk briefly about the consumer end. While hemp is a source of multiple products, the one getting most of the attention is CBD. Garrett Fortune owns Commodity, a fully integrated hemp business.

Garrett Fortune [00:02:44] So CBD is one of the cannabinoids within the hemp plant. When we extract hemp we have multiple cannabinoids, including CBD. Everyone recognizes that hemp and marijuana are different. A hemp plant has to have below .3% THC in it and we extract that out when we make CBD. We isolate CBD as that cannabinoid during the process. You hear claims about it from every avenue whatsoever.

Joe Cornely [00:03:15] I Googled health benefits of CBD. The claims said it relieves pain, anxiety, diabetes, heart disease, calms epilepsy and a long other list of benefits. Now, I emphasize that's what the claims are. I have no idea whether they're true.

Garrett Fortune [00:03:33] That's the hot one now. But I think for the medical research CBG, CBN and CBA, some of the other cannabinoids are going to be higher research in the future. That's just getting all the notoriety in the press right now.

Joe Cornely [00:03:45] So beyond the CBD, what other products are being made from hemp?

Garrett Fortune [00:03:50] There's a lot of animal feed from the extracted byproducts and they're doing research at different universities. The fiber is amazing. These are hemp pants that I'm wearing right now from Prana. And there's a lot more companies that are starting to make and look at hemp as an alternative to cotton. For instance, Levi's is doing

a hemp pant right now and some of the other big brands that are out there, people are researching the husk. Hempcrete is huge. They're doing a lot of research on that. There's a company called hempcrete and they make a concrete out of hemp. And that is shown to be very strong and durable. They're using it in doing some hurricane research down south and they're looking as another product that can come out of the hemp plant.

Joe Cornely [00:04:34] Hemp entrepreneur Garrett Fortune, who will be back later in the show. As I mentioned, we're spending the majority of today on the production side of hemp. So what's a hemp farm look like? We don't have any in Ohio yet because our state chose to not participate in pilot programs that had been approved by the federal Farm Bill in 2014. So next year will be the first year we could see hemp grown commercially in Ohio. So to get us a look, Farm Bureau's Ty Higgins took a road trip.

Ty Higgins [00:05:07] I traveled down to Warsaw, Kentucky. That's just southwest of Cincinnati by about 30 minutes. I met Taylor Jones. He and his family farm currently in their fourth year of growing hemp for CBD oil. He told me that putting hemp into a farm rotation is not a one size fits all scenario.

Taylor Jones [00:05:24] I mean, you can go across the state, probably talk to 20 different farmers and you'll get at least probably 15 different production methods. Everybody's just trying to figure it out. We, our family historically, tobacco farm, cattle farm. And then we kind of transitioned ourselves into produce, which we got to use so much plastic. So we're kind of a blend of all those methods. I like to think that growing the hemp on plastic. Kind of similar to how we do produce and then harvest it and hanging it in the barn and drying it and stripping the flower and leaf off kind of similar to tobacco. I think that gives us the highest quality final product. And right now the market places really high value on that. But other people across state are doing it much differently... Following a grain method or they'll grow it and almost chop it like silage that yields, you know, a lower potency of CBD, which is what everybody on the oil side is growing for.

Taylor Jones [00:06:30] But if they're getting it sold, they're out a lot less investment, a lot less risk. You know, like anything, probably the biggest factor is how can you get it sold on the back end? And for us, what we've seen...there's a lot of people across the state that might grow this and simply never get it sold. It might be a complete loser financially. For us, the highest frequency of getting the product sold on the back end is to have it dried and have the flower and leaf stripped off the stock. That also plays a big role in why we grow with that method.

Ty Higgins [00:07:08] How big of a boon was it for Kentucky agriculture?

Taylor Jones [00:07:11] I think for some people it's a great thing. For some people kind of still feeling their way through it, it's maybe a little better than break even. And then for some people losing bad, it's just it's not a commodity yet. With corn, beans, we've got the Board of Trade. You know what it's trading at. You know where you can go and move it. It's liquid.

