



**Fred Reno 00:42**

Good morning, Chris. Lets start in the beginning. How did you get involved being a viticulturalist?



**Chris Hill 00:52**

Well, I was at Virginia Tech, taking horticulture classes, I really wanted to get into some sort of plant and growing industry. I graduated, moved back to the Charlottesville Virginia area, was working at a garden center, and then with the extension service and 4H in different things. And then some friends of mine wanted to start a vineyard. And I suggested they start with a quarter of an acre. I had a couple of classes in viticulture at Virginia Tech, certainly like that. The industry in Virginia was just starting. But my friend said, Well, we'd like to start with a sizable planting. So, if you want to do it, we'd like for you to help. And so my job was with the 4H was ending. And in September of 81. With with Glendower vineyard. We put in nine acres to start. So, we were off and running



**Fred Reno 01:54**

was that in 1981. That was initially planted Glendower.



**Chris Hill 01:58**

So, we did a fall planting of a hybrid called Vidal Blanc. So that was the first grapes we planted and then we planted the rest of the vineyard in the spring of 82.



**Fred Reno 02:11**

Was there any vinifera in that vineyard in the beginning?



#### Chris Hill 02:14

I had about two and a half acres of hybrid about six and a half of vinifera which was Chardonnay, Cabernet Sauvignon where is Glendower? Is it still an active vineyard today or the vineyard just got pushed up two years ago, and the farming was so which was fine. The vineyard had been hit over the years. One winter, we had a minus 17 Fahrenheit boy that did some damaged. And then another winter, we had gotten down to probably minus of six or seven. The vineyard had had been through some some real trials. It wasn't that it was a lovely farm. Beautiful, great to work, but the elevation wasn't very good. So snow would come through you you have snow cover, high pressure builds in, you get a real clear still cold night, you get this tremendous inversion, and the cold air is sinking. And if you're too low, you're the one that fills up with the cold air, whereas the more elevated areas stay relatively balmy, for instance, February 5 1996, that that night at my home, which is a 1200 feet south little bit west of Charlottesville, it was zero and 12 miles away. By the way the crow flies, it was minus 17. So there was a 17 degree drop in that 12 miles. And then if you went to the James River, which was just another mile a half further on that 12 miles, it was minus 20. It was an eye opener to East Coast, the potential difficulty of East Coast vinifera grape production.



#### Fred Reno 04:17

That is a bit of a setup for my next question that came to my mind. You've been growing grapes here for close to 40 years. There's a lot of talk, as we all know about climate change, which I have my own opinion about what that means. I'd love to hear what you think is the difference between 40 years ago. And today. I mean, what have you seen if anything that has been a gradual shift or what what is it? What do you see



#### Chris Hill 04:44

from the predictions I've seen, basically the Middle Atlantic states are going to probably have the least amount of change within climate change the further north you go is more change the further south you go, we In the Middle Atlantic, we'll probably get more extreme my concern with the Middle Atlantic states is that were predicted to get wetter and wetter could be an issue. But one thing we will have, which we've always had is volatility, as we've always had and had to respond to, there will be years where it will be quite dry. If a Bermuda have billows for far enough to the west will get caught up in that will be dry. If that doesn't happen. Then in August or and or in September, we'll get thv tropics. This year, our tropical weather was in August. And it's been a real challenge that that that being said 2019 was brilliant. 2018 was very wet. 2017 was wonderful. We had a great mintage in 2017. So it'll be there's a lot of ups and downs. The question in our

industry is whether you can ride with that. The weather is so inconsistent.



**Fred Reno 06:09**

When we first met well over a year ago and I spent some time with you and your vineyard, you said something that stuck with me since that, that day now well over a year ago. And that was very simply I was out there trying to understand what I would call classically what is terroir in Virginia? And your answer to me kind of surprised me a little bit. So I love you, to talk about what you see is what we would call classically what is terroir in Virginia? What are the best growing areas? If there's such a thing? What is terroir? What does it mean here,



**Chris Hill 06:41**

my feeling on terroir has always been for us that it was a function of rainfall. How much rain do you get when do you get it? our soils typically are fairly good, agricultural soils. With the rainfall we get we get a lot of vigor and that's where the the viticulture really comes into play. You can't control the water, you can't turn it off and turn turn it on. And you'll get on some years your crying for rain and others it won't stop. So then there are some soil types that are fairly lean. I'm seeing those as being making perhaps year after year on year, better red wine just because they don't have the waterholding capacity and you don't have quite the production of a I have to throw out this term, Methoxyppyzazine it's,



**Fred Reno 07:45**

yeah, I was gonna ask you I seen you mentioned that before. What is that?



