**New Recording 6**

**WICC:** [00:00:00] Way, yeah, when we had a chat to him is we just let him talk because we didn't we really want to box in and restrict kind of what messages he thought we thought we needed to get across and then what we ended up doing is actually phrasing questions around it if that makes sense.

[00:00:21] **Stephen:** [00:00:21] Yeah.

[00:00:22] **WICC:** [00:00:22] So what we're hoping to do is basically, you know, Did you kind of going about you know the importance of soil biology and living soil health and yet you know that Focus not just on chemistry, which I've set with you this table so many times but then what we would end up doing is kind.

[00:00:44] Pull that apart into like two or three kind of main messages and actually phrase a question around it if that makes sense. Yeah. We said I'm a student roster and mean what's the importance of blah blah blah biology and in the capture that little bit so it's not so much questions. We have we just kind of wanted to get some of your thoughts.

[00:01:01] **Stephen:** [00:01:01] Yeah. Yeah

[00:01:02] **WICC:** [00:01:02] soil biology and how to maintain it you improve it and benefits and.

[00:01:08] **Stephen:** [00:01:08] No worries. It's all right.

[00:01:09] **WICC:** [00:01:09] Yeah. Yeah Green. Is

[00:01:12] **Stephen:** [00:01:12] it into something and send you to heaven? Oh, I see. That's fine. Yeah. Yeah. Yeah.

[00:01:26] **WICC:** [00:01:26] Yeah.

[00:01:28] **Stephen:** [00:01:28] Oh, so we'll make it up as we go. Yeah. Now we had we had we did that last interview with honey.

[00:01:38] That was.

[00:01:42] He was the West Australian not Sir Michael Jeffries, but another said that he ex-general West Australian. Yeah, once again Advocates first for change, you know, so regenerative is really big now. Yeah, well it actually. You know why it many times regenerative is just that it's a to know what's the name of this new fad is the new term I suppose we can lie, but I think in essence that means that you're leaving the farm in a bit better condition than you started.

[00:02:16] That's what Regina give I think really nice of you. Improving improving the outcome

[00:02:22] **WICC:** [00:02:22] violent with

[00:02:25] **Stephen:** [00:02:25] regenerative that Bobby bit noisy

[00:02:28] **WICC:** [00:02:28] okay with regenerative agriculture. What what are the main principles because when you look up regenerative agriculture, everyone seems to have a different definition on it.

[00:02:42] And I think this is one of the hard things about selling region a is people cannot Define it. What do you see is the main principles of regenerative

[00:02:52] **Stephen:** [00:02:52] agriculture for me? You know, it's the way we Farm. Anyway, it's like the triple bottom line, you know, so you've got environmental, you know, our comes on a farm that must be regenerative because you're actually trying to improve environment very cute.

[00:03:08] Improving the condition of the actual Farm itself, you know, I mean like in productivity, so that's soil dominantly. So increasing soil carbon, you know, so, you know, really you're improving your system consistent is regenerative to me. Whereas say hi chemical use and high nitrogen use has negative outcomes on the.

[00:03:35] As negative outcomes on long-term productivity because you just Imports have to increase increase increase because you're losing your soil carbon and everything else so that can't be regenerative. And for me also Genovese economic who has to be you have to be economically sound. Otherwise, how can you do how can you actually constantly focus on doing stuff like even planting trees if you don't making making so to me the JV exactly what the term virginity is, even though it ended means that we're coming from the poor base and trying to improve that's what regimes.

[00:04:15] I think every site to make doesn't specifically lock in a way biological and remineralization. That's our that's our motive farming other people might be by Dan and Megan. I'll call themselves in than the regenerative field. So I just see it as you know, environmental social and economic three.

[00:04:40] There are three guys are three guys. Scratch, you know, we we consider all that and and I'll see that as being redeemed, you know, because we're not when I was looking at production at any cost. We're looking at production, you know as sustainable sustainable production. Yes, which means you have to be sustainable.

[00:05:04] They're having a positive environmental outcome and you have to have positive Health soil Health outcomes. The social side for us is food quality. That's the only social side that we it is a social thing isn't it food quality, like if you produce, you know, if your deck exciting crops, you know with Roundup glyphosate, then you're putting.

[00:05:30] Poison into your food that that can't be a social thing to do. If you don't worry about the quality of your food, you know, how good how good the food is for nutritional value? That's the social thing. That's how that's how I term social because how can I be a farmer and talk about social outcome.

[00:05:50] I mean, I know environmental and social because that's affects everybody, but we really looking at it as a. Yeah, so that's how we think social you know, this the social side of our business. Is that what are we doing for the community, you know and it has to be quality food for health. That's

[00:06:11] **WICC:** [00:06:11] the

[00:06:12] **Stephen:** [00:06:12] social outcome.

[00:06:13] And that's why we test a lot of stuff and that's what one of the reasons why we use very little chemical but there are a lot of other reasons now that we've found not using chemical that's with soil health.

[00:06:24] **WICC:** [00:06:24] Yeah, so you're not obviously chemical-free. You're just very considered when you

[00:06:34] **Stephen:** [00:06:34] use them last resort Last Resort attitude of chemicals.

[00:06:39] It's the

[00:06:39] **WICC:** [00:06:39] last resort. Yeah,

[00:06:41] **Stephen:** [00:06:41] so we say no we're not going ganic. We will use chemicals if we have to like what we've just done 60 70 hectares of blue gums and. The Harvest is sprayed. The stance as are harvesting as much as there is no other way we could control the blue gums without getting out there with axes and chainsaws and just forever we're doing it later, which is a lot more to kill the whole thing as it grows back.

[00:07:06] Yeah, it's a week we looked at their cost us a lot of money. It costs a lot hell of a lot more to do this way. Yeah, I think 60 hectares was $9,000. It's worth it. But we're spraying a stump that big on the top of the contractors do that means you have chemicals concentrated the truck on The Stomping fungi's about one of the few things that break in a fungus break down chemicals.

[00:07:34] So they're using them in industrial areas all the time. Now the best way to break down heavy everything from the nastiest of petrochemicals is true fungi's so the technology of. Site remediation on petrochemical sites is now going to bunge they do they're doing it six months paid the fungus and the hype is turn everything of the nastiest chemicals.

[00:07:59] You could probably think in which you would get the petrochemical. Yeah into back into carbon, you know, Frankie's are amazing. They don't that you can eat. The fungus the through the hyphae. So here they are returning staff to carbon like, you know, all the chemicals back

[00:08:19] **WICC:** [00:08:19] to

[00:08:20] **Stephen:** [00:08:20] just organic carbon, but nothing in the fruit.

