Cutting Edge: In Search of New Crops For Wisconsin

Episode 3: Hops with Guests Peggy and Randy Urness

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**SPEAKERS**

Peggy Urness, Carl Duley, JASON FISCHBACH, George Koepp, Randy Urness

**JASON FISCHBACH** 00:00

This is a podcast about new crops. You're gonna love it. Join us on the cutting edge a podcast in search of new crops for Wisconsin.

**Peggy Urness** 00:09

(Background music) And actually like you said before Carl you know hops at one time were, you know the number one, they were number one in Wisconsin and I guess we would like to kind of see that again. And it's another viable alternative crop for Wisconsin. (music)

**Carl Duley** 00:55

Welcome to cutting edge: a podcast in search of new crops. My name is Carl Duley, extension agricultural agent in Buffalo County with UW Madison division of extension, one of your hosts for today.

**George Koepp** 01:11

And I'm George Koepp, another of your hosts. I am the Columbia County ag educator for UW Extension out of Madison. And we're glad to have you with us today.

**Carl Duley** 01:22

Great. We're gonna have a little fun today with another topic that's dear to all of our hearts and that is hops in Wisconsin. George has grown a few hops in the past, haven't you?

**George Koepp** 01:33

Yes, I have. I just kind of play about 50 feet of hops with a couple different varieties and just something to play so I can make a little homebrew from time to time.

**Carl Duley** 01:42

I think I put in my my little hop yard about a quarter acre I think it's 13 years ago, maybe 14 just trying to to get a few hops started and see how they would do it do in Wisconsin and part of our research project. We started about then, in a UW Extension looking at hops as an alternative crop in Wisconsin. But it's nothing original to Wisconsin as hops were grown a huge crop in the late 1800s, early 1900s in Wisconsin. In fact, at one time, Wisconsin was the largest hop grower in the nation because of some disease issues in the crop, and no fungicides to deal with them. Crop kind of moved west and continued to move west to areas that were drier and a little less issue with fungal issues. So we're bringing them back and today it's our pleasure to have two of our early hop growers in the state join us in our podcast, Peggy and Randy Ernests speaking Randy, why don't you introduce yourselves?

**Randy Urness** 02:49

I'm Randy Ernests with Fine Brine Farms. We're in Rosholt, Wisconsin. We've been growing hops for about 10 years now.

**Peggy Urness** 02:58

And I'm Peggy Earnest, Same thing I'm pretty much I'm hired on hired hands.

**Carl Duley** 03:08

We've been out to the, to the Earnest Farm buying hops like quite a few times. And that's not true. This is, I think, a pretty equal partnership that Peggy and Randy have. And they each have their own specialties in the business. So don't let Peggy try to fool you here. Great. So, George, you had some ideas of starting today.

**George Koepp** 03:32

Just kind of wanted to get us going today, Peggy and Randy, and I was up there to help harvest last fall, and I know you do have a great partnership, and you guys are both so intricately involved in the business there. But today, we want to talk a little bit about, in many times in extension and in business, we recommend that projects or a business begin with the end in mind. So can you give us a little clue as to what was your vision for your hop business? When you started?

**Randy Urness** 04:01

Well we had that land, we moved to our property and built our house. And we had been leasing out the land for corn or hay to one of our local farmers here. And we wanted to do a little bit more with it than just, you know, leasing it out, we wanted to do some of our own stuff. And after with some research, we looked into the hops. And I guess our vision was to kind of develop and work with the group to kind of become a complete service of it. So originally Yeah, we had planned to put the hops in, grow to about this size to we're at now which is a little under five acres. And then we also right from the start initially planned to have the ability to pelletize and process and work with the other farmers in our area to help pelletize and process and get a finished product to the brewers

**Carl Duley** 05:04

Okay, anything to add there Peggy?

**Peggy Urness** 05:07

Actually like you said before Carl you know, hops at one time were you know the number one they were number one in Wisconsin and I guess we would like to kind of see see that again. I and it's another viable alternative crop for Wisconsin.