Taylor Jones [00:07:41] We were kind of used to this a little bit with produce. You know, you kind of grow it yourself and then go figure out where you're gonna sell it. So we were a little bit familiar with that. But the hemp. You have to go find who's going to pay for it. You have to make sure that they pay you. You have to make sure that their check is good. A lot of people say it's kind of like the Wild West and in a way there's a lot of truth to that.

Ty Higgins [00:08:04] If you went back four years and you could have somebody tell you one golden piece of advice about this industry, what would it be?

Taylor Jones [00:08:12] Actually, I can quote it. I've got unbelievable advice, actually. Kentucky Farm Bureau employee Kyle Kelly told me (he's the one who introduced us to the first company that we worked for). He said there's guys doing good with this and there's guys losing their farm to this. Don't risk anything you're not willing to lose. And we did that every year. We never risk anything we weren't willing to lose. And that's the only reason we survived.

Ty Higgins [00:08:39] On the regulatory front, how big of a hoop do you have to jump through just to get into this industry?

Taylor Jones [00:08:45] Getting in is not terrible. I mean, the paperwork's not quite as burdensome as you would imagine, but just remaining compliant. One of the big struggles, of course, you know, you can grow for oil. You can also grow for grain and fiber. There's not much THC risk with the grain and fiber varieties. With the oil, we're pushing limits on THC as much as we possibly can so that we can get the most CBD because it's all about the ratio. As far as the genetics and the varieties that are available, that ratio is only so good. It's just topped out. And in order to get the most CBD, you're just flirting with disaster all the time on the THC side so acquiring varieties that have that best ratio that are compliant, THC and valuable on CBD. That's a challenge. Then growing them in the field, know what you have, getting your tests done and being compliant. We'll have our state test and the Department of Ag has 45 days to get back to us from the day that they collect it to say whether that crop is going to be legal for harvest and marketing. They send us an email that says you're good. Go ahead and harvest this. So we invest the money. The labor. There's a whole lot of dollars, over a thousand dollars an acre, probably in that harvest. And then you wait 45 days later, you've spent all the money and you can get an email that says this crop's not compliant. Can't sell it. That's a challenge.

Ty Higgins [00:10:24] That's Taylor Jones. He farms in Warsaw, Kentucky. He and his family are in the hemp business and have found a method of growing the plant for oil that has been a success since they added it to the farm four years ago. You might have heard in the background the hum of a weed eater being operated by two of Jones's employees as they meandered up and down the rows of hemp, knocking down tall weeds that could thwart production levels. That emphasizes one of the many challenges that might come along with growing hemp. It can be very labor intensive. Joe, back to you.

Joe Cornely [00:10:54] On the regulatory front in Ohio, the job belongs to the Ohio Department of Agriculture. Dorothy Pelanda is ODA director.

Dorothy Pelanda [00:11:02] The governor signed the bill into law in July. And that bill says basically three things. The director of agriculture shall create rules surrounding how you grow it, how you process it, how you research it, and how you test its byproducts. Our executive director of the hemp program, Dave Miran began immediately working on draft rules based upon what other states had drafted in their pilot program. Those rules went out for public comment by virtue of the law that requires us to do that. We're almost at the end of the public comment period where now we can officially go to JCARR to adopt those rules.

Joe Cornely [00:11:40] I went over the documents on your website. There's a there's a million details here. We can't get into all of them. But one of the broad areas that you're

expected to regulate is in the cultivation, the growing of the hemp crop. It begins with licensing. What what's kind of the requirement there or the goal to have licensed growers?

Dorothy Pelanda [00:12:03] Once JCARR, which is the legislative rule making arm of the General Assembly, approves our rules, which we expect to happen in December, Joe, then farmers can apply to our department for a license. Now, this is different than marijuana, in which the law limited the number of people who could grow marijuana and no such restriction exists other than some basic parameters regarding your background. I don't think you can have a felony conviction or those kinds of things. And again, some of these are federal mandates.