**Chris Hill 07:49**

Well, remember, I'm a grape grower, not not a winemaker. But the leaves produce this compound impart it to the seeds. And it's a I think it's a type of tannin and but anyway it it in the winemaking, if you have too much of that, then it will impart a very distinctive flavor to the red wine. And this can happen any anywhere in the world. And if the red fruit is picked too soon, you have a lot of it. Now during the ripening process, this material gets masked over. And so in really dry climates where you don't get as much lush growth, there's less methoxyppyzazine being produced to start with. So there's not as much

imparted to the seed and the fruit. So you're starting off with a lot less here here in Virginia and on the east coast in general, where you can't control the rainfall and you can get a fair amount of it, you get a lot of lush growth, a lot of methoxypyrazine is produced, that gets imparted to the seeds, the seeds are carrying a heavy load of it. It takes more time for us to get that flavor masked over going into the fall with



**Fred Reno 09:06**

those have something to do if I didn't interrupt for a second with what I always refer to as getting the grape physiologically right or mature as opposed to sugar mature, ripe?



**Chris Hill 09:17**

Well, a is sort of maybe just the opposite of that the grape is probably physiologically ripe fairly soon. The grape doesn't care whether it's got methoxypyrazine or not, you know. It loves to have it that's what it's got and if you were to taste the the juice you would go well that that tastes nice, it's sweet you know, and it tastes good, but you'll also notice that it has a very distinctive green bell pepper flavor.



**Fred Reno 09:42**

So it has imparts an herbaceous,



**Chris Hill 09:45**

that's the herbaceous, we on the East Coast need to tone that down. And that's done during the ripening process and after the fruit is physiologically ripe, then you need to wait even longer, and have that green bell pepper flavor go away. So now we that's where we talk about that term hang tan now is when you'd really like to have some some nice sunny weather. Because when it if you get rain while you're waiting, your juices getting diluted. So you have a less intense juice, you'll have less sugar, also add more rain you get the more, the more difficult it is to hold the fruit intact. It wants to if it's ripe enough it wants to start to break down.



Fred Reno 10:34

So a heck of a challenge sounds like it well from your perspective. And this is a simple question probably with a complex answer. What are essentially the best grape varieties to be planted in Virginia? What do you like to work with? What do you see gets the best results on a consistent basis for white wine and for red wine?



Chris Hill 10:57

There worldwide there has been a real boon. And Fred you would know this better than me, but it seems to me there's been quite an uptick in the consumption of rose. Right so so as a winery, you need to have some some rose in Virginia we're having thanks to Matthew Finot, we're we're having great luck with Merlot.



Fred Reno 11:22

Yeah, Matthew, Fino. For those of you who don't know, is at King Family.



Chris Hill 11:27

Merlot, is a good grape to grow. However, if we get a lot of rain in August, then making red wine out of merlot is a little tricky because the juice gets diluted and the sugar won't build back up again. Well, here's the beauty of rose. We don't need a lot of sugar. And we don't need as much ripeness. Merlot is a nice, consistent producer.



Fred Reno 11:57

I'll tell you the varietal got me intrigued recently is Petit Manseng I mean, the Petit Manseng here just I had no idea. I hadn't been exposed that grape before, certainly as a single varietal wine. And there's some terrific examples here. And I just I love the turn people on to Petit Manseng around the country that I know because they themselves don't know what it is either. It's a chameleon. It looks dark, I think was this materized and yet this is dry. What is that? So I mean, how do you like working with Petit Manseng?