**Carl Duley** 05:30

Oh, early on, you guys got started with with a with a group. I think it was called the Midwest Hop & Barley Cooperative. Can you tell us a little bit about that? And how that got started?

**Randy Urness** 05:42

And actually the Midwest Hop & Barley Co Op is no longer called the Midwest Hop & Barley Co Op. We are still around but now it is The Wisconsin Hops and Barley Co-op. Our one Brewer that was involved with it from outside Wisconsin wasn't any longer involved. So they decided to rename it a few years ago to the Wisconsin Hop and Barley Co-op.

**Peggy Urness** 06:05

Well, it is actually a buyers Co Op. Basically, at the beginning there was a group of five brewers and they were looking to use local Wisconsin hops in their brews. And so, at the beginning, they did purchase some of our hop rhizomes to plant and we put them in and then as the years went on, we ended up you know, buying most of the plants or rhizomes, but what we do is we will meet a couple times a year, discuss price and at the time they were purchased during the bulk of the hops. That the growers and there were probably three or four growers as well, that we were growing. So it worked out well. We had an we had a market basically for the bulk of our hops.

**George Koepp** 07:17

Well, that's nice. So many times people grow things, and they really don't have a place to go with it. And now what happens to your profitability, so...

**Peggy Urness** 07:25

Exactly and that we were very fortunate, yeah. Good, that helps keep that business going. So do you see that being kind of a strong business for you here into the future yet?

**Randy Urness** 07:40

You're saying with the co op, yes, yes, I would say that's going to be our strongest source of sales. We do sell some outside of the co op now. The production levels we've got initially our production levels with all of the growers put together wasn't high enough. That was really really an issue to have too many hats? Now? We've reached points where we've got more hops and the Brewers necessarily want them some varieties. So we do sell some outside, but yeah, it's still going to be the strongest portion of our sales is through that Co Op.

**Carl Duley** 08:17

How do, Randy and Peggy, how did you gain your knowledge in the hop growing to the agronomic knowledge and the business knowledge with for hop production? How did you go about getting that experience and that knowledge?

**Randy Urness** 08:31

It all came from the UW Extension in your seminars.

**Carl Duley** 08:36

Well, thanks. I don't think that's totally true, but I think you did some other work yourselves.

**Randy Urness** 08:42

No, it was actually a large part because there were various speakers, the handouts, we did a lot of reading, research out of the you know, Pacific Northwest, anything we could get our hands on and Other than that, it was just a lot of trial and error, a lot of trial and error. You know, flying by the seat of our pants, so if it doesn't work one year try it different the next So...

**Peggy Urness** 09:14

Yeah, we pretty much ended up with a library of different research materials and books and papers and things we downloaded. Things from out west, things from Germany and really all over that we used as resources. You mentioned your before we started you mentioned your sprayer training. I took the PAT sprayer training learned about that I highly recommend that for people because Wisconsin still has the issues with fungus funguses and you have to deal with that. So I think that helped a lot learning in those aspects but just overall, communicating talking with other hop growers participating in you know, the different events, I think has really helped us out a lot. Yes, they do.

**Carl Duley** 10:09

Can you guys know you know, you've expanded up to this about five acres, five and a half acres. Talk a little bit about what varieties you've expanded into now and maybe a little bit of why those varieties right now?

**Peggy Urness** 10:24

Ah, we started off with Willamette and Magnum, because one was Willamette is an aroma hop, and Magnum is a bittering hop. And we want to try and do a little bit of each. It's kind of what the Brewers use. Basically, just to try, you know, it's like they seem to use Willamette quite a bit and, and Magnums were a little bit different variety. So it's like, well, let's try those We've expanded up to having Nuggets, US Golding's, challengers, US challengers, Mount hoods, a few tea makers, some Sterling's, some sods. We had Centennial up until this year and we took out all of the centennial this year we are in the process of taking those out. Now, why is that they're a popular hop Randy? Well, they're not as popular as we thought they were. And I think there's other growers in Wisconsin that are taking some of their Centennials out as well. They're also not a easy. In some ways, they're an easy hop to grow, but they also tend to be more work than some of the others and they also have a tendency yo be very susceptible to disease, we got sick, we were putting more effort into those Centennials than any other variety. And getting actually less results on sales from them. So we decided it's just we were done with them. We didn't want to deal with them any longer. So we're going to replace those with something else.

