

PODCAST EPISODE # 27 PROFESSOR EMERITUS BRUCE ZOECKLEIN/VIRGINIA TECH UNIVERSITY

SPEAKERS

Fred Reno, Bruce Zoecklein

Fred Reno

Bruce, welcome to my Podcast. I've been looking forward to having this opportunity. So, I want to thank you for giving me your time today.

Bruce Zoecklein

My pleasure. Happy to be here.

Fred Reno

Well, as I always do let's start at the beginning. What's your story? How did you get into the wine industry and what drove you into this?

Bruce Zoecklein

Well, I got into the wine industry in a somewhat circumventive route. As a high school student wanting to have some beverages for the weekend, I started making some homemade wine. And that was in the era where a winemaker, if someone said to you, they were a winemaker, that was analogous to saying I'm a glass blower. It was really quite an ethereal aesthetic kind of endeavor. There were virtually just a tiny handful of winemakers in California at the time that you ever heard anything about. But I started making wine. And then I was an undergraduate at California State University, San Diego, and ended up making some wine as an undergraduate and then went to graduate school. To pay for my graduate school I worked at a local winery, still unaware that you could actually make a career out of winemaking. And it just evolved from there. What winery was that? It was called Pleasant Products in San Diego. It was owned by a health food company. Again, this was in early 70s.

Fred Reno

Wow. Interesting. Well, then you went on to eventually become a professor at Fresno State.

Bruce Zoecklein

correct? Yes, I actually worked at a large a couple of other wineries. I worked at a winery in the San Joaquin Valley known as Perelli-Minetti and Sons. They were gracious enough to sponsor my further education. And then from there, I went into academics. Always understanding that if I didn't like academics, I would jump back into winemaking. I was not necessarily convinced that an academic career was where I wanted to be. But I always was intrigued and enamored

with the science of wine and the science of winemaking. And so, I thought that an academic career would be entertaining. And it's been more than entertaining. So, I worked in the industry, and in 1985 a position came open at Virginia Tech. My West Coast friends thought it was quite odd that I would entertain the idea of moving to Virginia to work on wine.

Fred Reno

How did you learn about the position? I mean, '85 that was a different landscape here in Virginia. Clearly,

Bruce Zoecklein

I was actually recruited, and I went out for the interview, I had done some consulting in Virginia, for Archie Smith's winery, those that are listening to your Podcast that are aware of the early players, so Meredyth Yeah, Meredyth Vineyards was a stalwart winery. And so, I knew a little bit about Virginia and Virginia wines, although I did realize it was somewhat basic, and embryonic. I made the offer that I couldn't refuse, or I didn't refuse, and then came to Virginia, I started my job, August 17, 1985. I remember the date quite vividly because it was that date, I'd gotten communication from one of my friends in California teasing me that perhaps I'd been in some sort of witness protection program. Or maybe I've been excommunicated from California because why would anybody voluntarily leave the epicenter, not just of the wine universe, but in their mind the universe. That Epicenter being California, of course, at the time, the wine industry virtually stopped at the California border. And while Yes, there was a little wine made in New York and of course, that was all sweet, sloppy hybrids don't you know, and a few little dribs and drabs, even up in Oregon, it hadn't gotten any acclaim at the time and Washington was not even a bleep on the screen, per se. My friends thought that was really quite tangential. So, I had to endure their abstract senses of humor. But to carry this story further if I may, I came here right before the harvest of '85. Let me back up for a minute here, Virginia Tech, of course, is a research institution, you get invited to stay That is to say, are given tenure, based primarily on the money that you bring in and the research publications that you create. So therefore, I knew right from the start that I needed to jump in and do some research, I started a project at Prince Michel vineyards right before the harvest of 85. And I remember getting a call from the winemaker at the time saying, Well, I think you'd better come up here for those plots of yours, they are not holding up real well. And by the way, last week, we got 13 inches of rain, and we're harvesting tomorrow. So those of you that know the geography of Virginia and know where Virginia Tech is, it's not close to Prince Michel right? I got in the car drove all the way up there. I'd never seen Crown Gall and bunch rot. And it was the bunch rot. That was the real problem at this time that had been that acute.

