

Hop Production in Iowa

📅 Thu, Dec 08, 2022 1:51PM 🕒 16:38

SUMMARY KEYWORDS

hops, harvest, diana, nitrogen, crop, iowa, leaching, brewer, year, production, product, grow, producing, industry, growers, information, farms, pounds, recommendations, starting

SPEAKERS

Diana Cochran, Christa Hartsook

Christa Hartsook 00:15

Hello, and welcome to the small farms podcast, a production of the small farms program at Iowa State University Extension and Outreach. Our podcast covers the opportunities and challenges associated with rural life. Today I am visiting with Diana Cochran, extension fruit specialists for Iowa State University Extension and Outreach about growing hops in Iowa. Diana, welcome. Thanks for being on the show.

Diana Cochran 00:39


Thanks for having me.

Christa Hartsook 00:40

Perfect. Dad, can you tell us a little bit about what's been going on with the hops industry in Iowa.

Diana Cochran 00:46

So the hop industry kind of still kind of chugging along. So about three or four years ago, people started kind of having an interest. And people started kind of doing a little background on their own and checking the feasibility of it. And since then, there's been quite a few people who have actually put in acres, continue to look at the process, as far as you know, is it feasible. And so we have, you know, I estimate anywhere from up to 30 farms in the state with a few of those farms also now putting in processing equipment, which is also the big kind of the next step that will help the industry out to have processing equipment to help with that the sales of the product



C

Christa Hartsook 01:31

Diana for somebody that's maybe just starting to investigate the industry or the feasibility of growing hops on their farm, what are we talking about in terms of size needed inputs, you know, costs?

D

Diana Cochran 01:44

Yeah, so it is it's so producing Hops is it's quite a big cost can compared to some of our other specialty crops. Because with hops, it's, you know, similar grapes where you have to mean it has to grow on a structure. So you have to have a trellis. So the trellis can run anywhere from 12 to \$15,000 per acre. Now, that includes plant material and in putting in the, the labor to put in the structure. So not only do you have to have the structure to grow it, then you have to worry about how to sell the product, because with hops, it's the cone is what you harvest, but then it's within the there's glands within the comb, that is the value to the brewer. And so for the brewer, they are going to want that pelletized and that's, you know, kind of two reasons was kind of more of a storage, so they can store easily. And it's not taking up as much room as well as you know, the shelf life. So post harvest shelf life. And so that basically means so you're not only having to worry about growing a product and going through, you know, similar to other specialty crops through the all the season of you know, pest control and weed control and fertility management. But then at the end, once you harvest it, then you have to dry it down, and then you have to go through a pelletizer. And then you need to, you know, put it into cold storage. And so there's it's not, you know, just you know, like some of your other crops where you can basically pick it and give it straight to the consumer. So that kind of brings on the challenges because the process equipment can be just as costly as the production equipment and production practices and cost into producing the crop. So that's some of the challenges that I always make sure people are aware of that it's not, you know, you can some people will use a fresh hop right off the plant, but they don't need it in a high quantity. And so it's like, well, yes, some people will want a fresh hop, it's a very small amount. And so you would need in order to do some new product, you're going to have to have it processed somehow. Now there are co-ops that are starting in the state, or I guess more of alliances, so more of a pay into the system. And then they will, you know, help process your equipment or process your hops. And so that is kind of helping, you know, with some of the people that are interested in starting up because there is somewhere to go. But it's still a small amount, you know, around the state compared to what it's it's few in terms of locations. So while we have I know of at least two, maybe even three now. It's still those are in certain locations. And so if you're not close to him, then there's still an issue of, of getting the product to them.

C

Christa Hartsook 04:34

Sure, absolutely. So not only do you have kind of some significant financial commitment to starting something like this Diana, you're going to have a time commitment as well, because you're not going to get a harvest. I'm assuming that first year very much

D

Diana Cochran 04:47

right so the first year so you know, similar to other perennial crops for becoming the full harvest it takes three to four years. Now the difference with hops is you do get a, you can get a yield the first year but it's a very small amount. So it'd be like 20% of what you would expect is

yield the first year, but it's a very small amount. So it'd be like 20% of what you would expect is kind of the the rule of thumb. And so while theoretically, you could harvest it, it's really not economically, you know, advisable to harvest it, because you're not gonna get much on your return. And so, typically, what I tell people is that first year, yeah, the first year, you're going to plant and you're just going to basically let it grow, go dormant on its own, you know, just make sure you get a good root system into place. And don't worry about harvesting. And then the second year, people will start harvesting, even though you're, you're not at full production, but you will start seeing more cones produced. So you can start kind of getting a feel for what it will harvest. And so maybe the economical return is not there. But it's also a good way to start kind of understanding everything, because it is kind of challenging to get everything harvested at the appropriate time. Because with hops, you have like a seven day window to harvest. It could even be shorter than that, depending on the season, as far as weather conditions are, at for that year. So to get everything, you know, basically harvested in you know, as quick as you can into the dryer as quick as you can. And then pelletised. You know, a lot of people start going into the second year, knowing that, okay, I'm going to harvest may not, you know, make a lot of money, but at least some getting through that kind of stuff.