Chris Hill 12:32

Petit Manseng is I think the nicest grape to grow in Virginia. It's got a thick skin, loose

clusters small berry, I guess that's where the petit comes from. I think makes a wonderful white, white wine it's very distinctive, it's got tropical characters, that you just won't won't just get pineapple, maybe a little coconut. It has these flavors that are that are very unique. And I've had to say one thing about wine drinkers. So you've got one group of wine drinkers that love all these different wines that are available throughout the world. I mean, we live in a time now where if you like wine, it's a great time to be drinking wine. But then again, the other wine lovers that love a certain wine sort of day in and day out. And that's what they like. And that's what they stick with. They get used to Chardonnay, that's all there going to drink. And that's fine. So when they drink a Petit Manseng they go, whoo, that's really different. If it's really different than sometimes that surprises people too much. But if you're adventurous at all in your heart, and soul you should definitely try Petit Manseng, it's a lovely wine.



### Fred Reno 13:57

So let's talk about the farming aspect of this. I see where you favor a trellis system called the Smart Dyson. Why do you like that trellis system here in Virginia? Or is it just like trellis system



### Chris Hill 14:10

is just a way Richard Smart and I fellow named Dyson in California sort of invented this this system where you have a lot of vigor you'll have and for instance, you you'll have varieties like Sauvignon Blanc that are extremely vigorous, just in their nature. They're just more vigorous than other varieties. Now you put that variety in Virginia, and now it's really vigorous, because it's getting the additional rainfall. And so where you have a lot of vigor, you'll get this tremendous growth out of the vines. Worldwide most places use what is known as vertical shoot positioning, where all the shoots go up vertically and as one canopy, one single canopy coming off the wire. Everything goes straight up. Well in Virginia my experience was when I did that, I had a very difficult time keeping the thickness of the canopy down, it was too thick. It would grow leaves and grow leaves and grow leaves. You can hedge it it grows some more leaves. So I was throwing all this canopy away in the summer would still wind up with a dark interior canopy that promotes powdery mildew promotes all kinds of bad things. So Richard Smart, comes up with his whole philosophy and his book called sunlight into wine, where you divide the canopy, instead of having one canopy going up straight. You divide the canopy on different planes, the case of the Smart Dyson, you have shoots that you allow to go down.



Fred Reno 15:57

Oh, that's where the ballerina term came from.

Chris Hill 15:59

Yeah, so and the Smart Dyson is where you take the catch wire and force those downward shoots down completely vertical. And the ballerina is where you allow them just to hang out and let them kind of do their own thing. And we combine that with really serious leaf pulling in the fruit zone. And that's right around that first bottom wire where where the cane or the cordon lies, so that all the canopies are very thin, you know, they'll they'll be like no more than three shoots per foot of row. And at the same time, you've got all this vigor and if you want to carry a bit of a heavier crop, particularly on the white varieties, you can do that.



Fred Reno 16:46

So last count, how many wineries have you been involved with helping develop vineyards here in Virginia and your 40 years? A dozen more? I don't know. I'm sitting here looking at List, Keswick Veritas, Pollock, Obviously Michael Shaps and wineworks where we're at here today, Pippin Hill farms, Barren Ridge, Lovingston, Del Fosse, that's just a small list. I'm assuming people you've worked with, they're all high quality producers. Clearly your hand has had something to do with this.



Chris Hill 17:22

And but the main thing is, is that the ones you you mentioned have been fairly successful, but it's really due to the to the people that were starting. I mean, it was so much it's been such fun to work with all these people, extremely dynamic. I love what they do really get after what little I could teach him, they just absorbed right away. They always had a lot of good people around him with a lot of his family. There'd be a lot of people involved. And I'd be just like, part of the team and my case, it would just be in the vineyard. And but that's where I like to be it's just it's been amazing. Really.



Fred Reno 18:07

I didn't mean to leave out King family. I believe he worked with him as well.