[00:08:26] There's no chemical residue in the fruit. That's with us with that most families. So whatever's in the soil and whatever they're doing. You're not getting let's say it was a. Glyphosate or just some residual chemical which is a shitload that sexist and so they'll be in that environment some of them dealing with those chemicals as far as returning to cabin.

[00:08:53] But none of that chemical would end up in the fruiting body. Hmm. Fungus may seem to some really interesting sites in the US who are really doing a lot of families in ag and food nutrition and everything.

[00:09:07] **WICC:** [00:09:07] One thing I wanted to capture to is the role of soil biology I suppose in production, but the effects that I want to be careful here because because I don't want to like alienate you don't even like.

[00:09:27] You don't even like Wicks always kind of has to play that middle ground where we're trying to identify best practice, but we don't want to be seen as is grouped

[00:09:34] **Stephen:** [00:09:34] as I'm pushing again great, but how

[00:09:37] **WICC:** [00:09:37] can you like an average farmer? That's it's a typical production Farm in that uses the you know, the all the modern, you know systems in chemicals and whatever.

[00:09:47] How can they make what are some simple steps that they can take to? Improve their soil biology short of switching to a mineral fertilizer. So I don't want to look I don't want to look like we're trying to go here Stephen Foster and self it

[00:10:06] **Stephen:** [00:10:06] mineralogy exactly that's been an issue. You know, we that's I don't have much to do the company at all anymore and in a way it's been a bit of an ed because we have a lot of visitors and we had some Farmers here

[00:10:20] **WICC:** [00:10:20] on.

[00:10:22] **Stephen:** [00:10:22] And then we've got the mount back High School want to do their tours here and they keep hassling me and I don't want to be trying to weed out all that sort of

[00:10:31] **WICC:** [00:10:31] stuff, but

[00:10:32] **Stephen:** [00:10:32] I can only tell a story that what we do and why we do it. Yeah, and that's really what you're after aren't you? It's not you're not endorsing it.

[00:10:42] Yeah, I've been a weak member for a very very long time in the area, you know, I've been involved in conservation. Since died off so I'm a reasonable aspect to have a farmer to be on your newsletter and solutely and so but what can a farmer do look you know it looking really in reality and I know this might sound a bit oxymoron, but you know, all we're doing is we're trying to enhance nature to do its own thing because we're just not smart enough to understand the interaction between all of the biology in the soil.

[00:11:19] All of the mineral compounds in the soil and the interaction between that and Vala G and in plants and us so the risers for your so to some what we do is where farming the rhizosphere. Yeah, you know, we're not looking at a crop and going oh shit. We need sink, you know luck look into a crop sales got a fungus for this sort of thing because we're focusing on soil.

[00:11:45] So our whole focus is on so and if you have that thinking. Then you can start managing to and it's a living soil. So you know what the rhizosphere is. Yeah.

[00:11:54] **WICC:** [00:11:54] Yeah. Yeah. I was going to say the Corina possibly probably doesn't

[00:11:57] **Stephen:** [00:11:57] rhizosphere is the is that interaction of between plant roots? There's got to get arises for you in a Phyllis fear.

[00:12:06] Phyllis fear is the surface of the plant, you know, which is the leaves and trunk and and all the associated biology with that because there's a hell of a lot of body block on our skin on plants and doing all sorts of stuff. It's atmospheric fixing nitrogen bacteria and stuff and not all just legume and then in the soil, it's a rhizosphere.

[00:12:26] So it's all the roots and all the bacteria fungi algae everything you can imagine Associated that route. But to the core of that is the rim is mineralizing because mineralize it and mineralized soil. That's what stimulates most biology so you'll find a lot of bugs. Have a satiation with mineral summer even named after minerals like of there's an iron bacteria.

[00:12:50] And so there's a lot of relationship between biology that's bacteria and fungi and minerals because that's the foundation of soil. Then you've got the Roof Systems. Then you've got all the reaction between biology and roots and minerals and roots and on and and then the communication between them.

[00:13:11] So that is the rhizosphere. So whatever goes on there is pretty 99 percent responsible. Whatever goes on top. So we're looking at a living soil, which is the rhizosphere. Yeah, and if you go if you and the reason we don't use much lime and we have really high production of their reckon. We're double the district's the district production and we don't use.

[00:13:37] Lime is because the rhizosphere is changes the ph and there's it. All you have to do is the influence of the right pH or rhizosphere on ph and Google and there's a lot of research on it, you know, so so really thick active strong biological root system, which means a big root system is low Farms go look like sighs my root system.

[00:13:59] That looks really good. That's good. Now you times that by a massive amount of. And it's huge. I mean they reckon this 250,000 different fungal species, you know, 50,000 all that and they're probably overextending knowing 50,000 let alone bacteria or algae or you know, and then then you've got all the insects and earthworms and just so all of that it becomes part of this rhizosphere.

[00:14:29] And so we focus on that rhizosphere as a in Hazard management inputs. And and go how the hell do you do that? Well, you know, we know I'll give you another example of legumes lost it. So if you look at you know, a lot of people talk about, you know, Clive is an inoculation sure, you know the rise over your on Clovis.

[00:14:56] **WICC:** [00:14:56] No, I

[00:14:56] **Stephen:** [00:14:56] don't you got to climb the plan, you know, and they're relating right? Yep, and they fix nitrogen.

[00:15:01] **WICC:** [00:15:01] Yep. Are you that?

[00:15:02] **Stephen:** [00:15:02] Yep? Whoa what it is Brock, but it's rhizobium bacteria that does that yeah, and then on a root system of any legume, it's got these little nodules that form and though in those nodules are all this bacteria.

[00:15:17] and when that plant dies. Didn't let nitrogen from that bacteria and that right from the rise of phobia becomes available to plants. That's why people like legumes in the system or it could be lupins peas beans Clover doesn't matter what when you open up a riser idea. It's pink and what makes that pink is Cobalt.

[00:15:42] The biology and COBOL. So if you have like a kobold. that's what I'm talking about the relationship between. Balaji the minerals is really critical let alone the relationship between minerals and our health. Yeah Denmark, you know, they named the disease after Denmark Denmark wasting disease which was a selenium deficiency.

[00:16:03] **WICC:** [00:16:03] Okay.