Joe Cornely [00:12:37] One of the items deals with land use restrictions. What are we getting into there?

Dorothy Pelanda [00:12:44] The idea and we modeled these after the Kentucky rules is that hemp is not going to be allowed to be grown in someone's basement, Joe. We want enforcement which is required to go out and inspect these, not to have to go into private people's homes.

Joe Cornely [00:13:03] You've got rules that deal with how the crop is actually harvested then as well?

Dorothy Pelanda [00:13:08] Yes. So the USDA and other states have promulgated rules that say 12, about 12 days before a farmer's ready to harvest he's going to contact our department. Our inspectors will actually go out into the field and do an in-field test for THC. That product in the field has to test less than .03 THC in order for it to be harvested as hemp.

Joe Cornely [00:13:33] THC is the component of a hemp plant that gets you high. But what happens if the state finds that your THC has exceeded the level allowed? We'll talk about that next on Town Hall Ohio.

Joe Cornely [00:17:12] We are taking a look at a new crop that Ohio farmers might be considering: industrial hemp. Just a bit ago, we heard Kentucky farmer Taylor Jones tell Ty Higgins that one of his biggest risks is that his hemp will contain more THC than allowed by law. So what happens if the crop exceeds the threshold? Back with us Director of Agriculture Dorothy Pelanda.

Dorothy Pelanda [00:17:35] The crop has to be destroyed at that point because we can't take the risk that it's going to be sold as marijuana. But the good news is this: most states have resolved or really reduced the number of hot crop that has grown, Joe, by creating either a certified list of approved seeds or a prohibited list of seeds. You know, processors who are going to typically contact with the growers want the farmer to have a successful crop. So, we're going to give farmers information about the seeds that are good for being below that level. A lot of growers firmly believe in using a cutting rather than a seed because it really controls the THC level much more.

Joe Cornely [00:18:19] There's quite a list of regulatory requirements that ODA is charged with assuring that farmers meet. But I want to switch for a moment to the consumer side of Ohio's new hemp law.

Dorothy Pelanda [00:18:30] The bill that the governor signed into law requires our department, food safety division to test all products that claim to have CBD in them. And so because that bill had an emergency clause the very day that the governor signed it into law, we were required to go out into the state of Ohio and take samples off the shelves of Walgreens, a Giant Eagle, and where it was being marketed to test for two things, Joe. First, truth in labeling. Now, under USDA regulations, no CBD product can claim that it has curative disease features. So if a CBD product on the shelf says cures cancer or cures arthritis, we have the right to embargo that product or ask the the store owner to relabel it. The interesting thing is that nationwide research shows that less than 31% of all products that even claimed to have CBD actually have CBD in it. So. So buyer beware. Number two, we're also learning that a lot of these products have been adulterated with pesticides and metals. So because it takes time for our department to create methodology, we have contracted with two private labs to immediately test these products on the shelves for content and to make sure that the label on those products is accurate.

Joe Cornely [00:19:54] ODA Director Dorothy Pelanda, who hopes all the rules will be completed by the end of the year. Now we're going to bring back in hemp entrepreneur Garret Fortune. His business is headquartered in Cleveland. He is into all parts of the industry: genetics, selling the seeds, contracting with farmers and co-ops, developing storage systems, processing the plants and turning it into consumer products. So I asked him about a very key issue for hemp growers. Where do they sell it?