### Chris Hill 18:11

Oh, yeah. And, and but and some of the most fun has been to work. It's of course, it's always fun to work with the wineries. But there are also a lot of independent grape growers in this part of Virginia, of course, that's a Wild Bunch there now working with, with the grape growers, it has really been been a hoot. And there's always been a tremendous amount of enthusiasm. I think that gets spurred on. I mean, it's a lot of the work is is drudgery. But there's something about producing a big crop of anything. It could be corn and soybeans. I mean, that's what keeps farmers in there. I think part of it is the aesthetic of going out there at harvest day, and where you, you've got a good year going, and it is phenomenal, phenomenal site. And then you get all these people together and at least in the grapes, right? This whole community of people that come in start picking, then you've gotta gathered what's been picked out of the field and into trucks. And it's just a big deal.



### Fred Reno 19:22

I've always told people in my career, especially consumers, and I'd always say Listen, you have to understand at the root of all this. It's farming. That's what this is. It's farming. It's not glamorous. It's farming and the farmer gets paid for what he drives across the scale. That's the challenge every year is balancing quantity versus quality the day of the day, it's farming.



### Chris Hill 19:45

Yeah. So you have to be naturally drawn to that and have the ability to get there either through your training, or the money you've made in a previous life. But I'll have to say and, and the what The wine industry, the amount of enthusiasm is really the the fuel. Once people get involved, they really get after it. And and to see their response to the public, people really enjoy coming to visit these these wineries in this part of Virginia, the land and topography is so beautiful. It's just a pleasant way to, to spend a evening, really any time of year. And so we've been really lucky that we've been able to attract a lot of company



### Fred Reno 20:39

that's what I'm hoping to do is help get the word about Virginia wine out on a much larger basis, so that people start to understand what's happening here, because it's exciting. I



mean, it is very exciting. Here I am myself 41 years in the business and I feel like a kid again, talking about Virginia wine, that's the passion is there.

Chris Hill 20:59

And Fred, if, if you can sell Petit Manseng wine on a large scale, we can definitely produce the fruit on large scale and really, really high quality fruit. This is a nice grape

Fred Reno 21:13

A potential future there. Tell me what was the impact going back historically, from Lucie Morton, her contribution to this whole growing thing because her name comes up as one of the pioneers obviously, as well.

Chris Hill 21:26

Lucie is probably. in our industry has a lot of remarkable people. I gotta tell you, she's, she's definitely one of them. She now this is my understanding. But so she studied down under Pierre Galet in France became an Ampelographer where she could looking at the at the vine determine through growth characteristics, primarily at the growing tip of the plant. These very specific things that that Galet had worked out, and she could identify varieties by the plant just by the plant no fruit, just by the leaves

Fred Reno 22:07

Well, that's fascinating

Chris Hill 22:08

she was hired a lot by nurseries, that were worried they had made a mistake. In other words, they they would have a row of young vines, that they were growing for sale next year. And they weren't real sure whether they got the variety true or not. So then they would call in Lucie and Lucie started noticing well through through her viticulture in mature vineyards, we've all noticed different diseases and what's going on with that? Well, Lucie started that identified these diseases, these trunk diseases in the nurseries ohthis has been profound. So this, this co, coincided with the ability to identify viral diseases through testing that had not been previously available. Lucie was able to go into these vineyards and find examples in the nursery of these diseases. And for years, these diseases had been

shipped to the grower, the nurseries didn't know it wasn't like it was really anybody's fault. But Lucie's work was just foundational in getting examination of nursery stock, particularly the mother vines where the cuttings come from to do the grafting. And that's where it led to, to check those vines for these different viruses. Because of Lucie, meaning of the expression virus free has taken on a completely different meaning. Now it really means something. Whereas back in 1981, as it turns out, he really didn't mean very much. So it's just I mean, Her work has been really the most preventing, and she really angered a lot of nursery people and pa and pathologist. In other words, she disturb she rocked that boat, but she is a she's she's tough. She hung in there and that she has really I think improved.

