

**Chapter 1 - Select the Tiles That You Want And Make Your Own Mosaic**

**Hugo** I'm Hugo Disler from Family Secrets. We have the pleasure to be on Shane Joyce's farm at Kilkivan. Shane you were originally farming at Dukes Plain. Can you explain where Dukes Plain was and what sort of farming you did and how come you are here at Kilkivan?

**Shane Joyce:** So Dukes Plain is in the Dawson Valley four hours West of here in Southern Brigalow Region. So the history of Dukes Plain is that it was in my grandfather's time was a prickly pear lease. And then in my father's time, it came under the Brigalow Land developments scheme that we had in Queensland. So it was mandated that so much of the scrubs were cleared every year and water put in for livestock and it was all planted with introduced grass species. That all happened between about 1958 and 1965 on that property. I came back there in 1983 and by then this amazing environment that you'd never have to fertilize or do anything to - everything would just grow like crazy was showing some really interesting signs of degradation.

And I guess the question on everybody's lips was what legume do we plant or what fertilizer do we put on or how do we get this landscape going again? So I came back into that environment in 1983 with an 8 year background in permaculture from farm I had on the Sunshine Coast. So I came with a lot of questions about the conventional model of farming and came armed with some of the tools of permaculture and the way I looked at what I was doing. And I'd sit down and basically do a back-of-the-envelope sums on what everybody else was doing to redevelop this country and it never really stacked up with the economics of the beef cattle industry, which was what Dukes Plain was, it was a beef cattle property.

So then I started experimenting at doing as little as possible to try and achieve. I set out to achieve there was to have my soils in the best possible condition. So the place had a lot of regrowth from the scrubs on it. So the method of dealing with that at that time was to go in and strip rate and plough and grow cereal crops in 1989. That was a boom that boomed in the 70s in the cattle slump in that area. When I came back there 1983 was when machinery and diesel prices had gone through the roof and grain prices have gone South. So most people were actually going out of cereal cropping and going back to cattle planting back to cattle.

So I arrived there and engaged 2 share farmers to go down this this path of re clearing and growing cereal crops and then to go back to grass after we'd had 10 years of cereal cropping. I was a little bit confused because I thought that was a way of improving the country and turned out it was a way of further degrading.

That's still happening today, actually.

That's all history but in amongst doing that we cleared the areas that were obviously easy to work machinery on and grow cereal crops. And then there was the other areas that were a little bit more difficult. So in 1983. I engaged people with a huge big bulldozer and what was called a blade plough which was a new tool for going underneath the timber regrowth with this big arrow shaped blade that actually severed all the root systems and lifted the soil and terminated a lot of the regrowth forever in one pass.

So I did some country like that and the conventional way to do it was to take everything out the leave nothing. These guys have started working. I went down to have a look at how they were going and I saw this cleared strip and I said, "I think it'd be really nice if you, if you're now left a strip of trees.

So what we did in that area was we cleared 60 meters and left 20 meters of trees and that look really cool because there was still some trees left in the landscape. It suited my paradigm coming from permaculture, it was kind of a form of alley cropping in a way. But what happened there was we had no grass come back in that area we had all thistles come back and I went into panic mode because I had no feed for my cows. So I then allowed one of my share farmers to go in there and start cropping in there. And he was he was from **Jed Dowley**, so the most number of trees he'd seen were poles on the power line. He couldn't get his head around farming amongst trees.

So I kind of relented and allowed him to take every second row of trees that out and he went ahead growing crops there. The interesting thing there though as much as he complained about the trees in the paddock because I was getting a share of the crop I said, okay, we can sort this out. You can plant this area with fodder crops for my cattle and you can grow in your so I'll take my share out of this paddock.

I could not shift him out of that paddock. He said but that's my best grain growing country. So as much as he hated the trees, he did acknowledge that that was where he's getting his best results. In one year he had a millet crop in there and we had some pretty ordinary hot dry northerlies blowing and you could see the difference in the crop. One area of the paddock the guys with the blade plough had got away from me and they'd taken it all out. There was nothing left. So we did have a totally exposed area as well as protected strips and there was a difference in the crop the stuff in the open was totally stressed from the hot wind and moisture stressed. In amongst the trees It was fine doing fine. So there was clear evidence from a visual point of view there, and there was also clear evidence from this guy who hated trees acknowledging it was his best grain growing country.