**Carl Duley** 12:25

Sure. I should have said they're really popular it seems like in Michigan, and I'm really glad you said that they're very susceptible to disease because I also started with Centennials And I think after two years I killed them all already. So it's Thanks for clarifying that disease issue. When you when you're looking at what hops to plant, what are your considerations? You mentioned disease. How do you find out what brewers might like? Can you can you talk a little bit about that?

**Randy Urness** 12:56

It's It's tough. It kind of has to be communication back and forth with the potential brewers that are going to buy. So for us, we do have the advantage, we have a very good relationship with our brewers that we're working with. So there is some stuff that we put in on the request of brewers. There's a variety that we have in that probably only one Brewer is going to want. And that's the Challengers. So it's like, well, I wouldn't recommend putting that in for other people because it doesn't have a real popular following. So it's, it's tough deciding but like you said, certainly look for disease resistance. Things that grow well in Wisconsin, if you're just starting out you might want to try was something that is known to be very easy to grow in Wisconsin and very disease resistant and that's Cascade.They're not, a lot of people have cascade There's been quite a few of them and some people are taking them back off because they couldn't necessarily sell them because of, I think that'll go back and forth, I think there'll be demand for them will go back up. And but we recommend the people starting off, we'll try some cascades because it really helps you get started growing. Now we say that we actually never did grow cascades. But because we've actually chosen some varieties that fewer people are growing, we've some of what we got can be a little tougher to grow. Even the things we started out with with Magnum and Willamette. Now that we're growing with them, they grow well, but it took us a while to really learn how to grow them, and they're not real high yield hops either. So that's something for people to look at as well. The other thing I would say as far as when people are choosing hops if they certainly want to have multiple varieties so that they're not putting all of their eggs in one basket, but also look at having When the harvest comes up, don't put in all hops that are early harvest or all hops that are late harvests, you want to spread it out. And we've certainly planted around that a bit, that we've got some hops that are definitely early who Willamette is fairly early harvest, and our Magnums are fairly late harvests. Now, we've been adjusting that some. But it's Yeah, we've kind of gone with that as well. So there's a lot of different aspects that have gone into the selection.

**George Koepp** 15:32

That's part of what happens as you grow and learn and, and to manage the hops here. And I like the fact that you have worked very closely and develop some good relationships with your brewers, help them and help you know what to grow so you can provide what they need, and also your relationship with the Wisconsin Hops and Barley Co Op. So those are all good things for people to know that to keep that end in mind. You need those personal relationships with these people to help this fit. So the one other question that goes with that then is, you know, as you do this, it isn't like you put hops in some rhizomes in the ground this spring, and I have a wonderful bountiful harvest this fall. How long does it take for you to get those hops kind of up into full production.

**Randy Urness** 16:23

They say, about three years to bring them really up into full production. It can vary a little bit, we put in our first rhizomes in 2010, and really had our first harvest in 2012, which was a small harvest. I would say, from what we've seen in Wisconsin is probably a lot longer than three years to really get them established up to the yield that they're going to have. And maybe it takes even longer because right now, we've been at it for 10 years, and most of the varieties, we don't have the yield, they have out west so maybe maybe they just haven't fully matured yet. I'm not sure.

**George Koepp** 17:08

And our environments just a little bit different than some of that Pacific Northwest too. So we've got a little different challenges along the way. But in along the same line then, okay, so it takes three years or so to get the full harvest maybe a couple more. And already, you've said that you've taken out the the centennials, so how long the most of your hop varieties, do you expect them to be good producers?

**Randy Urness** 17:33

The plant, the varieties will fall out of favor with brewers before the plants themselves really, you know, come to an end. And so that's and that's why we're changing out Centennials, the changes we've made have been more on you know, a to more aligned with what the Brewers want.