Garrett Fortune [00:20:24] So that's a great question. And it's funny because right now is harvest. And I probably get a hundred phone calls a day right now of farmers that ran out and planted the ground. And they had companies down in Kentucky that promised -- over promised and under delivered. Now it's come time to harvest and they don't have the money to buy it. And the market's fallen out or they can't get into a processor because that's a bottleneck in the industry right now. Those processors are pretty full already, especially at harvest time. So a lot of these farmers are scrambling to say, how am I going to protect my harvest? Because CBD breaks down very quickly with UVB and oxygen as well as any kind of light or humidity. You've got to keep it dry, which is good for my hemp sack business because we're selling and educating the farmers. And you can store in our bags up to a year, whereas in a super sack, you're going to start losing value on that product right away. If you can store it in the right way, in the right environment, you can wait for that market to come back up and you're not hitting the market at the same time. But I also recommend that you get with good companies that know what they're doing and have outlets for it. Leverage their networks that are out there. We're looking at putting a co-op together here in Ohio through the Ohio Farm Network and through the Ohio Hemp Association where we can consolidate, have a group. I'm going to start growing clones and seeds here in Ohio as soon as I can and then be able to build on that because I want to keep it in my backyard. I don't want go to all these other states and then have to process in other states. I'd rather keep it in Ohio.

Joe Cornely [00:22:01] As is the case in most facets of agriculture, the university system is going to be key to helping farmers, processors, probably even consumers. Fortune is already working with Ohio State's College of Food, Agricultural, and Environmental Sciences.

Garrett Fortune [00:22:17] There is the agriculture side and the farming side and making sure we have a future of farmers in our industry to grow it in the future and understand it. Secondly, there's understanding better pesticides and going after what kind of research can be done on the farming and the technology and applying it to this new industry and

then coming up with a path within the university and training people on that so they can come up on not only learning how to farm it, but learning what to do with it.

Joe Cornely [00:22:45] So while we've got just a second left here, your best piece of advice for a potential CBD consumer. And your best piece of advice for potential hemp grower.

Garrett Fortune [00:22:57] So my best piece of advice for a consumer would be know exactly where that CBD is coming from. There's been a lot of research and snake oil out there. They researched 100 different brands and found out 80 some of them didn't have the CBD levels that they thought they had. I would make sure you're buying from a reputable brand that has a reputable proven CBD in it. For someone getting into hemp farming I say you walk before you run. Educate yourself and surround yourself with people who have experience in this. Ohio has a lot of people in the industry, all over the country that are from Ohio that are looking to come back here. So leverage those resources that, you know, that are in the community and in the industry.

Joe Cornely [00:24:20] Welcome back to our look at Ohio's soon to exist hemp industry. We've heard so far the experiences of a Kentucky farmer who's been doing it for four or five years. An entrepreneur who touches everything from seed through to the final product and from the regulator of hemp in Ohio, the Ohio Department of Agriculture. All of that said, the reality is this is literally all brand new for Ohio and Ohio farmers. And traditionally, when farmers want to learn something new, they turn in large part to the Cooperative Extension Service at The Ohio State University. James Morris is the OSU Extension educator. That's county agent for us old timers. He's in Brown County. That's east of Cincinnati, along the Ohio River and smack in the middle of Ohio tobacco country. James is one of a few Extension personnel who are on the frontlines of helping farmers learn about a new potential enterprise. To start our conversation, I asked James, what is the level of interest he's seen so far among Ohio farmers?

James Morris [00:25:27] We just had a program down in Brown County that last weekend on Saturday, and we had close to 80 people registered for that program and we actually had around 65 to 70 there in attendance for it. And as far as who's interested in it, it's probably the most diverse group of people I've had in a class. I've only been here a year and a half, but I've had a lot of programs so far, from pesticide trainings to tobacco production to forage production. And this is the most diverse group of people from tobacco farmers to the younger generation really interested in learning more about this product. And some people were there just to literally learn about what this product is, what this crop is. They have no interest in growing it at all, but they just want to know what's going to be happening next door. Their neighbor is talking about growing it. So I think from the tobacco level interest, you're right, we have a lot of experience. And I think that's where a lot of the initial interest came from. We'll talk about the harvest process here in just a minute. But as we talk about that process, it's very similar to tobacco. And there's a few things, though, I think that caught a lot of people by surprise. As we talk more about what this product takes from start to finish. And I think a lot of the tobacco growers or former tobacco growers were like, wow, OK. I think I need to think a lot a little bit more about this.