[00:16:03] **Stephen:** [00:16:03] So you need the aboriginals caught with work and I don't know if your elders say this but you know Denmark was known as sickness country by the aboriginals. Yeah. Have you heard that mentioned?

[00:16:16] **WICC:** [00:16:16] Yes, I

[00:16:17] **Stephen:** [00:16:17] have. Yeah voltic as time goes on it gets less and less but to give an example. The crackers were 40 players amount Barker well-known even know they were in very nice people.

[00:16:28] They were the first of the really big non-aboriginal 40 players from the cracker family Barker in the early days. I'm talking the 70s. They had a game when I playing locally. They had a game in Denmark. And the crack of always had to ask they obviously like a client their Mark and I refuse to let him play Denmark.

[00:16:50] So the team didn't have the crackers in dimmer and that was because of this now I was because they call the sickness country. Yeah, and if you look at the history of all farming,

[00:17:00] **WICC:** [00:17:00] but that's the root of why it was called. The sickest country was a selenium to

[00:17:03] **Stephen:** [00:17:03] selenium Cobalt zinc and copper. So all the early flight because highly leached country.

[00:17:12] Meaning it might have carry limes, but it's had thousand millimeters of rainfall leaching and leaching and leaching in teaching. So so relatively we thought that's why the early all the early War settlement blocks out through that white had massive problems with cat. I was only until I discovered the deficiencies was farming even viable on the coast and pretty much from here.

[00:17:36] Probably through the Walpole really, that's the history if you go and had if you go and read some of the early. Settlement history of the region when the mill has finished Milling. Yeah, and then was a lot of land grants which was after the second world war, but I first and second World War I would say most of them failed.

[00:17:58] And it was they couldn't get there just couldn't grow quality enough pasture for their animals. That was the main reason for failure and it was only until they discovered that. The trace minerals and slain and kobold Jeremy copper and zinc, but probably been in Mali as well. So yes, Holly late nice carry limes grinding massive trees, but highly latest.

[00:18:23] So if you go a little bit further Inland, the mineralization is a lot higher because it's it slowly changing bleaching of

[00:18:30] **WICC:** [00:18:30] courses. You're from from

[00:18:32] **Stephen:** [00:18:32] why rainfall over evil? Yeah. Yeah, say that you go to the Amazon which is all this beautiful country and they go and clear it. They get one crop out of it because those yellow Sands exactly the same it's highly leached.

[00:18:46] You know, they've you getting that one year of crop out of it through the organic matter and other resource still recording.

[00:18:53] **WICC:** [00:18:53] Yep. I'm sorry. No. No that's good. This is. Golden, so this Focus that we have like in this Monsanto world of Agriculture were really just focusing on phosphorus nitrogen, you know to a lesser extent possibly potassium sulfur in PH obviously soil PH.

[00:19:15] There's an obsession with it at the moment. I mean, can you. Most of the farmers that I'm talking to they're not putting on these Trace elements, you know, when they're in this kind of acid based chemical fertilizer regime, you know at most you know, they're putting on some pot ash or you know, superphosphate, you know, and it's like

[00:19:38] **Stephen:** [00:19:38] but they're what they're doing is they're buying lick blocks.

[00:19:42] They're getting B12 in their vaccinations. They're injecting and drenching particular. I said use lime. So what's happened? Is that in our not look at that, you know, this is probably getting you know a bit of the rhizosphere because the you know, we're managing a rhizosphere that manages pH.

[00:20:02] That's the only reason that you know, we have pH is of 3.9 and calcium chloride, which is about 4.5 4.6. Yeah, and you know how many people we've had on the farm if they Andrew white lie, you know Tim this professor and blah blah blah blah. And they God this doesn't compute. So here we have really high production.

[00:20:23] And then this year we got 27 rolls a hectare of our haylage. So you have

[00:20:30] **WICC:** [00:20:30] sorry. I'm just finding out where we're at because I wanted

[00:20:32] **Stephen:** [00:20:32] to say I'm

[00:20:33] **WICC:** [00:20:33] sorry, this is good. I just I can skip two things if you don't

[00:20:37] **Stephen:** [00:20:37] ya later, but I'll just go. No,

[00:20:38] **WICC:** [00:20:38] I'm not worried about my time. I just want to so we don't go through an hour of it like.

[00:20:43] **Stephen:** [00:20:43] Yay,

[00:20:46] **WICC:** [00:20:46] he's

[00:20:46] **Stephen:** [00:20:46] me chopping and changing but those are all that look I think we found if you like the system is a chemical system. That's the way we that's the way I nearly everybody Farms is chemical. And even in biology when I was at school, there was called the three-legged stool. There was biology.

[00:21:09] Chemical and physical was actually for this minerals. So that's how we're farming but we've picked on one chemical. So pH really is are falling from a chemical system and I couldn't agree more that low PH means less nutrient availability and certain things but you know on a biological system. It's the actual soil.

[00:21:33] It's the rhizosphere that controls has a big influence in temperature and moisture retention and pH. And once again, you just got a gun wave and you will heal see the pH they color stain Pho against root system where most of the activity's against the root system and they and then you might have five pH in their soil and six and a half of seven near the root systems.

[00:21:57] Let's the biology feeling that they're making an environment. That's perfect for them. You know, that's what. That's for bugs are good at and often in a negative way to like, you know, you get an infection. They're going to create issue in your body that you know proliferates that type of bacteria because what happened?

[00:22:19] Yeah what happened to me, but but no, but what was interesting is what happened to me is that what happened? It's always called competitive exclusion. Yeah, you understood a word that I understood why it was happening. And I need because I know that happens in the soil and yeah the same stuff but when you get back to the back to the liming, I'm really critical of what they're doing.

[00:22:41] I'm very critical of the the soul reports that are coming out of Department of Ag and that water which is these ones that most farmers are doing. Because if not take my word for it, if he gone to MLA, which has been known fact, I got a copy of uml a meeting lots of they're responsible for their herd health of Australia, whether it's cattle shape or goes MLA.

[00:23:10] We all play levies to them and then they put all these nasty things on like but here you don't we haven't biosecurity and know that they're the MLA who do laughs. Yeah, right. Well the MLA have a fact sheet. Which warns farmers who use lime and excessive superphosphate that will tie up copper zinc.

[00:23:31] Once again slain and Cobalt. That's Mac. But it's also manganese and magnesium. Now, they've got a fact sheet that you can go on just forgotten ml life. Actually there. It is warning Farmers to be careful about tracing will deficiencies. Whenever using super phosphate which means it's been overused has been used for 30 50 years, but or line applications now when these reports this all poor test reports come through from you know, the nutrient mapping or wouldn't

[00:24:05] **WICC:** [00:24:05] perform nutrient mapping.