**George Koepp** 17:57

Oh, go ahead. Randy.

**Randy Urness** 17:59

I was gonna say so. Yeah, it does take a while to get them established, but it gives you some time to really get the production out of them as well.

**Carl Duley** 18:09

And for those listeners that don't quite understand, we talked about them being perennials, but they're not like a tree or a shrub or even like a grape vine. These die all the way back to the ground every every year in the fall and then they grow from shoots from the crown, kinda like alfalfa for those that are familiar with that grow back every year. And maybe that's a maybe that's an angle we go to next. Let's let's talk a little bit about what happens just real briefly in a growing season. What's the first thing you have to do in in spring?

**Peggy Urness** 18:44

Well, first thing in the spring is we can get out there you know, basically when the snow comes off the ground, we tend to clean off the growth, old growth from the prior year, make sure the the we have our hops, hills and hills basically small hills like almost the size of potato hills for drainage, clean those off, then we'll apply a pre emergent herbicide. And when it's dry enough, we can get out there and hang twine, and we have a trellis system. And every year we have to hang twine from the top of the trellis to the bottom to the plant of the hop plant. And then when that's done once the hops are approximately Oh, 18 inches, 20 inches tall, we start training them up the twine and then they'll get it and then eventually they'll grow up to the top of A cable, which is approximately 18, ours get about 18 feet.

**Carl Duley** 20:07

Yeah, it's good to point out this isn't like a trellis you have in your garden or for your grapevines there. They're generally between 18 and 20 feet tall, pretty elaborate cable system and it's a pretty good sized post that you have to hold this all up. Yeah, so Okay, now you have them strung. What other kind of processes or do you have to go through throughout their growing season, to keep them healthy to get a decent harvest, etc.

**Randy Urness** 20:38

Well, throughout the season we, on a seven to 10 day basis we're putting out fungicide to protect from downy mildew, powdery mildew. What's the new one, diaport, then there will also be some spray For herbicide, and weed control, and also for sucker control. So once the plants are up and climbing, well, they're still putting out a lot of additional shoots and those shoots all take nitrogen. So we actually ended up burning those shoots back down as well. So that's, that's the bigger part of the herbicide than weed control is to actually get rid of that dense mat where disease can develop as well. So we're getting rid of that. So it's the spraying and scouting throughout the season.

**Peggy Urness** 21:37

Fertilizer as well

**Randy Urness** 21:38

And then fertilizing as well. We do actually mostly liquid fertilizer, but we also do spray foliar fertilizers on ours as well. So throughout the season, yeah, it's a lot of spraying, fertilizing, scouting, watching for insects, any problems that might be developing and that nature. So they say that people should be in their hop yards every day looking at them. And I think that probably has helped us, because we do have the easy access to walk out and look at them every day to see if something's going on.

**George Koepp** 22:19

Okay, good. Do you also do some irrigation for your hops? And if so, do you kind of furtigate along the way, are you putting down granular or liquid fertilizer and talk about that irrigation a little bit.

**Randy Urness** 22:33

We have a drip irrigation system that we put in pretty much right from the start 2012 we got it in basically 2012 I think a lot of people remember was a dry year, and we got that installed in order to otherwise we would have probably lost all of our hops and a lot of people with the dry weather that didn't have their irrigation and did lose a lot of hops. But so we've had the the drip irrigation and right from the beginning, it's really recommended to use drip irrigation you don't want to overhead or turn styles because you don't want the hops the plant getting wet you want to get them dry to avoid disease. So, and yes we do do fertigation we put out the majority of our fertilizers through our drip irrigation system. Everything from the nitrogen, potassium, the micros, we even do some lime through drip irrigation, which you have to be careful with. You really want to make sure you get it thinned out and flush the system well because lime even though it's you know it does dissolve and get it and it mixes with the water. I don't think I can truly say it dissolves in the water. But you got to really watch it or you will plug up some emitters.