Bruce Zoecklein

So, I'm driving back to campus realizing that this research idea is gotten deep sixed and thinking that there's probably people in the local penitentiary that had better career options

than I did, if I don't get some research going as an almost a function of bad serendipity. I go into the office, my office at the university, and pull out from the mailbox, a book that was sent to me by a friend, it was on wines of America. And imagine my surprise, this was by an author I'll choose not to name but is one of those self-proclaimed experts, okay. I'll define an expert as anyone who guesses correctly more than once. This, this expert actually had a listing of Virginia in the index. So, imagine my surprise at seeing that when I turned to the back of the book, to find the almost page and a half on Virginia. And while I can't give you an exact copy or a rendition of exactly what he said to paraphrase, he said something like this? Yes, they do make wine in Virginia. But one has to wonder why. Yeah, and so my pacemaker practically froze. But, you know, interestingly, it was not simply a commentary on the wine quality, although the wine quality at the time was pretty marginal because when I came to Virginia, we had 31 wineries making wine, some of what you could even drink. It's so much easier to make wine in the arid environments of California. Why would anybody want to do that? Why would anybody want to go through the struggle of trying to grow grapes in the humid wet winter problem area of Virginia or the Mid Atlantic in general. But fortunately, for us all, this so-called expert did not understand the soon to emerge interest in regionalism, regional cuisine specifically to which wine fits in very nicely, and it's this interest in regionalism that really helped to kickstart not just the wine industry here, but throughout the country.

Fred Reno

Well, I'm curious about Virginia Tech, because Tony Wolf was recruited or came right after you, I believe, right around the same time.

Bruce Zoecklein

He came up six months later.

Fred Reno

Who started that program? Were you part of the beginnings of this program? Or was Virginia Tech doing research in enology and viticulture before that?

Bruce Zoecklein

We have a Department of Food Science and the Department of Horticulture both of which are associated that did a little bit of work in both viticulture and enology but they there was no dedicated faculty for that. It's just some people that did a little bit of work. The reason why Virginia Tech got into the grape and wine business in a serious way is the reason why it gets into anything because of political pressures. There were some influential winemakers, or I should say, winery owners, not wine makers, that had the ear of both state government and the people running the university. They suggested in their own little not so subtle way that they would like some more help and they got one of the legislators to sponsor a bill to create both the Viticulture and Enology position at Virginia Tech, including some startup monies. So it was that initiative coupled with a very progressive, a horticulture department Chairman fellow by the

name of Tom Friese, who really got things off the table and into action. Tom was the one that actually recruited me. His insight into the potential of the grape and wine industry was really substantive. He realized that the potential was large, and he wanted his university, and more specifically his department of horticulture, to be quite in the forefront of that. So, both Tony and I were hired into the Department of horticulture, even though enology, the science of winemaking, is not traditionally a horticultural aspect, Tom was astute enough to realize that those sort of lines of distinction are irrelevant anyway. He understood that this relationship to synergism between agricultural production, marketing, tourism, and tax revenues, added new meaning to that term value added and was very instrumental in getting the rest of the University on board with this. You don't just start programs you have got to convince every other person whose last name begins with a capital letter who is an administrator that this is a good idea. Tom was not only a good department Chairman, but he was also a good salesman and a good navigator. He did a lot of the spade work that really allowed the industry to be where it is today.

Fred Reno

So, from your perspective, building on the fact that you came here in '85, and it was very embryonic. I mean, Barboursville was just probably beginning to get known and things of that nature. Yeah, we're having a glass of White Burgundy here, by the way, folks, just for full disclosure, and it's quite good. Anyway, the question being very simple. What was the turning point from your experience, from your standpoint that all of a sudden, Virginia, as an industry started to really make some credible wine, multiple producers, as opposed to this guy over here, this guy is actually making something you can drink?