[00:24:07] **Stephen:** [00:24:07] There is no trace minerals measured whatsoever. I have gone through many with

[00:24:12] **WICC:** [00:24:12] Farmers what they started bringing in. Is tissue testing in the spring following so the people can actually jump on the roof and do tissue testing, but probably only about talk to 25% of people are doing it 25% of Growers are actually jumping on that but.

[00:24:32] I agree and like this is probably more often record but wicks in a really precarious position because we've gotten to a point that there is almost no funding out there. We've been chopped off at the federal level. So we're addicted to State funding. The only way we can get State funding now is Towing Department of AG Albanese, Lon.

[00:24:51] In order to actually stay alive. And so even this right here this will I know will piss off David Weber and all these people pointing out soil biology because I don't think he believes in it whatsoever. Now I know but the reality is is like we're caught in this thing where I live. I don't want to just present their thing.

[00:25:08] You know what I mean? Like I want to. Kind of and even the Bailey's because I knew the Bailey's these people here were actually found out the trace elements. You know what I mean? They got on the caught onto the tray ceilings are doing the tissue testing. So it was a way of kind of trying to pull the slightly to the middle if you know what I'm

[00:25:27] **Stephen:** [00:25:27] saying?

[00:25:27] Yeah. Yeah. We'll look. I mean I could go sometimes you gotta look I've always said to people to come here and I say we get a lot of people is

[00:25:35] **WICC:** [00:25:35] look

[00:25:37] **Stephen:** [00:25:37] at our success is in our. You know, the reason we had the report on the farm is because we have increased our soil carbon levels all by it by only 1% but we've been monitoring our soil organic matter levels over 10 years and we produced about 1% The reason I know our stocking rates Ernie double District average is because we were one of the the Farms that the you know, Carbon and initiative and you know, there's a whole pile of farms that were tested around Australia.

[00:26:08] And stories for down the more we are one of those farms and so they come out and they take what your stocking rates are and everything else and you'd lambing percentages and whatever and then go away and then they them research how you fit within the scheme. So when I got the news letter back we were double new double District average In Stocking, right?

[00:26:28] Yeah, and I had no idea we were that, you know, because we were just busy doing our thing, you know, you know. So to me, the result is in is is it gets back to that? Okay virginity of want what have we done in the soil with increasing soil carbon levels that must be but I don't think anybody would doubt that's a negative reactive power would doubt that.

[00:26:49] So there's a positive that we've done to sustainability of our farm is we are not only does that production seem to keep increasing. We're improving our soil. That's something we could measure even you know, the soil organic matter levels. And productivity is really high and chemical use is really low so we can say that our production is low in chemical and myself are what but right now, you know in Western Australia, you know any 40% of our barley last year was rejected was not suitable to Center China 40%.

[00:27:26] if you talk to CVH and what's going on in the wheat belt? Is this gonna be Panic Station soon? Because guess what? We don't reduce very good quality for

[00:27:35] **WICC:** [00:27:35] our you heard a lot of speaking on it recently and they even listen to the news at all her.

[00:27:40] **Stephen:** [00:27:40] Yeah

[00:27:42] **WICC:** [00:27:42] anyway, so she's stuck her neck out and losing all the Stephens been in her ear until the green at the time was good.

[00:27:48] That's Stephen talking because she goes and she actually brought that exactly up. She did with some wasn't saying stop using it and it's it's she wasn't hitting that side. She was saying we're doing ourselves out of Mark. Absolutely, and she played that commercial side and she got absolutely attacked by the farmers.

[00:28:04] I know because there is no you can't stop using it. We she doesn't know farming. She should be representing us and it's like she is she's trying to tell you you're going to lose markets.

[00:28:12] **Stephen:** [00:28:12] Well, the reality is got shot saving say VI true pulling their hair because they Market the sign we don't want that and they're going out.

[00:28:22] Okay, it's this other Farmers this year who are doing, you know, they have to give us a sprayable. Save me I just wanna say this Bridle. All right, so that's the change is the markets going to change the consumer is going to change it. So what are the West Australian farmers do they go and Lobby the government to Lobby the Chinese government to lift their in in our every levels which is their chemical residual levels.

[00:28:46] So they want China and Vietnam and Japan and Europe to change their nrm. There was because our Farmers aren't prepared to. Yeah to look at so how stupid is that?

[00:28:58] **WICC:** [00:28:58] It's not walk in marketing and business perception, as you know is reality. So whether they've proved that it's carcinogenic or not. The fact that there's a belief means you have to actually play to that and work to that so that all evidence aside It's like because they keep going off a lot of sperm prison said, 'The rally because there's a perception out there that it's not so you can almost abandon the whole argument whether its carcinogenic or not because people are believing that.

[00:29:24] So you actually have to work to that because that if you want it that market and maintain that market that's kind of the Cornerstone of

[00:29:31] **Stephen:** [00:29:31] already started doing some of the research and the best research are sort of Lifeforce itís such a good Falafel say with a bunch of German scientists that reviewed all the glyphosate health research in the world.

[00:29:43] It was it was probably an 80-page document half of his references. And the glyphosate was registered first registered. Say if you can look at the first title registration for classes sideways antibiotic, and that's metal. She later. That's how it kills plants and she likes Metals takes manganese out of the system and stuff.

[00:30:02] So that's why plants die slowly now glyphosate was the richest antibody. Most of the reports are about gut biology and office. And then now they're understanding that got Balaji is so important to health to brain to all these functions in the body there now looking and that's that's something that's coming through the medical industry big time.

[00:30:22] So so getting back to the soil, you know, we've got to treat the soils, you know In Darwin's, you know, it's the what decide the god of the earth is the soil. so we just got to treat the soil is a living. Just thinking it's just a thinking thing prizes. So if we go out and put four tons a lime on we've got to think of the negative consequences of that if you're going to shove a fungicide down and I'm not saying that sometimes you won't because I'm not we're not like that.

[00:30:56] If we think we need to we will even though we never have and fungicide insecticide would be the last thing that we you can put a fungicide in the soil. What fun is you kill? Big bunch of them. What does that do to the to that sort of that living system so that I think the success now farming is with try to promote that living system, even though we can't get our head around it really because it's quite immense.