**Carl Duley** 23:57

Randy, you said going out to the yard to scout. You talked about disease and we won't go dive too deep into all the nitty gritty about diseases and hops, but you're scouting for insects also any real issues on insects that you've had over the years.

**Peggy Urness** 24:13

Probably the two, the two insects that give us the most problems are potato leaf hoppers, and spider mites. Leaf hoppers will come in, we're pretty close, I'd say about around the first of July to expect those. They'll come in and start they'll be on the underside of the leaves. They start to suck the juice out of the leaves and basically turn there'll be a yellow band around each hop leaf and they call that hopper burn. Spider mites will probably come on a little bit later. Probably Close to harvest sometime in August. Those prevent a little, they're more problematic. They sometimes can get into the hop cone and cause damage. So we're, we're vigilant about getting those taken care of. Right, basically, you know, they'll there's a threshold, but we watch them pretty closely.

**Carl Duley** 25:30

You haven't had to deal with Japanese beetles in your location?

**Peggy Urness** 25:35

There are a few, maybe just a handful. They do not present a major problem for us.

**Carl Duley** 25:44

Well, there's only a handful. They're kind of pretty you can deal with that. But some of our growers in other parts of the state have have pretty, pretty devastating results from overpopulation of Japanese beetles, so they're a little bit hard to kill because they're they're hanging around, around up there 20 feet in the air. So good for you guys for not having too serious of an issue with those. So so we're about up to harvest time are we with the schedule for the year, time of year to harvest and kind of what is what is harvest look like for you guys.

**Randy Urness** 26:16

We cut the entire plant down and load them on the trailers. What we do is we go through and cut the base of the plant first and get that loose and then we come back through with the trailers and we actually use a scissor lift up on the top and we cut them and load them onto the trailers and harvest or haul them into their harvest room in our facility and we have a wolf harvester and we load them into the harvester and feed them through the harvester has stripper fingers that tear off the cones, the leaves and clean off the vine and then the harvester has dribble belts and fans that really helps separate out the culled once from the leaves and the other debris. And then once they're harvested, they go immediately into dryers or kilns where we dry them down to 10 to 12% moisture. And from there we bail them up and put them into cold storage until we're able to pelletize.

**Carl Duley** 27:23

You made that sound really easy, Randy, that process. Let's back up just a little bit though. You said a wolf harvester. Is that something you just go down to your local implement dealer and pick up or what was? Where were Wolf, where do they come from? And what's the process of getting one?

**Randy Urness** 27:41

Well, the wolf harvesters pretty much all come from Germany, Poland, Czechoslovakia, that area. The models that are being used in Wisconsin and the Midwest are all pretty much from the 70s, they do make newer ones and have made newer ones. But pretty much for the size of field that we're having around here right now. They're all pretty much Wolf 140s 170s that range. And so what's happened is people are going there's importers that are going around Germany, I think they've pretty much bought up all of them available in Germany and Poland and a few of the countries in that area. So they're starting to move further out, and they're buying them up importing them to the US. They actually cut the harvester in half and put them into shipping crate containers to bring them over here. And then when they get back in the US, either the end owner or somebody has to weld the harvesters back together and set them up. So yeah, the harvesters are a little interesting. It's that is pretty much the predominant used harvesters right now, there are also harvesters that are being made in the US as well. Bumble. More more more mobile harvesters. Our harvester is stationary. The wolf harvesters Don't move, you've cut the crop and take them off to them. Even the mobile harvesters, you cut down the plants and take to the mobile harvester, it's just that you're able to put the mobile harvesters in the field and run it from a tractor PTO or some other source of power of that nature.

**George Koepp** 29:35

Sure. One other thing that I've noticed is rather interesting amongst the growers, Randy and I think you'll attest to this is the fact that since you're using machines from 1970 era, and they're from a foreign country, we all know engineers, everybody else that every time you have a machine, you have breakdowns and so to fabricate parts or to get parts and share parts amongst growers. You guys probably have developed relationships to help keep those machines going because you're gonna have a short window of harvest, that you need to keep that machine up and running. So is that kind of how you manage the parts situation with a machine like that?