C

Christa Hartsook 06:24

Sure, absolutely. Diana, let's talk a little bit about the market itself, is there a demand for local produced hops,

D

Diana Cochran 06:33

I'd say the demand is kind of yes or no, the demand is there, if somebody can produce a quality product, and at a cost that's reasonable, so the brewers and I would know that they're going to have to pay more for Iowa grown hop because of this scale of farming. And so they're okay, you know, they understand that, and they're, you know, prepared to do that. But for them, they also need to have a consistent quality product. And that's, you know, kind of where, because we are new, so I mean, we're producing good quality products and quality cones, but it's still that, you know, isn't enough to, you know, for a brewer to be able to purchase that entire amount. And then the other issue is a lot of these brewers they're, you know, at a place where they're also trying to, you know, build their brewery. So they're not at a place where they can just make a lot of, you know, different decisions that are, you know, based on maybe they're not sure if their customers are going to want it. So they're, they're kind of in the same place a lot of our growers are, so it's kind of out there, they're both trying to, you know, build their, their industry. And so it's just kind of challenging on trying to figure out how to do that. Other thing is, like, a lot of your breweries are going to have contracts that, they contract their hops. And so with that, you know, they're in the contract for maybe two to three years. And so then trying to bring in something else. And again, it's how do you market a crop that you can't show your quality, because you have to wait till you have the product, and it takes a couple years for you to get that product that's at, that quality you desire. So it's kind of one of those, you know, working together. And so that's where they're, you know, we're trying to, to help people work together, I routinely keep in touch with the Brewers Guild. I've me and Aaron Hodgson, and another faculty member at Iowa State, put together Advisory Council of hop growers and brewers to kind of make sure that, you know, we know what's going on in our industry, because we know that, you know, a business is a business's business, and you have to make money.

And so that's kind of where we are. And so there's a market. Yes, there's a potential market, but it's also got to, you know, show, you know, what's, what's available. What's, you know, it's gonna be that kind of common, common theme for both industries.

C Christa Hartsook 09:00

Absolutely. Diana, I know, you've been doing some research at Iowa State on hops production soil, you know, health and fertility. Tell us a little bit about that. What have you been seeing?

D Diana Cochran 09:12

Yeah, so I've had a project looking at different nitrogen rates and different forms of nitrogen and a lot of that came from, you know, hops have been grown for ever, you know, they're not a new crop, especially, they're not a new crop to the United States. But in terms of recommendations, they are quite new because a lot of people it's just been family ran farms and so they really haven't had to look at changing a lot of things over the years. And so now that we're seeing this crop grown in different regions, we're having a start, you know, looking at Hey, you know, in the Pacific Northwest, yes, they may need to add a lot you know, maybe the recommendation is 250 pounds of nitrogen in a you know, maybe they need to add, you know, two to two inches of water each week in their sandy soil conditions. Where in Iowa we don't don't need to add 250 pounds of nitrogen, we don't need to add, you know, that much irrigation. And so that's kind of where my research is focused is looking at what is kind of that, you know, optimum nitrogen level for the Hopkins in Iowa because, you know, we know, you know, we have nice soils, we have high organic matter and most of our soils and a nice hold water holding capacity. And so my research is kind of looked at that. So we're looking at, you know, what, the different rates, so I have, you know, from zero up to 300 pounds of nitrogen applied to different plots and, and just looking at it over time, so we just finished our second season with it and, you know, while we do see some differences, you know, with the amount, the yield, based on rate, you know, increasing yield, with the rate, there is kind of a diminishing return. So we do see that, you know, we're seeing that around the 100 150 pounds of nitrogen, you're getting about the same, you know, with some of the other with the higher rates of 250 300 pounds. So we still have a lot to look out with that. But it's, you know, definitely what you would expect, you know, when you have more organic matter, you don't need to add as much nitrogen. So it seems like something that's pretty, you know, kind of a common information out there. But at the same time, when it's a new crop and somebody starts reading information, they're like, oh, you know, the recommendation is you have to add, you know, 200 pounds of nitrogen, some people are quick to think, Oh, I gotta add 200 pounds of nitrogen, versus always looking at your soil conditions and source light. And, you know, it's also about timing. And so that's what we've also tried to start focusing on is, we know, that's the, I think, the biggest issue in Iowa, because I have had farmers that say, Hey, I've added 300 pounds, and I don't feel like I've seen you know, a difference. And the difference is, it's kind of when you're applying it, and when is the rain coming? So what's that leaching effect. And that's where we've seen a big kind of an issue. And so what my project for, like my current project has kind of led into was, you know, the Leopold Center was funding to help with one of these projects to look at more of this leaching aspect and looking at, you know, okay, what is going on, when we have an inch of rain or two inches of rain? And, you know, how can what's a way for me to look at, alright, how can I supplement what was lost? Or how do I, you know, vice versa, you know, so looking at different ways. And so it's unfortunate, you know, that, that some of those, you