Joe Cornely [00:26:44] Well, you previewed several things we're going to talk about here. So if I want to know something about soybeans and I contact the Ohio State University, there's probably 50 people that can tell me about varieties selection and how to properly manage the soils in the fertilization and on and on and on. How does a university like Ohio State get started with virtually a brand new crop?

James Morris [00:27:14] Right. So this is a completely new learning experience, as you mentioned, for all of us from a producer, a consumer and educator standpoint. I think in southern Ohio around Adams and Brown County, David Dugan and I have been working on a research plot with a company out of Kentucky. But speaking of Kentucky, they've been at this now. This is their fifth year growing this. So we've had opportunities to go down to field days and kind of talk to them about some of their research that they've been doing, speak to some of their educators, look at some of their fields that's been growing close to us So even though we haven't had a chance to get our hands on this and grow it yet, a lot of experience will come from that right there.

Joe Cornely [00:27:52] On the production side, what are some of the key research areas that you feel we need to be paying attention to?

James Morris [00:28:01] I think that the key research areas will be determining... I know a lot of farmers in Kentucky and some that have the interest already from hearing what been going on in Kentucky is the length of time before we harvest that crop. You know, waiting for those CBD levels to maybe go up. Are those going to go up as we wait a little bit longer before we harvest that crop? But also we run that risk, that THC level going up too, so that maybe some of the practices we think about raising that CBD for a higher market price and getting more money out of it may also in turn run that risk of getting that crop destroyed if we go over that 0.3% THC. So I think a lot of work will have to be done there from a research standpoint of how long can we leave this crop in the field? What weather conditions are going to make it go over that THC level? Because as a producer, that should be your biggest concern other than finding a market for it. If this product goes above the marketing level. I'm out all my money.

Joe Cornely [00:28:59] You're talking a lot about CBD. Are you hearing any interest from farmers who are looking at the hemp as a fiber or a foodstuff or some of the other non CBD varieties of hemp?

James Morris [00:29:15] So a lot of our interest in the southern part of Ohio has been the CBD, but there has been some interest. I think I did a program over in Ross County and it seems like more of the northern counties you get some larger, flatter acreage and that's going to be more of the ideal situation for that grain and fiber production. And just because you're going to need a larger amount of that to be more profitable in the same way with corn and soybeans, you know, those are going to be our big acreage areas for those which I think would be the ideal situation for grain and fiber. But the marketing side on that I think is kind of the hurdle for that point. I have not had to work with that area very much, so I can't say for sure. But finding a market for a grain and fiber producer is gonna be a struggle at this point. The reason I think this is because Kentucky has had issues. They have very few market opportunities available for that. And they're on the very far west part of the state. If you don't have a processor close to you, those travel costs are really going to hinder your ability to make a profit.

Joe Cornely [00:32:40] Back to help us learn about Ohio's move into hemp production as a brand new crop is Extension Educator for Brown County, James Morris. As he starts advising farmers about putting out their first crops this coming spring, we're reminded of what we heard earlier from Ohio's director of agriculture, who is responsible for regulating hemp production.

James Morris [00:33:02] I've been cautioning people, keep in mind that these rules are not final yet. So these are proposed rules. So don't put your cart on the horse just yet. Take your time and proceed with caution. And as a production level, I've recommended a maybe an acre or less...well, it has to be at least a quarter of an acre or a thousand plants. But at least don't jump into this and go 20 acres. I'm going to, you know, cash out on this crop. It's going to be a learning experience. And at this point, you know, just your ground preparation and the irrigation. So I think that was, as I mentioned, the big surprise that tobacco farmers was water requirements and irrigation requirements and that system is pretty new to a lot of people. So preparing yourself for that. Getting the equipment you need. Once you get an A OK from the rules, don't go buying all this just yet. But springtime rolls around. It's all approved. The irrigation side of things will be a lot, especially in southern Ohio, that we're going to have to prepare.