Bruce Zoecklein

Well, for the most part, it's a sort of epicycle kind of advancement, but there were a few hallmarks. Early on, we did very well with whites, particularly Chardonnay. Chardonnay is very elastic grape. So, it's very forgiving. That's why it's planted so ubiquitously. But if I had to pick a turning point, I guess it would be the vintage of '03, which was by anybody's definition, terrible. Lots of rain, no sun, all of the worst conditions possible. However, despite the fact that environmentally could not have been much worse, there were a surprising number of vintners that crafted some very credible wines, and particularly credible given what they had to work with. And for me, that was a point where I realized, wow, maybe we are finally getting it together. Now, when I say credible wines, particularly red wines, and we had put in the early 90s, a lot of emphasis on trying to make our wines, red wines, much more supple. We were trying to go into that French mantra of making wines for keeping and wines for drinking. And prior to that, we did not have the best of either world because the wines would fade pretty quickly in the bottle. Frequently they were very Angular and tight, tannic acidic red wines are not popular by any measure. But I think what's happened here is that we have worked collectively as an industry. We established these winemaker roundtables that I'd mentioned to

you that were gatherings of regional winemakers who would come in sit down, bring wines from their cellar unbottled. I would always make sure that these were unfinished wines, because when they're in the bottle, they're in the bottle. It's what it is, after that the trains left the station. We would critique these blindly and I would lead the discussion and we began a, I think, sort of a systematic exchange of ideas and, thoughts. This allowed me instead of going to a whole host of winemakers and saying the same thing, I would in a group make some suggestions and the winemakers no doubt learned as much, if not more from fellow winemakers than they learned from me. It was this sense of community. That I think, is a huge reason why the Virginia wine industry has propelled to the high Echelon that it has held now.

Fred Reno

Well, I have seen this collegiality since I moved here in 2019. And it's refreshing to see that it's growing, there's still a lot of information sharing, there's still a lot of cooperation, there's still a lot of people working together, it clearly reminds me of the late '70s and early '80s in California and Oregon. Of course, that's all changed. It's become very corporate.

Bruce Zoecklein

Well, it used to be the us against everybody else idea. Now, I think there's some significant friendships made. It's more of the pleasure of the cooperative interaction than it is any kind of us against them because I mean, we're still competing with everybody else, right? The wine industry adds new meaning to the term global marketplace.

Fred Reno

That's for sure. There's no question about that. So, tell me about this organization that you're the coordinator of I believe, it's called the Applied Research Cooperative Federation wineries for California, Oregon, and Washington. Is that just a West Coast collective?

Bruce Zoecklein

It was established by a French products company called LAFFORT. And it's analogous to our Virginia Winemakers Research Exchange. It is designed to do just what I've been talking about and sharing ideas in this case. The idea was that there's all of this information coming from the land grant universities such as Virginia Tech. And it's like that old saying, There's so much to learn and so little of it worth learning. Winemakers very seldom read the Journal of American Society of enology and viticulture, because to them, a lot of that is way too esoteric. It's not practically oriented. It doesn't relate to them. And some of that criticism is justified, maybe not all of it. But the point is that with the wine research exchange and ARC, this LAFFORT program, were established to have winemakers conduct in house projects, under the supervision of researchers who would aid in the establishment and the layout of research projects, but that the projects would be implemented by the winemakers and be done to satisfy limiting conditions that the winemakers would be facing. Those conditions are really boiled

down to two issues. I mean, is it going to increase wine quality? Is it going to lower cost of production or both? And if it doesn't fall within one or two of those, then it's not usually performed. And so, it's simple things like we're doing with the winemaker's research exchange on different yeast, different barrel treatments, rack and return versus that sort of practical stuff and practical decisions that winemakers have to make to in order to be able to dial in their own stylistic goals.

Fred Reno

Now I understand. So, I believe I understand the difference clearly. But if you were going to say what's the number one thing that's different about growing grapes in California versus growing grapes in Virginia. If there's one thing that's like, that's the difference.