Not only US viticulture, but really worldwide. People are far more aware. And then she found cohorts in France, in other parts of the world in Italy, in different places. They were thinking the same way. And then so they've gotten together and that it's been a wonderful movement when she got pushback. Fortunately, there were some major wine producers in California like Robert Mondavi that backed her

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#### Fred Reno 24:56

WOW that's great history. Didn't realize that. So you're into the viticultural area of farming. And I'm sitting here trying to understand why Virginia hasn't been able to break through nationally and internationally with the type of recognition and following that I believe it deserves. And I keep coming back to the fact that there's no Robert Mondavi here. I mean, California don't realize well, maybe they do realize how lucky they are that Robert Mondavi did what he did. Because without him, California's wine business would look completely different, in my opinion, it was that tireless crusading about wine quality, drove him and drove the international and national recognition. And I'm looking around going, Okay, where's the Robert Mondavi? Where's that one person here in Virginia, who is willing to go out there and just say, hold on here, we make world class wine, here, we make as good a quality wine as everybody is willing to put the chips on the table. And to do that, because that type of energy is contagious. in the marketplace, who knows, maybe that Robert Mondavi is out there right now, and they're just about ready to come out of their shell if you will in Virginia

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#### Chris Hill 26:18

I think the one thing that's always held us back a bit is the wet weather. Because as an investor, you've got to be able to handle the rainy years also, now we get a lot of really good years. But in California, it is rare that they get rainfall during harvest. When you look around the world, most places that commercially produce a lot of wine have really dry summers. And it really kind of come become comes down to that. So that's one of the



reasons I would really like to see the success of Petit Manseng. Because it's it's the one it's one grape, they really handles rainfall better than any grape I've ever worked with, it's an East Coast. Great, Fred, you've got to develop the the following and the people that that are interested in trying it and buying it. I had a Vintner say to me about a year ago, something that stuck with me for quite some time. I love your opinion on this. They were saying to me that they thought that maybe some of the best potential vineyards in Virginia haven't even been planted yet. What's your thoughts on that? I think we for red wine, we have some soil types that deliver your in year out better red wine than and other soil types. The problem is those soil types are not at elevation. So now, we haven't talked about frost, which you know, really, one, even major grape growing regions have issues with frost, I mean frost is a big deal in California. So along with other investments, you've

got to invest in wind machines that bring down the warm air from above and mix it with colder air below that, hopefully, raising the temperature below for high def pointed that you don't get frost, it isn't an annual problem. We have a lot of years that is not a problem. But when it is a problem, it's a big problem.



**Fred Reno 28:32**

But what about overhead sprinklers? Like which is common in California? Now, there's so much water in here?



**Chris Hill 28:37**

That's a great question. You know that that's another system and that's a lot depends on an I, you know, I would need to talk to California people about that a lot depends on at what time of night, the the freezing temperatures occur. So if the freezing temperatures occur at at midnight, then your trellis system is certainly got to withstand a heck of an ice load. There are a lot of thoughts, I was just talking to a grape grower from Burgundy, they they use the the wax blocks. And his thing was, he didn't want sunlight hitting the frozen tissue first thing in the morning when the sun first comes up he wanted the ice to melt before the sun hit it. So what he wanted was a smoke cloud cover over the vineyard before so that the ice would melt completely before the sun hit. I'd never heard that before. And so that sort of take a look at that and see sort of what the physics are behind that and whether that's true. But that's really labor intensive. It's a lot of effort. A lot of smoke, and your neighbors may have something to say about it.



**Fred Reno 30:01**

Yeah, I bet they would



**Chris Hill 30:02**

they they'll go along with you a little bit better perhaps than they would in this part of Virginia. What we use now are helicopters, which are great, and they are really effective. Unless the temperature say falls below freezing at one o'clock in the morning, the helicopters flying in a thermal cloud in the warmest air above the vineyard. And but that's a fixed amount of warm air. Once all that warm air has been shoved downward, you can exhaust the thermal cloud, then there's nothing but cold air. So if you start too early, you're going to exhaust all the warm air, before sunrise, and then things will freeze up anyway. You've got to you've got to do a lot of gambling, there's some serious gambling