[00:31:21] It's in its complexity,

[00:31:25] **WICC:** [00:31:25] you know, something's there, but you take a precautionary principle you guys something's there. It's working. It's magic. It's complex and I understand. Let's not a

[00:31:32] **Stephen:** [00:31:32] flip it. Yep, and and say you go. Okay. I want to use a chemical or fungicide. Well, we know the history of side effects from drugs in the medical industry.

[00:31:42] Well, there's no different to the farming industry. There's a bunch of side effects and you got and no one can deny this not because there is and so there's a bunch of side effects. So you've got to think about you know that you know that I'm what I'm going to do here. What is the side effect of that?

[00:32:00] And a lot of it you don't know so you got okay you are on caution now, but I do know if I put a lot of calcium in the soil and I and we look at calcium levels in our soil test and I add lime or Dolomite to the farm based on this calcium levels. Yeah, but I know the history of this Farm since new land.

[00:32:19] And it's had one and two one and a half tons of lime or Dolomite in its life. I'm not coming back soon. Yeah. And I know that because we know the history for new lands not like the previous owner put in 5 tons of line. Yeah, but I know that there's a negative affect the side effect of too much calcium in the soil too much liming is the trace elements and if you want to confirm that just go on MLA website is looking after Health.

[00:32:46] **WICC:** [00:32:46] Well, where is the connection know like between between a application of calcium? How is that affecting the trace elements? What's happening

[00:32:53] **Stephen:** [00:32:53] in a. Well, it's become too dominant. You know that well I'm

[00:32:57] **WICC:** [00:32:57] doing is it worse The genome out in terms of like in terms of like abundance or is it

[00:33:02] **Stephen:** [00:33:02] is

[00:33:04] **WICC:** [00:33:04] it like

[00:33:05] **Stephen:** [00:33:05] what's happening?

[00:33:05] I toss them out and I tried oxide calcium. Why do you think the water authorities involved with the egg Department during this? They want to change the PVR of the souls to stop leaching of phosphide. Yeah, right. How do you stop letting a phosphite you tied up? If you don't have biology, how do you release it?

[00:33:26] I mean the csiro talked about the Billion Dollar Bank of our phosphorus in our soul that we can't get. That's the sole bang, you know serious. I wrote as she lied to work on this, you know, so here we've got all this phosphorus tied up in our soil that we'd like to access probably the only way to access is through biology whether it's mycorrhizal fungi.

[00:33:46] That specifically seems to go for phosphate. History biology. So with the more line we put on the hot that we lift the PBI ties up more phosphorus less leaching into the waterways, which is what the water departments involved with this wise water Partners not hag.

[00:34:03] **WICC:** [00:34:03] No no this water. I mean the measured they're giving of the obviously the export of peas.

[00:34:09] I'm causing Messer problems with the histories.

[00:34:13] **Stephen:** [00:34:13] Yeah, but what happened to me? He's more end. New Zealand's all about in oleic all their problems and yet anyway,

[00:34:20] **WICC:** [00:34:20] yeah, we can obviously ends not a problem because we lose it through denitrification. You know me repeat really gets caught in that system.

[00:34:29] You know, I mean, we can't actually lose it through atmospheric processes. It is it is a bit of a bit of an issue.

[00:34:37] **Stephen:** [00:34:37] But well you start having a look at all the issue with water tables where they're monitoring nitrates in the water tables, which is a massive problem. That's in it's not me and it's going down Follett ization of urea is high in certain conditions sulfate of ammonia is next to Mill volt.

[00:34:55] So this whole bunch of different ends used in ag some of volatile some on so the ones aren't volatile like urea is volatile, but it's only volatile if it's if it's if it's not if it's done when it's raining there's less volatility. That's been issued that dollar for back, you know, if you put your ear on because it's the cheapest unit of in but if I have the highest volatility in it because it's bit fussy lot about you know bit Vicki then I'm it's an expensive form of n so that's why this work was done, but the leaching of nitrates is into the groundwater.

[00:35:33] Nitrates and groundwater have a look and Google and you'll come up this shit later research and and New Zealand is all about nitrates. Yeah, the dairy industry. Is it a high rainfall as well as because they're poor and your ear on five six seven hundred kilos a year and there it's effective effective.

[00:35:51] **WICC:** [00:35:51] Well there there there there legislated now like from soil test application.

[00:36:01] **Stephen:** [00:36:01] Sorry, we are here to not quite

[00:36:04] **WICC:** [00:36:04] there but no mean wa is obviously, you know, it's a whole thing. Yeah, I mean Australia slow and W is the slowest of the lat. Yeah, that's besides the NT but you know, it's like

[00:36:15] **Stephen:** [00:36:15] yeah, I think Wei zheng's next, isn't it now?

[00:36:18] I'd like that but we just attitude that I suppose that's what we are here. But yeah, so what wider slime well, I'm not a chemist. But I know you know excess calcium ties up magnesium manganese and there's a say that it's such a concern to MLA because they're concerned about the our stock being deficient in minerals.

[00:36:41] Is there put a fact sheet out and so pity Farmers probably didn't look more at that to why bring up the mlas because there are major major body the spends a lot of money in research. They're big, you know their Australian wide the reputable. Yet they're coming out with some information that we're not being told a you defend tile by the egg Department know that you're going to get traitors any of those farmers and I sat down with Mangrove stud, you know, they've been using the minerals and that had look at their big map and you can wash it.

[00:37:14] He said I see this areas here, which was the at most acid areas. We've got here on their map. I went sounds productive country. That's Jan and cry Williamson need a man grunts. Dad. The largest probably the largest Christ will start in the spring which is driving

[00:37:32] **WICC:** [00:37:32] anyway, so what why the obsession like I find rigor will probably get coming off track here because I won't be able to go down that road with our current funding

[00:37:45] **Stephen:** [00:37:45] Klein.

[00:37:46] **WICC:** [00:37:46] I don't mean like a yeah, I just. Yeah, you want my money but here but I can grab elements out. You know what I mean? It kind of tease things a bit more towards. Yeah awareness, but this is just a personal question for me. Why is there this massive disconnect between for example. Elana and Alban e like it's it's huge.

[00:38:11] It's almost like they don't even work for her. You know what I mean? Like they work for Monsanto or something like that and it's like it's so if you

[00:38:19] **Stephen:** [00:38:19] can do think that that's who that my dad to come works for know that is started with the egg department when in a fee-for-service, you know, when things go this is years ago.

[00:38:30] And so then most of the fee came from the big cup big companies doing research with them. So the relationships built up doesn't matter what happens you build a relationship up. I'm going to sign out when you bet you know, I know Al me did a lot of research for different chemicals pay by the chemical companies as an independent group.