Bruce Zoecklein

The major differences that we're working on are water management. We've done a lot of work in understanding the relationship between water management and terroir. In fact, if we were to break terroir down to its core element it would be hydrology, and water uptake, water use. So, what's occurring now is a great deal of effort is going into trying to understand water management issues on the west coast. And by that, I mean to say, when we should require the plant to have some moisture stress, and when we shouldn't, moisture stress in the plant at the right time can increase the production of secondary metabolites. Secondary metabolites are essentially aroma flavor and phenolic compounds. And they are the things that make great wines, great wines. Therefore, because we're in a competitive market, a lot of people are looking to see how they can maximize those in their grapes. And the easiest way to maximize them with our current understanding is to be able to control plant moisture. Now in Virginia, we can't control plant moisture. It's much more European in style. Of course, as you well know, most European vineyard zones that's even certainly most French vineyards, it's not legal to irrigate. But that's a primary difference. Now, back to your question. There are, of course, plenty of other differences. We used to say in Virginia after we got through a devastating winter that would wipe out the crop, or we got spring frost, or we got a tidal wave of rain that we used to think that we have all of the problems and none of the benefits. But I have to say I'm working on the west coast, and particularly being involved in looking at the impacts of smoke taint. Our problems are still our problems and not unique to Virginia. But it's certainly safe to say that it's all together that much easier out in California.

Fred Reno

Well, these days, I'm starting to believe that the West Coast of the United States is not the future winegrowing.

Bruce Zoecklein

It's interesting that you mentioned that because there are a few West Coast wine makers that are beginning to think that too. It's kind of abstractly amusing. I did mention the reaction I got from my academic and industry conference, about when I first got out here to Virginia. But over the years, the number of inquiries that I have received about requesting information about positions out here, either in the industry or academics, has definitely gone up and has gone up geometrically over the years.

Fred Reno

Well, from what I see, I want to touch on this because you wrote an extensive piece, which I read the other day about climate change that was quite well, brilliant, I must say. It really laid it out in full detail about what you see and what is happening here. I saw this in my career before I left California, it was getting more and more difficult to get what I call physiological ripeness in the grape at 24 degrees sugar brick. So, everybody was letting it go to 25, 25 and a half, 26, or even 27 trying to get that physiological ripeness. Then they would make the wine, and d'alc it, sometimes water back. And that just stripped the soul out of the wine. All of a sudden you can line up a dozen Russian River Pinot Noir's and they all taste the same. There's no soul in the wine and that's what attracted me the Virginia wine that there was still soul in these wines.

Bruce Zoecklein

Yes, this concept of minimalistic winemaking kind of gets bandied about in undefined terms. But it is safe to say that relative to manipulation we're making wines in a lot simpler fashion here. We don't have, with the exception of say 2010 that situation. We don't have excessive alcohols that make wines kind of clumsy, usually our wines are much better food compliments than you would see in many California regions. We don't have a requirement to put on this extended hang time, which allows for a greater concentration of alcohol, to get a commensurate amount of aroma, flavor, and nuance.

Fred Reno

So, the biggest challenge you would say about climate change? What have you seen here in Virginia if you've seen climate change here?

Bruce Zoecklein

Well, the biggest problem with climate change is the increase in variability, the unpredictability of the climate, as I mentioned in that article. That you're referring to the harvest dates in several regions in France have been moved up by about three weeks over the last 20 years. And that's a big issue, you've got the unpredictable weather, which means that you're going to have droughts, and you're going to have floods. And that's a problem. The other problem that's not discussed much but will continue to be a factor is the increased level of carbon dioxide in the atmosphere. Now plants of course, use carbon dioxide, but a higher level of carbon oxide causes a physiological change in the plant. And you mentioned the bricks, the soluble solids

are sugar content of the grape and its relationship to aroma and flavor and phenolic compounds is very important. In California, that relationship, that divide between the sugar level at harvest at a normal say 20 bricks, 22 bricks will say, the aroma and flavor is not very good. And that's why you have to have the fruit hang longer, the Brix goes up primarily as a function of dehydration, so you get enough aroma and flavor. So, there's a spread between the bricks, and the aroma and flavor and phenolic compounds. The more co2 in the atmosphere, the wider that spread is going to become because of what's known as floating. Well, that's a function of the plant physiology.