that goes on with when you're flying helicopters as far as the amount of money you're spending and what the return you're going to get. So the other way to do it, Fred is to go with a with a vineyard at and an elevation where you're in that thermo cloud. That's the ideal east of the Blue Ridge Mountains. So 900 to 1200 feet, you find those sites. those sites are usually fairly steep and heavily wooded, that those sites are there, but they're not. They're not alot of them. you went there, I'd love to hear your thoughts on the contribution of Virginia Tech to the overall wine industry here. Well, I mean, we really struggled. So So I planted my first grapes in 81. Tony Wolf came on the scene. He's the state viticulture extension agent. And he was trained at Cornell, as was Richard Smart. Until Tony came, we simply were going blind. We didn't know what we were doing particularly, we had a tremendous problem that we didn't even know about with this little moth called a gray, gray moth. It flies late in the evening is extremely small. I didn't know moths could be that small. So that was pointed out to us, like, what's the problem people do the larvae burrow into fruit. And so we knew we were getting rot at harvest. But we hadn't identified it as that problem. Besides that, Tony is a tremendous speaker and educator. His thoughts are so organized, hate for him to hear me say this. He's downright eloquent. What he's done is educate all of us as to our issues and how we can solve these problems. Plus when he first got here, and he started this experimental vineyard. So we have a lot of the varieties that we use now have come from Tony's original vineyard of different varieties, the Hortons were the first people that really latched on to a lot of these varieties. If it wasn't for Dennis and Sharon Horton, we wouldn't have anything. They and Tony worked together very closely on variety selection. A lot of this didn't pay off on until years later, but it was, but you got to start. Bruce Zoecklien,, who then at the same time came on as a state enologist our winemakers were making horrendous mistakes. And of course, we as grape growers we, we had when, we couldn't say nobody could see it. But Bruce really got people. For instance, we didn't use refrigeration of the fruit before processing, particularly the white grapes. We didn't do that at all. I would I would bring Phil Ponton at Okancroft , I would bring him a truck full of 95 degree grapes. We would take those you know, put him in the press squeeze them. Fred that 95 degree juice, come rolling out of there. God help everybody.



### Fred Reno 34:15

I remember the early days at Sonoma-Cutrer where I was at. And they we had come up with this invention of this chilling tunnel before anybody had it. And the bins that they picked it into the field were designed as quarter ton bins and they would stack four on top of each other. And there was this conveyor belt and it looked like the best way I can describe it as a carwash and they put them on a conveyor belt Bill Bonetti he was a genius, the winemaker and he could chill the fruit down to 40 degree before it would go to the mechanized sorting tables and get sorted hand sorted before we go into the press.



**Chris Hill 34:57**

So and how long would it take for it to take it down to 40?



**Fred Reno 35:01**

it wouldn't be more than well would obviously depend to some degree on what temperature the grapes were when they came in. But most of the picking was done in the morning, it wouldn't be much more than if I recall correctly. 30 to 45 minutes. It was very powerful.



**Chris Hill 35:16**

Amazing. Very powerful. Yeah, that'd be great. It's true that mean, we would have gotten off to a much early start in our development of quality. Well, you know,



**Fred Reno 35:27**

yeah, just to digress a second what Bill Bonetti said to me one day when I got there, and boy, I learned so much from him, he was such a fascinating individual. He would always talking about maximizing vineyard potential. That was what his job was, I really didn't understand what that meant at first. And then I realized, Oh, he's talking about the chilling towel. He's talking about the sorting table. He's talking about the press, where only takes the free run and two atmosphere and three atmosphere. That's what he was talking about, he was getting the most he could, out of whatever the quality of the grape was, he was extracting the most he could out of it.



**Chris Hill 36:07**

that that is really important. And in Virginia, that's super important, you know, because what we have is variable weather every year, you need to maximize everything that you can. And the best operations here. Really take advantage of really good years. And that's where the quality is just unbelievable. And then on the years, that are more difficult. Those operations that are able to maximize, give wonderful wine, I mean, it's still a very good wine. But they've been able to, to maximize whatever grapes that we get in.



**Fred Reno 36:48**

Chris I really appreciate your time this morning. This has been really a learning experience for me getting to understand the viticultural side of someone who's been at this now for almost 40 years, and I can't thank you enough for giving me your time this morning. And

this will be a delightful episode. Thank you. Well, Thank you Fred.