[00:38:51] That was their part of their fee for service because farmers were not going to pay the ACT apartment get anything because farmers are funny, you know, they gathered bloody a department doesn't know and then. Then the next I want to see egg Department say about that program, you know, you know, so, you know there.

[00:39:06] Yeah, get up it like that. But yeah, so it's beef service, but I don't know other disconnects there. Lana's right onto it, you know, you know statistically we're a very unhealthy state. as far as health. and she linked which is the first of which is brilliant. She linked soil Health to human health.

[00:39:27] We links as a farmer sort of. To Animal Health, if you have poor soil don't expect to get healthy grass and I'm not just talking about grass is high. I'm talking about grass that's got a lot of nutrients that a lot of density to it and how that you know links to health. So she's the one who said look we got if we're already got poor soils anyway, If we're producing poor quality food.

[00:39:54] Then we're going to have a poor health outcome in there in the community, which is where we are and that's what that's why she is where she's coming from and which is really good which is which is logical so for our shape and our stop, you know, you know their health and productivity the reason we get a hundred and thirty like because she was a hundred and thirty percent lambing percentages out of Marino's and we've been averaging that sort of numbers for years.

[00:40:22] Well, The Australian average little on West Australian average is about 85% Yeah Marino. So we 20 30 40 percent above Marino average. No lambing percentages, you know, we're keeping use to eight and a half years old highly productive 50 years ago that people used to keep the user lot lot longer simply because the most productive age in shape.

[00:40:49] Which meant to be four and a half to seven and a half years old and that was the old literature was saying where most people sell them at four and a half. We're buying shape this year at four and a half year old the farmers best shape because he's kept them for that long and they four and a half years old.

[00:41:04] The only just getting into the most productive.

[00:41:07] **WICC:** [00:41:07] Is there something that you can say that would kind of sum that up that we could get on here that because what I'm hearing is is basically. Farming is not done in a lab. Basically, you know what? I mean? Like the person the pudding effectively know what I mean?

[00:41:24] Like you got better Animal Health lambing percentages and things like that this this kind of stuff can't actually be it just feels like the department of egg is kind of just going. It's very clinical lead focus without any sort of big picture and game where they're actually looking at the big picture and going to this is the result exactly

[00:41:49] **Stephen:** [00:41:49] and

[00:41:50] **WICC:** [00:41:50] trying to find some way to kind of sum that up in your words that

[00:41:55] **Stephen:** [00:41:55] were lots of I think

[00:41:56] **WICC:** [00:41:56] recommendation something that we can end with where it kind of says, we need to make a move where we start farming the land holistically with a you know what I mean?

[00:42:05] I don't know that evidence-based system or. Yeah,

[00:42:09] **Stephen:** [00:42:09] we'll look I think you know, you know in science science is about reductionism, you know to do a trial so, you know, so, you know, if you want to do a trial you have to reduce the parameters right down to do see then you can do it, you know replicant trial and you know, but he controlled and Lala.

[00:42:30] Is you can't have too many variables in? Otherwise, you just what the hell? What's that mean? So they'll do a trial on the use of three different nitrogen's for instance. How can you the trouble with with that that that type of system we've got right now is we've got a complex biological system, which we know.

[00:42:51] We have a complex plant root plant system, which we know and we have a complex. Nutritional system which we focus on minerals that a nutritional system. Well, you want to do a trial bring all those together the variables that's in the thousands. Yeah, and then and it's really difficult. So it's very excited a lot easier for scientists to focus on one thing and that's what's happened.

[00:43:14] So pH absolutely pH is influences, you know nutrient availability. High pH effects a lot of trace minerals manganese magnesium, you know the ones I've talked about. Yeah, but you know, it might be good for phosphorus. So so that's what they focus on your focus. So you start bringing biology in which is is a cloudy area because it's only really being understanding to be understood and then they realize that every time they find something that's just so much more out there makes it really hard.

[00:43:49] So it's. It's just reductionism and sort of they got to focus on a certain thing. And that's what they do. And that's why I lying this become such a big push. Yeah, so, you know, so thing is for us as Farmers is that you know, I look at production. I want to make sure we have production. How do I how do I know that our system is good for our animals will all look at lambing percentages.

[00:44:16] I'll look at our strengths of wool and I look at our productive age. So they're my three indicators to to say, how am I going as a farmer? Yeah doing what we do. Is

[00:44:28] **WICC:** [00:44:28] that it I just drink that's like 44.

[00:44:34] **Stephen:** [00:44:34] So that's how we did that as a system. So that's half my focus and I have to have somewhere I have to be able to look back and monitor how well we're doing.

[00:44:43] It's not just you know, like as I say in highly age this year. We had one padded produce 27 rolls a hectare, which is over 18 tons of Highly ejected on paddocks of a locked-off. No nitrogen application. Yeah, I know and another sort of that sort of unheard of I mean to shock the hell out of me. I had to go and measure the paddock just check the areas because I thought.

[00:45:08] I couldn't because the contractor and out and said over a hundred and fifty rolls so far on this padding because I was paying for wrapping and so

[00:45:16] **WICC:** [00:45:16] I

[00:45:17] **Stephen:** [00:45:17] stopped got them to stop rapping. You know, we started making hey, it's going to lead it. Yeah. Well, we've still got half of last year's left which is very few farmers of got much hotter left.

[00:45:26] So

[00:45:26] **WICC:** [00:45:26] let's suppose if you're if you're solely focus on ph you should probably be making batteries and not farming.

[00:45:32] **Stephen:** [00:45:32] Yeah. I think you're right. You just can't look. Yes. Listen to this call pH in the system. That's fine. But for me, it's more about the calcium in the system. You know, that's so we'll look it up Patti can do so test comprehensive soldiers.

[00:45:46] We should unlock salt and microbial test which you know, we've done and we'll and we'll get our ship that calcium there. I think could be too like, how do I know? What's too low? Well, we just look at what the labs around the straw Alia and what the recommendations from egg departments and DPI New South Wales other people we work with or get information from and say well that's you know that a sandy soil calcium level should be around this and magnesium should be around that so then I'll manage my kelp my daughter might or lime based on those levels who I actually ignore pH now, I don't even look in our all I know is this really low and there it is and all the scientists gosh.