Anyhow, so that was that. That was '83 and then my next dive into clearing some of the country that wasn't suitable for clearing for cropping was to come in again with a blade plough and this time I was starting to feel a little bit cheeky and a little bit half bullet proof and we actually only took out 50% of the regrowth we cleared. I think the plough was 3 meters wide, so we'd cleared 6 meters and left six meters cleared 6 meters and left 6 meters. So went right across this paddock like that and in my head was in, you know, five years' time I'll maybe come in again and take out some more trees. We put cattle in there the grass thrived in there. We put cattle in there, I had actually had adjustment cattle and I

didn't see anything of these cattle and I was starting to wonder where they'd gone to, I was so used to the cattle mobbing up around the water and sitting there for most of the day and then going out to graze at night. Curiosity got the better of me. I had to go looking for these cattle. I got on a horse. The cattle was spread right across that paddock evenly was totally different behaviour to what I was used to with the cattle on that place in the cleared paddocks. So that was an interesting sort of a thing.

But then we then got into in that paddock I did the cell grazing Grazing for Profit Workshop. I started a grazing chart and yield recording out of my paddocks. That was in '95 I think I started recording. So '88 was when we did the clearing. So seven years after the clearing. I started. Kind of getting a little bit twitchy because I was seeing bad ground under the trees and worrying about whether I needed to get on the phone and ring a contractor and take some more trees out.

Thankfully at this stage. I actually had six months of yield recording out of all the paddocks on the place over a hundred paddocks over three and a half thousand hectares. That paddock was the highest yielding paddock on the farm. So the phone went down I didn't get a contractor in. Now that paddock is still like that 50% cleared and what are we now 20, 21 years they out with records, like yield records and that paddock is still holding up. It's not the top yielding paddock on the place but that paddock is still evolving, the pasture species are continuing to change. So there's a whole lot of stuff happening but the interesting thing in those areas where we've left our regrowth our soils are in so much better condition. Our pastures have been in better condition. I've got to fess up now because we're in one in part of the deal in Queensland where we got pasture the die back and I thought that Dukes Plain would be bulletproof years of cell grazing, rotational grazing, chemical-free management, use of biodynamics - the whole deal - we did everything right, retained the timber. I thought we were going to be bulletproof and pasture dieback wouldn't affect us. It has come and given us a slap and said no, you're not immune to any of these things.

I was up there, gee I don't know when it was - six or nine months ago I was up there and I actually did some video footage and put it up on Facebook showing that where the grass was dying was where we'd cleared and there was no trees and where we had trees the grass was still fine. Then I was up there are only a couple of months ago and all the grass in the trees has all died now. But it's kind of interesting that what happens in those systems, we're not immune to things like pasture die back that may come along or extreme weather events, but what's what stands us in good stead is our whole environment is in good shape. So it is in a state that it can actually recover from any shit that goes down.

Okay. So what happened with Dukes Plains? In five and a half years ago I sold it to a coal seam gas company for environmental offsets. They came headhunting us because of the amount of regrowth timber that was on the farm and it fitted in with what they needed to get to offset what they're doing in the gas industry. I leased back from them for 5 years, but when I sold to them I then started looking - coming out of a paradigm of, I guess, a lifetime of being asset rich and cash poor. I really freaked out of the concept of having everything in cash. I joked about it. I told a lot of people after 31 years in the grazing industry I'd finally achieved CRAP which Is cash rich and asset poor.

So it was one of my priorities was actually to get back into the land again. That's what led me to Kilkivan after extreme, like a lot of searching on the internet. Top of my list was having water Dukes Plain didn't have any permanent water.

So I searched from basically Mackay to the Gold Coast close along the coastal belt because I wanted to be close to an airport. I wanted to have mobile phone coverage. But this was the only place I found apart from a farm at Bundaberg that actually had decent water on it. So that's where I've ended up. The farm at Bundaberg had sugar cane on it. It had crap soil and really steep gullies and the irrigation pump was in the Colan River and none of that kind of fitted with me. This place ticked most of the boxes. So that's why I've ended up here at Kilkivan. The farm landscape here was historically had been a dairy farm, been farmed to within an inch of its life and so all the timber, all the trees have been cleared off. So for me, it was a perfect landscape to come in and do some more rehab work. So that's where I'm at now.

