

When we get to that point where we really start to fill it in the pocketbook, we have to make shifts. And I think one of the most beautiful things about being a human being is that when we have to show up, when we are forced to get creative and innovative, we find solutions. I'm a quality assurance specialist for about 7,000 acres in the Yakima Valley of apples and cherries. I've been in this quality assurance position for the past four years. And prior to that, I went to Bastyr for a degree in herbal medicine. I studied natural medicine making. So I'm technically a certified herbalist. And I really missed getting my hands dirty. So I love playing in the soil. I love growing things.

I get the opportunity to bring what I learned at Bastyr, looking at human health, microbiomes, gut health. and what i know about herbs and and plants to agriculture. And so i bring a very different spin to this conventional approach. I started looking at how we're growing things. You know, high density, we're pushing things to fill space, to get production quickly um everything's fed this sort of conventional chemical diet. And I thought, well, you know, maybe we should start looking at the soil. Like, how are we starting these trees? And so i thought, well, If we don't have any microbiology in the soil because when we take out a block, we fumigate it, we basically sterilize it and start over because we don't want to bring any pathogens over.

I understand. It makes sense. But how do we get that healthy microbiome back into the soil so that we give those trees the best opportunity to take what they need when they're young? I started doing more and more research on biochar just to kind of understand the science behind it and why it's so good. Why does it work? And looking at that and understanding that it actually can house that bacteria, the good bacteria, the good fungi, and hold onto water when we go through areas of stress. So looking at all the positives that it brought, I thought, well, this might be a good first step. Let's play with it. We don't have to make any changes to the chemical applications. You know, we can continue doing conventional, our conventional applications of things, but we can just add this and see how it might help.

So what we ended up doing is we ended up banding it in and then when we planted, the planter itself moves the soil around the base of the tree. And we thought, okay, well, six inches, you know, both sides of the tree and six inches deep, that's a good start. Let's try that. So without having to use extra equipment, we just went ahead and let the equipment do the work itself as like a dual purpose. One thing we did learn is that all biochar is not created equal. So depending on particle size is kind of how you want to look at application rate. What I found in playing with biochar is the smaller the particle size, the more it's going to take away faster, right?

So if you... put just a raw biochar down and it's not inoculated, it's not charged, meaning you haven't pre-infused it with nutrients, it will pull the nutrients away from the tree and hold on to it. And if you have a higher application rate, you're going to pull more and more and more. If you have a larger particle size, it won't do that as rapidly. So it actually gives the trees and the soil a little more time to sort of balance out. So I have used wood feedstocks, so like orchard waste, even timber waste feedstock. I've used stuff from coconut core feedstock. I see the wheat chaff feedstock and they are all not created equal. They're very different. So before I would go and grab a biochar, I would learn a little bit about it.

I would also ask for a character analysis so that you can look at your pH, you can see if there's any salts behind it, you can see what their feedstock is, and anybody who's making

biochar on a large level is going to walk you through a process of, we've done these tests, here's how we suggest to apply it, and I would stick to that. I would not, I would not go, you know, more or less. I would go with what they what they suggest. I think that when the going gets tough, the tough get going. I think that's true. Where we are as humans, where we really shine is when we are forced to look at things a little bit differently and there's a lot of pressure to do things differently.

It is scary and you've got your life and you've got your your investment into this and you know that what you've been doing works pretty well.