[00:46:26] Like Angela at his again this professor at uwa from England. He was a mapping he was doing those all those you know measuring all the biology through the rural area is a farming area

[00:46:37] **WICC:** [00:46:37] is no

[00:46:39] **Stephen:** [00:46:39] micro Blitz. Oh, yeah yeah, he's been here and he's the one who said doesn't compute because we had Clover leaves like this and production doesn't compute rather than going.

[00:46:52] Wow. What are you doing here? Let's this is what we want. You got high production low ph and because I had a comprehensive soil test right now to look at he knew that was biology. He said I saw Bob to do it biology because he that's what he is a bomb just yeah, but a new wi is bit like with their department has to really stem how.

[00:47:12] Talks and what Focus equals?

[00:47:15] **WICC:** [00:47:15] Yeah, we'll go that is much much smaller scale in the exact same situation. It's like I'm you've completely converted me, but it's like hearing you don't pay me they do.

[00:47:26] **Stephen:** [00:47:26] Yeah, but I don't want any trouble here Wick and but I'm just a farmer doing something differently.

[00:47:34] And and that's what my principles are. It's a Saul's Allah. That's number one. Number one asset is a soil. Track is not an asset. I mean it's an acid but you know, I don't treat that farm machinery is the acid or the shearing shed. Everything Vienna Machinery. The Machinery is to help you. Yeah.

[00:47:51] Yeah my our asset. Yeah machine was not on the pedestal asset is the soil that's our asset. Any thinking fan would say well that's true because that's what we our livelihood is based on.

[00:48:05] **WICC:** [00:48:05] How do you talk to people this is another point because I actually easy as an example a lot when I talk to Farmers about soil PH because I kind of wear two hats when I talk to people and you know use your farm visibility example that you're going to get virtually every farmer I talk to this does is program it said you are going to get.

[00:48:28] The lime sail from Department of AG. They are wholeheartedly obsessed with lime in PH and it's going to be the cure-all and I basically kind of cavity because I know they're going to go and get brainwash of these workshops and said there are two schools of thought on this, you know what I mean?

[00:48:42] And I said if you maintain good soil biology and talk about the rhizosphere blah blah blah easier an example and I've had a lot of Growers and they say, ah, they've either tried mineral fertilizers in the past. Or they know somebody that's tried in making that transition between their sadly if you always have to call traditional now, but traditional, you know MDK acid based.

[00:49:07] The mineral nigga up immediately, you know protection, you know goes down, you know, I mean it's you know expensive, you know, and I just don't get the results and I just know I just got to put this on or I'm not seeing instant results and my thinking I'm not a farmer but you know, there's going to be a transition or a lull until everything kind of adapts and soil biology improves, but I hear that quite a bit people go out doesn't work for me.

[00:49:28] It's a you know, it's expensive and I'm not seeing the same results

[00:49:31] **Stephen:** [00:49:31] immediately. Well a lot of dairies are using the memo. And if there is no one can afford a production loss with a big the biggest wagyu Farm, you know, I'm gay they're on the minerals have been there for four years. They took their lime budget and put it into the minerals.

[00:49:50] So didn't do the line and zero corporate Farm. They don't have I don't have a year delusion. Hay production. That if you and and and we never did either but when I talk about minerals to spit like the chemicals, we have a bunch of minerals, but we also have sulfide a Polish. We also have some soluble

[00:50:10] **WICC:** [00:50:10] phosphate.

[00:50:11] **Stephen:** [00:50:11] Yeah, so it's not all about organic or it's all about just minerals. I mean, they're all minerals. But yeah now so what we're doing is we use some soluble phosphates, but we also use some guano so many soluble phosphorus. So the level of phosphates we're putting on our soil. We might have a product that's a six or seven P which is not much different to what they're doing of which two percent of that is Grano and 4% is soluble.

[00:50:40] So by Nature we putting less soluble fertilizers lost soluble phosphorus. So we'll have no Legend the phosphate because we put less iron that's pretty much while you're we have less Legend with your useless. So it's a combination. So it's a combination of the solubles and the minerals. It's like not ruling out.

[00:50:58] I'm organic and I can't use you know, soluble fertilizers. It's the combination. It's trying to be middle of the road. And so if you go into this into a program like this and say, well I put a hundred kilos of superphosphate. I'm going to do a hundred kilos of minerals and that's yes, you will take a hit for a while.

[00:51:16] But the way the way we calculate our cost per hectare, which for area Farmers should do but don't they we don't look at fertilizer as oh that's expensive that six hundred dollars a ton where single supers $400 a ton even a single service got no trace minerals or nothing, you know, it say, I don't phosphate and sulfur calcium, but we'll look at that.

[00:51:37] Let me go. What is the cost of our nutrition per hectare on the farm? Oh nutrition. What does that mean fertilizer lick blocks? Any Treme nutrition is also about intervention. So if I have to get bets out if I have to inject magnesium into the cattle if I have to get, you know, vitamin B12, which is what they're all doing.

[00:52:04] That's the cost of nutrition per hectare to your cost. Every year fertilizers part of that. So if people looked at what we do and I go yet. We're spending so much a hectare on fertilizer, but guess what? We don't buy any look blocks. We don't do this. We don't buy vitamin B12. We die by magnesium.

[00:52:23] We don't love then you add your cost per hectare and I'll chitra tape. Yeah, that's not easy to individualize of anything in farming like that you end up in trouble saying, oh I've got to cut you know, you got to look at your overall cost per hectare on a program. Not just the important one thing people won't think I'll let Blocks part of that.

[00:52:46] They'll just separate it.

[00:52:48] **WICC:** [00:52:48] Yeah,

[00:52:48] **Stephen:** [00:52:48] and I think that's part of their course it is.

[00:52:51] **WICC:** [00:52:51] No

[00:52:51] **Stephen:** [00:52:51] is we don't have

[00:52:52] **WICC:** [00:52:52] to do

[00:52:53] **Stephen:** [00:52:53] that? Yeah, he's better to get it through the food that it is through anecdote because the animal absorb better, right? Yeah.

[00:52:58] **WICC:** [00:52:58] So we've had this conversation I think at this table before about like in fisheries management, they've moved to maximum economic yield for maximum sustainable yield and farming hasn't actually made that transition.

[00:53:11] But like when you manage Fisheries, they did have a 20 years ago and it's it's about how much money is actually left in your bank account at the end of the day. And farming for is a lot slower. It almost seems to be the old the way we used to manage Fisheries was how much can we extract from this system every single year and keep extracting that a mouth that's purely was focused on and what happens is your bank balance keeps going down and down and down because you work harder to extract that.