Joe Cornely [00:33:59] What else? What would the ideal hemp plot look like? The right variety, right? You mentioned irrigation. What else? Soil type fertilization. What are we looking at so far?

James Morris [00:34:13] I'm I'm glad you brought back the variety thing real quick. Just to touch on that, your variety for your CBD. And if you've studied this, you probably know it, but your varieties for your CBD, grain and fiber, those are going to be completely different varieties. We're wanting a shorter all female plants for the CBD, where we're looking for the grain and fiber side, those plants are going to be about 10 or 10 plus feet tall. So that's important to keep in mind. Know your varieties and know what you want to plant. As far as soil tests look like, usually around the 6 2 6 5 range would be sufficient. You can look at the nutrient availability at those levels. That's gonna be the same as for most of our other crops. But as far as knowing exactly what this crop looks like, it does not like wet feet. So we want to make sure we have good drainage in our locations. And then also it really likes nitrogen. That's the main thing we can say so far is as much nitrogen as some of the research studies have shown. It will just keep taking it up. But I can't sit here and say at this point, here's the ideal soil conditions nutrient-wise. Go ahead and get your soil sampled and make sure pH is in the correct range and then also make sure you have good drainage in that field as well.

Joe Cornely [00:35:23] You've said several times that the production of CBD variety of hemp is similar to tobacco. If you're a tobacco or former tobacco grower, you know that means labor and talk a little bit about that.

James Morris [00:35:37] So again, that's probably going to be a big struggle for us because you ask a lot of these tobacco farmers, why did you get out of tobacco? They just did not have the help. And we can say that probably for a lot of our farming operations, you know, we're lacking help on it. And to bring in paid help for just an acre of hemp could really affect the profit. So unless you have some available help, ready to help you out with it, it is labor intensive, and that is going to be a struggle for us. And I think a lot of these that's I guess why some of the newer generation really took interest in this. We'll see how much time and really how many man hours it really takes. Because, again, you're cutting this...you're taking a pair of loppers out there like big brush cutters out there because a tobacco knife really is not cutting these stocks. So they're pretty woody stocks and you're throwing those on the hay wagon or whatever it may be hauling those to the barn and drying them for roughly eight to 10 days, depending on the weather conditions. And then you're stripping those. Oh, but if you think about tobacco when you're stripping it, you really have got your one main stock. But you look at a hemp plant, you've got branches of

50 maybe on one plant. So you have to take each individual tiny little branch and strip the buzz and leaf off of that. So what the time it took you to maybe strip one tobacco plant, it's going to take a while. It's a pretty tedious job to strip all of them.

Joe Cornely [00:37:02] I know you said you haven't had an emphasis in this area, but on the grain and fiber side, how do you harvest that? You need special equipment? Can you put a head on a combine?

James Morris [00:37:13] The grain and the fiber is going to be drilled into higher population. So when we're talking CBD, we're going to talk maybe 1500 to 2,000 plants per acre. You're going to drill these grain and fiber 35 to 50 pounds per acre. So it's gonna be a lot higher population. And again, for the fiber we're wanting, you know, mass and form to grow up. We don't want to branch out. We want them to be competitive and be a big plant similar to silage and corn silage. We're wanting a bigger stock. So. I think that's where and now as far as harvesting goes and there's dual purpose varieties, too. So it's pretty neat. Some of the research plots that I've seen have, you know, a reel head on the front that'll collect the seed from it and then also chop the stocks and spit the fiber out on the other side. So it'll put the grain in the hopper and then throw out the fiber on the other side. And really the fiber is kind of like hay. We're going to let that lay in the field and break down for about two weeks.