**Randy Urness** 30:16

We've found a few sources for parts. One of the nice things with the harvesters. Wolf did very good as the bearings are common bearings. They're not specific to their harvester. So there's a lot of common parts and I we've started to build up collections of spare parts spare bearings, I have a spare v belt for every v belt and it's got probably eight to 10 different v belts on this thing. So I've got spares for all of the belts, on the main dribble belts and things like that. We have found a company out of Canada that can get us belts, we've actually had to replace two different belts on our harvester. Now, one of the main, the biggest belt that we put on it, which goes through the whole machine, we were actually able to buy from the original person who imported the harvester, the company that was doing the import out of they're actually very involved in the hop industry. They're out of the Pacific Northwest. So but yeah, so we're locating and got kind of a source of parts. We've also Yeah, like you said, it's a short window. So we're trying to get backup parts and have them on the shelf.

**Carl Duley** 31:39

Yeah, I looked at the wolf harvester as a as a lot of farm, and I call them farmer engineers, farmers that are great mechanics and like to build things. These wolf harvesters from the 70s are like an ideal project for those farmer engineers and you get a lot of opportunities to work on them. You mentioned that you do some pelletizing. Could you talk a little bit about that process?

**Randy Urness** 32:05

Yeah, once we, as I said, we put everything into coolers to store it until we're done harvesting. Once we're done harvesting, we might take a week or two off. And then we start doing the pelletizing. And we actually have a licensed food processing facility where we do the pelletizing. But the process of pelletizing essentially, we bring the bales out of storage, we break up the bale and feed it into a hammer mill, very similar hammer mill. In fact, the hammer mill we're using is sold very common for hammer milling corn and feed. So it's the same same hammer mill. From the hammer mill, it goes to our pellet mill. There's some steps and augers in between, but it's more or less just process or material movement type things that goes to the pellet mill then. And in the pellet mill, the hammer mill product goes into a die with rollers in the die. And the rollers push the hops out through the dye to form a quarter inch diameter pellets. The pellets are the form of hop that the Brewers generally use. 15 years ago, it was almost the only form of hops the Brewers use. There is some new things they're starting to do more with extracts and different things as far as different forms of pellets and things. Now, at the beginning of the growing in Wisconsin, they did more wet hops some brewers still do some wet hop where you put the whole cone in and there's still some stuff with whole cones but we don't get we pretty much pelletize everything it stores better that way. So, so once the pellets are formed, we put them into vacuum and vacuum and nitrogen flush Mylar bags. And then from once they're sealed up in the bags, they go into freezers. And we freeze them until they go to the Brewers. And they will keep for several years once pelletized and frozen.

**Carl Duley** 34:33

Now this is you're not just doing your own. This is an additional business you have isn't it? Where you're pelletizing for other growers as well.

**Randy Urness** 34:41

Yes. And we talked about the Wisconsin Hop & Barley Co-op when we started working with Wisconsin Hop & Barley Co-Op. We, and you said okay, what our vision our vision was at that time, they then have pelletizing capabilities. They actually didn't have harvesting capability for the most part either. They were hand picking, which is a good way to lose friends to have them come over and help hand pick. So we do the pelletizing for Wisconsin Hop & Barley Co Op, we also pelletized for some other growers throughout Wisconsin. And it's not our main focus to pelletize. for other people. It's me, you know, mostly for us and for the co op. But we Yes, we've certainly pelletized for some other people as well.

**Carl Duley** 35:35

One thing that George had mentioned he was up last year helping to harvest we've done this a few times. You've been cooperating on a couple different projects with UW Madison extension, the most recent one being a hop nitrogen research trial, why why is that important? And why is it important to cooperate in some of those trials in general?