[00:53:42] And so you have more inputs you turn through my butter Motors boats fuel crew. You work more days of the year in order to keep taking that amount what they do now and it was very clever of the federal fisheries. Did this change about 25 years ago. They got let's go maximum economic yield. How can we make you the most amount of money and Mac said you I always sits below MSY.

[00:54:06] It's always you're always taking less but by taking. Yeah, the what happens is the value goes up. The the quality goes up. You have less inputs less time, you know all less Abbas in almost seems like you're kind of taking a more of a holistic M ey approach to farming and kind of go and look at the take a step back from it all of these extra things that you're adding the patch up leaking Dyke

[00:54:29] **Stephen:** [00:54:29] setting look.

[00:54:30] It's about proactive Farming versus. Reactive farming and because we are nicer job that most most funny is reactive. Oh shit. I've got a problem. I got this I got there and you're out there with either chemicals or whatever. Where is it? Proactive farming? And that's what's come about a not we didn't we didn't start in this we didn't start this thinking about proactive is you know, this is what we are.

[00:55:02] This is what's. So we're proactive and I'll give you an academical sense our proactive. We have to treat the the the we don't have to use because we're sharing but the Lambs for flies and women using a product called vetericyn. We don't know it could be very nasty, but we've been using it for 4th 40 years and so in September in a September we use about 1/3 the dose that they.

[00:55:30] And it's a backliner and we just go around the bum. It's on the skin. It's not blood absorbs. I hate blood absorbed stuff, you know because it gets into your mate and fashion, and eventually they'll be testing mate. Yeah, and then they'll go hang on your your downgraded because half the markets don't want your meat anymore because it's got too much chemical that fat or in the night anyway and so on so we just do a little bit in the back is not how we be doing the services.

[00:55:57] Do we have any Fly Trouble Never? You know, we just don't have it and people God I hate shape with chasing flies and that well, that's a reactive response the proactive. So I'm just talking on a chemical system here right now. That's a proactive and I simple all you're doing is preventative, but on a farming system, you know through, you know, we we stepped out 25 years ago.

[00:56:20] I thought we're going to change our system because we're not happy with superphosphate. We think what the hell we got one mineral two or three minerals. We're doing it for donkey's years csro or on our back saying that we've got a super bank that worth billions of dollars. And what's going on, you know, this is this is Australia y-yeah.

[00:56:39] And that's when we decided to change but we also understand minerals. We knew kobol and use selenium we knew of those issues and that's why we went to the mineral life. What we didn't know is the reaction between these raw minerals not just soul face but raw many Rock minerals, but finally crashed and we use sulfates as well.

[00:56:57] You know, like we're middle the road here some sulfate minerals are process minerals, you know, like Factory processed. I will use some soluble phosphate. We're trying to get try to get the best of both worlds to make a system. That is highly productive. Fits with our goals or what we want out of the sheep now, which is our lambing percentages and you know an hour qualities about lamb and heavyweight lambs and income and all that stuff, but we're not stuffing up the dam.

[00:57:29] So we're not stuffing up the creek. So the rivers. Yeah, and by Nature, we don't you know, because we obviously get a shitload better utilisation of phosphorus and most Farms because we have such high production. We wouldn't have that production. If we didn't if we didn't have enough phosphorus, you know that soil tests and microbial tests that we're Nash Martin and I had those that was before they have I show you I'll give you a copy of those tests to take with you

[00:57:57] **WICC:** [00:57:57] the results.

[00:57:58] Yeah. You haven't seen him if you are interested. We I've actually got another. Ash has got a suite of tests, which is a suite of six different tests that we've heavily subsidized through the national landcare program to I don't know if you want to do any more testing on your farm,

[00:58:22] **Stephen:** [00:58:22] but I like ashes follicle testing.

[00:58:27] **WICC:** [00:58:27] I'll send you a link. I know you're not really in

[00:58:29] **Stephen:** [00:58:29] love done for me. I'll

[00:58:31] **WICC:** [00:58:31] get

[00:58:32] **Stephen:** [00:58:32] i'll get this in.

[00:58:33] **WICC:** [00:58:33] Yeah, I like that. Look we have to get going because I'm I've got to be up at another Farm in 35 minutes. I wanted man. Do you know Paul win how cheap all dr. Paul? He's a he's a agricultural that. You better performance on reg Road

[00:58:54] **Stephen:** [00:58:54] far away just

[00:58:55] **WICC:** [00:58:55] recently no.

[00:58:56] No, he's just moved into the catchment. He's to be in the wheat belt or something like that mazing man. He's very focused on biology as well. He's a vet. Did you say he's a vet? But he's one of these people is bit like Stephen, you know, when he's people you just get heart God, you know, like yeah, just trying to absorb it all but very very smart man

[00:59:17] **Stephen:** [00:59:17] so you can be practicing privately.

[00:59:20] **WICC:** [00:59:20] Yeah, he does. Yes,

[00:59:21] **Stephen:** [00:59:21] so note how the Barker fit

[00:59:24] **WICC:** [00:59:24] no, no, no. No, he's got his own practice. He was doing I mean he actually looks on it with regret now, but he was actually developing braids and things like that, you know and stuff and. Please look back and sees the are the ways of what's happened with capital, you know, and he says if I could do it all again, I wouldn't have done that.

[00:59:47] I want to push things back the other way, you know, we've made all these super cows and stuff like that. It's basically I'm not what we should have been doing but said that was the thinking, you know, 20 years ago and now he sees the are the ways but he's very focused on biology and. Praising the

[01:00:05] **Stephen:** [01:00:05] volume more than they than the breeding.

[01:00:07] Yeah, we've always thought that to that breedings a percentage of how well you're doing but it comes always comes back to the food doesn't matter how much great bringing you got in you haven't got great nutrition. It's going to fall down and yeah. Yeah and it'll come through the breeding to because you know, we are what we eat all

[01:00:24] **WICC:** [01:00:24] this

[01:00:26] **Stephen:** [01:00:26] may be the only way that things will change is if the.

[01:00:29] Because the export market so huge is if other countries go.

[01:00:32] **WICC:** [01:00:32] This is what these are the levels we

[01:00:34] **Stephen:** [01:00:34] accept then they might go all the way back to the start of things where the soil is to change their habits so they can export and that's why farmers of kicking up now because they think they can't do that.

[01:00:44] Yeah. She finishes.

[01:00:47] **WICC:** [01:00:47] Yeah, we probably should because I have to shove on we've got

[01:00:51] rules.