Fred Reno

That's really interesting. And for you listeners out here, I would encourage you to go online. This article is in Wines and Vines from the February 2018 magazine issue by Bruce Zoecklein. It's worth a read, check it out. It's very good. I was like, Okay, now I get that part of it. Well, you told me who started the Virginia Tech enology program. What is the state these days like? I mean, you're retired. I assume you're still active with them. Do they still have a really robust on-going department with Enology and Viticultural classes? What's happening there at Virginia Tech?

Bruce Zoecklein

Yes, I'm still involved. I still have an office on campus. When I retired, they replaced my position with two people? One, I had a dual appointment teaching research and extension. Right. They hired a separate extension enologist Beth Chang. An excellent enologist, and a fermentation researcher, Amanda Stewart.

Fred Reno

see. Okay, so they broke it into two. Yeah, for the listeners who don't understand extension, it is applying the science (correct me if I'm wrong) at the winery level, and the research, of course, is doing the research.

Bruce Zoecklein

Yeah, we have a very active or have a very active extension program trying to provide --Well, you know, there's this saying that the faster we develop the science, the greater is the likelihood between what we know and what we actually do. So, the idea with extension is, of course, to minimize that, that difference so that what we know can be applied, assuming that it's actionable, again, under the two primary by headers, lowering the cost of production or increase in quality. Our extension program is definitely oriented around those two features. Otherwise, it doesn't matter, you know, so if a vintner asks a question about what time is it, we don't want to tell them how watches are made? We want to get right to the point and that's what they're interested in. That's part of being a practitioner. You want to know what the practices are? Not the theory.

Fred Reno

Well, one of the things that I'm really interested in is your opinion on, having been here as long as you have, the future of hybrids in Virginia, and vinifera. Admittedly, I really didn't know much about hybrids because I spent most of my career on the West Coast. But when I came here, I started tasting them. And I've become a big fan of well-made Chambourcin. I've become a fan of Seyval Blanc personally well made. I know why hybrids have somewhat of a stigma. But where is this going to go in the future? Given climate change? farming practices, and everything else involved with hybrids versus vinified? What do you think?

Bruce Zoecklein

Well, I think we are evolving. The problem with hybrids is one of perception and legacy. Early on the East Coast, and Midwest, producers in this country were presumed to be making nothing but poorly made hybrid wines. And so, some of that criticism was perhaps justified, but not in all cases, of course, and there was and still is, to a certain degree, a certain amount of what I would loosely termed vinicultural racism. If you put a hybrid name on a bottle of wine and try and sell it to a retailer or wholesale house, they'd look the other way, if not run the other way. However, take that same bottle, put a proprietary label on it and have them taste it, then that's a different story. I think, as you mentioned, with Climate Change, and with market change, summed up this way, we have climate, we have environmental climate, we also have market climate, I think both of those are changing to allow more hybrid wines in the marketplace. The young people that I talk to, and I interact with, particularly on the west coast, are not all hung up with a wine being from Napa, or a Pinot Noir being from Burgundy. They don't give you know what, what they want is a decent value. That's the only thing. So, they're not hung up on the perceived esteem that hangs some of us up with. And so, I think they're going to be quite receptive to all kinds of new products they already are, you can see that in the marketplace, with a proliferation of everything out there now. And that wouldn't happen if the young people weren't buying them. So, I think the future is bright as long as the wines are made well, no problem with that. In fact, I had a former student of mine, who went up to be a master student at the University of Minnesota, solely to work with a fellow who was a breeder. Peter Hampstead was his name, who is breeding hybrid varieties. And she was in charge of making wines for those to evaluate for commercial sales. And some of those, like Marquette and others are really quite popularized now.