**Randy Urness** 35:58

As you mentioned, we've been working with With the UW on the nitrogen testing, and we've got two rows, two different varieties that we've actually dedicated for them to do the nitrogen research on, there's a couple of other hop growers in Wisconsin that are also participating in the research. And it's I think it's real good that hops is coming back. So new in Wisconsin, there's really need to evaluate. Okay, what are the nutrient needs in Wisconsin? People have traditionally just put on what they were all at in the Pacific Northwest. Well, is that right? It's all we have different soil types here than they have out there. We have different growing conditions and season. So the UW is really looking at that and setting Okay, what is the right amount of hops to or I'm sorry, the right amount of nitrogen to put on the hops. So I think that has been real educational for us. And I think hopefully it's being helpful and educational for the rest of the growers in Wisconsin as well.

**Carl Duley** 37:10

Yeah, I think it's been great. It's been great working with you, and also to other growers in the state on the nitrogen trials. One of the things we should mention is we don't have any research facilities. We don't have a research Hopyard in Wisconsin. And so we do rely heavily on grower cooperation for any of the projects that we've done. early on. It was mainly focused around disease. Now we're looking at a little bit on nutrition, soil nutrition, plant nutrition. One of the things we didn't talk much about was was money. Now, Michigan State put out a paper a couple years ago, that pointed out about 15 to $18,000 an acre to establish a hop yard. Do you think that's close? Does it fit in kind of with your experience on your own hopyard and talking with others?

**Peggy Urness** 38:03

It's probably in the ballpark you know, with with Randy's background in mechanical engineering there, there's a lot of things that he's done to kind of set us up that, you know, other people aren't as fortunate to have had. One of the things when we first started, we had to but we had no tractor we had to buy a tractor and a trailer. As for our supplies, and I think we're still doing it. We've been on a giant scavenger hunt, for the most part to kind of provide the infrastructure for our hop yard. For instance, all of our utility or most I can't say all most of our utility poles are from the baraboo ammunition plant in Sauk county. We just happened to be down there years ago and found out that they were remediating the land, removing all the structures and poles and all everything on the land, and they were holding auctions for equipment. So we actually bought lots of utility poles. In fact, we bought enough that we couldn't haul them back on our trailer, it would have taken Randy probably a year to get them back. So we had to get a a trucker to bring them back. So that's one thing. Another thing is for our cabling, a lot of our cabling we used or found used elevator cable from somewhere up in Minneapolis. So we use that just, you know, things like that, that we've been able to use or repurpose. But yeah, I'd say anywhere from 10 to 20,000 per acre is a is a good rule of thumb.

**Randy Urness** 40:08

It's kind of a broad range, but it really depends on how people are getting started up and whether or not you want to take into account some of that other equipment and stuff. Yeah, I would say that their range, I guess I've seen people quote, lower ranges as well. But I think that's probably in the ballpark.

**Peggy Urness** 40:28

Yeah. For labor. We've done everything ourselves except, you know, basically getting a trucker to haul poles back. We put in all the all the poles ourselves, all the cabling. So that saved us some money as well.

**Randy Urness** 40:44

Yeah. And actually, I know of numerous yards that they actually hired people to come in and set all of the polls and set up the system as well and hired out to do all of the irrigation so I can imagine those are easily running more in that 16 to $20,000 range to establish.

**George Koepp** 41:06

Sure. And one thing I'd like to just throw into is I've been to different hop yards up at Randy and Peggy's place. You're working high in the air, sometimes you're working low down on the ground, you guys are using a scissors left. So the safety aspect of what you're doing there for putting up those cables and harvesting your binds. Using that scissors lift is a much more safe way of doing that. Then some other optional operations that I've seen. So I want to commend you on that a bit. The important piece of equipment for doing that higher type work.

**Randy Urness** 41:43

Yeah, it actually has been and that's one of the initial investments that kind of missed there as well. Yeah, we got to, we're able to get that again, scavenger hunt and pretty much bought it on an auction website site on scene. Yeah, we got pretty lucky on picking that up. And it has just been such a lifesaver, such a help for us.