know, places aren't available for that. But that's basically, you know, where a lot of my research has come from is just kind of looking at the recommendations that are there, what's going on in the soil? And what can we do to, you know, not mix up the recommendations in a sense. So, you know, make sure people understand, yes, I can give my plant 300 pounds of nitrogen, if it's all being leached through, and it's not, you know, available, and not see a difference. So it's all about that timing, as well as your soil properties.

C Christa Hartsook 12:58

Sure, sure. Diana, this last year, you had a pretty intensive class for people interested in hops production itself. And I know they took a field trip kind of at the end of that, planning to do that again this year.

D Diana Cochran 13:11

Yeah, so we, the hop workshop. So last year, we did it over like a six day period, six different modules and, and how to kind of follow in season and I think this year, we're going to do it again, we're going to do it probably over an entire day, though. So that you know, and hopefully, we're looking at having it maybe even kind of people come in the night before, have kind of a meet and greet kind of event, and then have a full day of information shared in the winter months, because that was a deal. A lot of the growers were like, hey, you know, on the weekends, it's great that you're doing this, but it's hard for us to get there because that's when we're doing our, our farming. So yep. And so we're still going to do that, again, this year, we're working out the dates. So we haven't got that set. But hopefully, we will have that set. And it'll be available, you know, information will be available in the Extension website. Sure.

C Christa Hartsook 14:06

Absolutely. And I know you've got a session upcoming at the Iowa small farms conference, tell us a little bit about what you're going to cover there.

D Diana Cochran 14:13

Yeah, so with that, I'm looking forward to kind of seeing what kind of people are there as well. So I, you know, prepared, it's going to be kind of an intro to hop production, but to cover a lot of the basics as well. So to kind of cover, alright, so this is what you can expect this is you know, kind of like you're using your goats as well as you know, some people I feel like I ended up trying to convince them not to go into hop production as much as I'm convincing them to go into hop production. Because, you know, it is something that's not you know, just an easy crop to produce. So, I try to you know, kind of cover a little bit of everything, but in a very much kind of geared towards, you know, what the, you know, audience is kind of, you know, interested in because some people are interested in more of just kind of that basic informing shouldn't have, all right, what would be a good amount of land, you know, to start with and cultivars choices, you know, or some of them are really looking at it more on that processing side. So I kind of try to, you know, touch as much as I can, but not too in depth, because if you're like me, I like to kind of hear a little bit, and then you know, let it sink in, and then go a little bit deeper into the

information. And so it's going to be kind of an overview. But hopefully, it's a it's enough information that people are interested in hop production, and they have a good feeling of what their next step is when they leave, if they're already producing hops, and they have a better understanding of kind of where they're going next. As far as you know, maybe they're going to increase some, some acreage. So yeah, I'm trying to, you know, it'll hopefully be a good overview, but enough information that people aren't going to be like, I didn't learn anything, but they're going to come out of there with whether it's basic knowledge or a little bit more on the advanced knowledge, they should be able to gain something from it. That's on their level. Sure what their expectations are.

C Christa Hartsook 16:03

Absolutely. So that session is February 10, at Scheman in Ames. And you can look for registration information at www.extension.iastate.edu/smallfarms. Diana, anything else we should cover before we end today?

D Diana Cochran 16:19

Oh, I think that that's covers it. I mean, I'm, I think this will be a good conference. And it's always got a nice audience that comes in with a lot of good questions. So I'm hoping we get the same this year. Because it's always nice to get that feedback and that, that conversation going.

C Christa Hartsook 16:33

That sounds great. Thanks so much for being on the show today.

D Diana Cochran 16:36

All right. Thank you