Joe Cornely [00:42:49] We are back on Town Hall, Ohio, with our look at what Ohio's hemp industry might look like. It'll officially get rolling come next year. Now, you may have heard earlier that one of the products that can be made from hemp is concrete. Hempcrete, to be more precise. We're going to learn a little bit more about that in a few minutes. But first, we want to wrap up our conversation with OSU Extension Educator James Morris. He's from down in Brown County. Earlier, he gave farmers some advice on things that will be helpful if they intend to try planting a crop this coming spring. James wanted to add one more.

James Morris [00:43:25] Key point that I would want everybody to really pay attention to as you're talking about growing this... If it's CBD, grain, if it's fiber, your market is your most important thing. And if you talk about getting ready for the spring, that's what you need to be doing right now. Whether or not this gets approved for spring, we hope. We think that it will. Find your market. Look at your contract and know what that contract says. Ask questions. And just because they may be able to say those plants, make sure that they are going to be able to market those products for you. Because we've heard horror stories of those being left out and then a farmer having 2000 plants that he or she cannot get rid of. So that's the biggest concern, I think that I have from a producer level. We need to make sure that we have our markets secured. If you don't have a market, you're not going to sell those that are farmers produce auction. It's just not going to happen. So you have to have a market.

Joe Cornely [00:44:19] Where do you recommend farmers turn to start researching this market potential? Is there a place to go or do you just start Googling I want to sell hemp.

James Morris [00:44:29] There's a few that we can....I'm not going to recommend any. But there I think we've had a discussion here and you can contact your local Extension office and maybe see if there's any around you. That's the best that we can do at this point. I do not have a list in front of me saying here's all the processors. And hopefully at some point we can get a good list that put together. But your local areas and your local

Extension office is going to have an idea of where you can go and at least start contacting people to get a contract and start having those conversations.

Joe Cornely [00:44:58] And a final word from Morris, which is a message you've heard from virtually everyone on the show today in communicating to farmers about hemp.

James Morris [00:45:08] Don't invest what you're not willing to lose on it.

Joe Cornely [00:45:10] Earlier, hemp entrepreneur Garrett Fortune ran down a list of potential products that hemp could be the raw material for. I think we've all heard about the health claims of CBD that's extracted from hemp and then the fiber that's used for rope or clothing and food additives from the grain of hemp. But the one that caught me by surprise was when he mentioned concrete made from hemp. Melissa Boyer is with a group called the Midwest Hemp Council, and she's done some work with what they call hempcrete. Now, I'm going to give you the same disclaimer from earlier in the show when I was listing a few of the benefits that CBD proponents talk about. I'm making no judgment or claim on whether or not these claims are true. But that said, to learn more about hempcrete, here's Melissa Boyer.

Melissa Boyer [00:46:00] Hempcrete itself is pretty simple to make. It is. There's a ton of advantages over regular concrete and huge benefits in construction in general. Starting with just the energy efficiency of it. It's nontoxic. Carbon absorbing. Can reduce greenhouse gases from the air. Just numerous benefits to building with hempcrete.

Joe Cornely [00:46:27] For me the biggest question just how do you go about making hempcrete?

Melissa Boyer [00:46:33] Take hemp hurd, which hemp hurd is actually the center of the stock of the hand plant and it is ground up. So once they've extracted the flowers and all of that and they use the center of the stock and just crush it up mixed with lime and you can do it two ways. You can do make a slurry and form it into a wall that already has like the forms and the load bearing and the main structure of the wall. You can pour it in there like a slurry. And then over time, the reactions between that the hemp and the water and the lime are going to basically petrify the hemp and turn the lime back into limestone. So it just cures and it does take a while to cure in that form. And you have a strong load bearing wall.

Joe Cornely [00:47:25] Melissa Boyer of the Midwest Hemp Council talking about hempcrete. Again, I repeat, no endorsements on any of those claims. I want to thank our guests, Ohio Department of Agriculture Director Dorothy Pelanda and entrepreneur Garrett Fortune of Commodigy, Extension Educator James Morris and Kentucky hemp farmer Taylor Jones.

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