**Carl Duley** 42:08

And I think what you're talking about is pretty typical, again, with a lot of our alternative crops that cutting edge crops, people have to be creative, they have to be creative with equipment, and they have to be creative on how they get these things established if they want to have a have a chance of making it as a business or in some ways, even as a hobby. So let's start, let's talk a little bit about future. Do you guys do you see where do you see the hop industry being in Wisconsin? You know, five years down the road? 10 years down the road, continue to grow profitable business to be in? What do you think crystal ball time?

**Peggy Urness** 42:46

I it's a it's an unknown, hopefully as we learn more with, you know, the extension people that we're working with, our hope is that it will Make hap growing easier for other growers more efficient. Maybe you know if we can learn more about fungicides to take care of that pressure, a lot of people have given up just because of the disease. So, you know, let's hope that we can maybe, you know, figure something out. They're profitable. I think it has to do a lot with relationships with brewers. You know, maybe people drink more beer. Yeah. Okay. I don't know. Randy, your thoughts?

**Randy Urness** 43:40

Yeah, as far as on the future of it, I think with some of the things that have been going on in the last few years with, there's a few more large yards kind of getting started up. I think those are probably starting to do a little better of course you got a large yard, you got that much more overhead. Now you're talking employees, you have to pay as well. But I think they're starting to look more at that scale where it's probably going to work out. Is there opportunities for the small people? Yeah, I think there's still opportunities for yards that are a couple of acres, you know, maybe smaller as well. It's just to develop the right relationships, and kind of figure stuff out. And profitable. It takes a little while. Okay, we might be able to say that, you know, we're making some profit on this now. Are we making a living profit on it yet? Maybe not. But Randy still works, Yeah, I still work full time. So it's, yeah. All of that is still a little bit of a work in progress as far as where it's gonna go in the future. And it'll be around in 10 years, though.

**Carl Duley** 44:59

Great. And I think It's really important. Now you said a key word with relationships and relationships with brewers. And I think it's maybe one place where Wisconsin didn't do as well as some other states. We didn't seem to establish those relationships with the Brewers, the grower-brewer relationship. I think we're getting there. I think it's it's coming on now the last couple years, but initially, don't think we were quite there. It's hops are a little different. You can't sell them at your, your local Co Op. You can't there's not that type of market out there. So building your own, building that relationship really, really important. Maybe one other thing for me that I that I thought of what about competing, competing with other States Pacific Northwest, I mean, that's where about 90% of our hops in United States are growing, maybe they're down to about 85%. Now, what do you think?

**Randy Urness** 45:51

I would say, there is no competing. I don't think we really compete with the Pacific Northwest. from that. aspect, maybe we can. Well, I don't know that we even necessarily compete with the other small states. Because a lot of what we see and part of the reason we got involved Originally, I guess I didn't really mention this was the Brewers looking for a locally grown product, you know and that's how we really got kind of started. So I don't know that we're competing all that much, even with the smaller states, competing with other growers Within Wisconsin. I don't know that we're even competing with other growers so much, you know, in Wisconsin, I think there's opportunities out there. Granted, people still have hops left. A lot of you know, numerous growers in Wisconsin probably still have some hops left. We certainly have some hops left. Because we had a very good year last year, but yeah, we didn't get everything sold, but we're getting there. It's getting down there for inventory now. It's been a little slower selling last few months but so but I still don't think that the growers are competing. I think there's plenty of opportunity out there yet. So competition. It's not really where the problems or anything lie right now.

**Carl Duley** 47:15

Well, I would really like to express my gratitude to both Peggy and Randy for today and actually, throughout the years now that we've been working together a partnership and doing some study and doing some, some projects and doing our annual annual meetings, you guys have been great. You've hosted field days, etc. You're a real asset to to Wisconsin and a real asset to the Wisconsin hop growers, organizations and just as a group of people, so sincerely want to thank both of you for joining us today.

**Peggy Urness** 47:51

And mostly, Thank you! You've been, you guys have been just so supportive, it helps immensely and we truly appreciate it.

**Randy Urness** 48:01

Yes, we do appreciate it and thank you. Hopefully we can keep all of the collaboration and going forward. (Music playing)

**JASON FISCHBACH** 48:27

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