Fred Reno

Well, that's interesting. In fact, I remember Ben Jordan, when I interviewed him, said, Well, I thought I had to make vinifera when I moved back to Virginia, because that was what everybody had. He said, Now I learned if you just make the wine that the hybrid, the grape itself will give you, as opposed to trying to make it something it's not. You really can make some compelling, interesting wines

Bruce Zoecklein

Yeah, I think that's the whole point. We were very Virginia centric. Many people were attempting to make Virginia Vinifera centric in the early days, because it was this sort of sense of insecurity, being in a new embryonic wine region, you have to stroke harder to get any kind of attention. And there was this perception that no matter how hard you stroked, if you weren't making vinifera wine, nobody's going to write anything about it. We've gotten over that little bit, we're still vinifera oriented, but I think a lot of the focus on vinifera and away from the hybrids was in part because that's what they presumed the wine writers and the other gatekeepers insisted on. Now that things are liberalized a little bit and as you say, Ben and other people have the right idea that you go with the flow. You exercise the features of the particular grape at your particular site? I think things are changing.

Fred Reno

Okay, a personal question. My favorite question to ask everybody sitting in that chair. What was the one wine you had in your lifetime? That you went Wow, that's it. The sort of Epiphany wine and your said man, wine can be this good, this interesting What's that one wine at some point in your life, your career, that you had.

Bruce Zoecklein

I not sure that I could say one wine. Fortunately, I've had the opportunity to do a lot of traveling and taste a lot of wine. (Well, that's okay). I had, in my younger years, early academic years, I had an opportunity to taste a '82 Latour which instilled to me why it had First Growth status. I got it that, you know, like it didn't seem academic after that.

Fred Reno

Okay, that's really good. I could see how that would be BOOM! So, it says, you've also been involved in doing a lot of planning in winery design, how did you get involved in that piece of the business itself?

Bruce Zoecklein

By going to people that know something about that. I gave and organized programs on winery planning and design, initially in Virginia, because we'd have these people inherit a barn or something and want to put a winery in the middle of nowhere, at the edge of the earth and you turn right, and they want to put a winery in. I would send them a business plan and say, well, you ought to think about this for the business plan. They would write back and say, well, we want to make, and I always asked them which wines would you like to emulate? Or I asked them a kind of this reciprocal of the question that you just asked me? What wines are your favorites? Or what wine really got you into this? Or what would you like to emulate? And I remember this one gal wrote me back; she said she wanted to make Howell Mountain

Cabernet. Well, that's intriguing. So, you have a winery and a vineyard on Howell Mountain. No. And I you know, it's like that the old the old story about you can't get there from here. But anyway, those sorts of inputs, suggested to me that now maybe we should start some programs. And so, we began a couple and then they became regional and then they became national. And now I have a book. It's called winery planning and design. And I'm the editor, and it has presentations from people who actually know what they're doing. From engineers, from architects, to people that specialize in sustainability. About a third of it is on sustainable features from building materials to solar designs, green roofs, you name it.

Fred Reno

What do you think the biggest challenge for Virginia as a wine industry as a whole right now, looking forward over the next decade or two decades, what's the biggest challenge that they're going to have to meet and deal with?

Bruce Zoecklein

Climate Change?

Fred Reno

So that's what everybody's going to be dealing with, isn't it? Yes. Okay, so what's the second? What's the second thing you have to deal with?

Bruce Zoecklein

Oh, I guess there's still a perception on the part of some people that it's a regional industry. How good can the wines be, but that through your efforts and efforts of others that problem is being addressed?

Fred Reno

Well, I sure hope so. If I can make a difference. That's what I'm trying to do. I can tell you folks buy a bottle of Virginia wine. There's a lot of damn good wine out there. There is no question about that.

Bruce Zoecklein

You know, we still have the concerns of, well, it's climate change. I mean, it's winter hardiness. That's always a feature. But fortunately, with the work of our viticulturist people who are planting grapes in much more suitable spots. We're slowly if not rapidly, getting it together to use the common vernacular.

Fred Reno

Yeah, I think that's very true. Well, Bruce, I can't say thank you enough. This has been interesting and very enlightening. Thank you.

Bruce Zoecklein
My pleasure.