**Helen Disler:** Shane, one thing you talked about was measuring your yields. What were you doing to know that things were coming up okay? Like were you doing soil?

**Shane Joyce:** Yeah. Yeah, I do. I do soil tests. This is my soil testing tool is just a basically a pocket knife, which I go and dig into the soil and dig the soil up and then I get feel the texture of it. I smell it and see what plant roots are in it. You get an instant, you get an instant outcome. The other thing that I use in soil testing is a dowsing pendulum to find out what I need to be, if I need to be adding anything and what? As far as sending soil samples to a lab I did that at Dukes Plain. In the latter years there we established that we were up around five % organic matter across that place. The district average was somewhere between zero and one so we're really lifted our soil organic matter levels with the management we're doing. But yeah, how do I know that It's going the right way with what with the management is the soil testing it with my pocket knife smelling it, feeling the texture of it, looking at the pasture species, looking at how the animals are doing and looking at the trees on the farm and the health of the trees.

So those are the probably the main - it's just basically, a lot of it is just basically observation, but also yield recording. How many grazing days are we getting and we use what's known as stock days per hectare per hundred millimetres of rain. So basically it's a measure of how effectively we're using our rainfall and how many animals were grazing for that rainfall. So on this farm when I've inspected this farm I took soil samples and sent them off to the Environmental Analysis Lab in Lismore, Southern Cross University, at Lismore and I just wanted to check that I wasn't buying something that had some really massive deficiencies that basically, I didn't want to become and start creating a silk purse out of a sow's ear. So I wanted to know that it was reasonable and could work with me rather than end up with something that was unworkable.

**Helen Disler:** You also mentioned in the report, the amount of insects and bird life and the biodiversity that came back with that too.

**Shane** Yeah, so at Dukes Plain it was an interesting property because 60% of it was sandstone

**Joyce:** ridges and gorges. So it was not agricultural land. It was kind of interesting because when the scrubs were cleared that provided a refuge for some of the wildlife as well as for the some of the nature Spirits in that land landscape, so they just everything was holed up in there as we as we got the trees back on the farm and got the farm functioning better a lot of the wildlife came out and one in particular was a King parrot. The King parrot for you'd only find them up the gorges. Eventually they ended up they were over the whole place. So they were for me was were really strong indicator species. The other indicators were the small birds, so the wrens and finches and Dukes Plain had been managed with fire prior to me being there. When I took fire out of that environment. We suddenly had all these little prickly shrubs come back that had been with regular fire that were taken out and no other habitat for a lot of those small birds. They were a good closed canopy that little small birds could get in and shelter and nest and the other thing that was really interesting there was a lot of those shrubs were a khepera species which are a host plant for butterflies. So we had an absolute explosion in the butterfly populations on that place and spiders, lots of spiders in the paddocks.

Yeah. And on this farm when I came here, I was kind of what are the bird species? I arrived here on the day of settlement. I was here within 48 Hours. I'd put out my biodynamic preparations over the whole place and I immediately started recording the bird species here. In the first 12 months. I recorded 80 species of birds on this farm. As you can see with this landscape It is largely treeless. So we're working here towards getting more and more trees in this landscape to encourage birds and early plantings are here around the house. And you see the birds coming in. A lot of the small birds coming in - a lot of the honeyeaters.

**Hugo Disler:** You mentioned something which would spook a lot of farmers which was using a pendulum and it doesn't spook me because basically we're getting our agricultural understanding, we sort of think we can control nature. But when you consider photosynthesis is actually a universal type of activity that working with a pendulum which is working with universal energies makes a lot of sense because plants are connected to the universe. We sort of think of the atmosphere only or far as the clouds go. So I was quite interested in you had to say that and I'd like you to have a bit of a comment on that to bring that into the reality of nature rather than being some, you know, something else other than how nature works.

**Shane Joyce:** Yeah, okay. So working with a dowsing pendulum is an interesting.....