Fiona Dempster

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**SPEAKERS**

Oli Le Lievre, Fiona Dempster

**Oli Le Lievre** 00:09

This series is a GRDC investment that takes you behind the scenes as we sit down with some of the people shaping our grain industry, uncovering their journeys, learning more about their passions and the projects that are part of their everyday. We are over in Western Australia. This is now the third part of what has been the GRDC In Conversation Podcast. We’ve covered Southern Australia, we’ve covered the north across NSW and Qld, and now we’ve headed west to meet with all sorts of growers, advisers, researchers and people involved in the Aussie grains industry. Welcome to the next series.

**Oli Le Lievre** 2:18

You Fiona, for people who aren't familiar with your day-to-day and what you're up to, are you able to just, yeah, explain to us, if we were to meet you at the coffee shop, how would you describe what you do day to day, and yeah, between the farm and obviously your professional work as well.

**Fiona Dempster** 02:34

Oh, so yeah, every day feels the same, but then very different. Yeah, so we live on a farm. It's about 20 minutes out of town, out of Mingenew here. We've got wheat, canola, lupins and some sheep. I spend most of my week, I guess, between the farm and town, we've got three kids. So that keeps me pretty busy. And I also work part-time for the University of Western Australia. I work remotely from Mingenew and you and, yeah, very, very lucky to have that working arrangement in place.

**Oli Le Lievre** 03:09

And how long have you been with the University of Western Australia for?

**Fiona Dempster** 03:13

I've been with them since 2011.

**Oli Le Lievre** 03:17

Okay.

**Fiona Dempster** 03:18

Yeah, so a long time now.

**Oli Le Lievre** 03:20

And working remote the whole time?

**Fiona Dempster** 03:22

No, no. So the first few years, I commuted, I worked mostly out of from campus, and came up to the farm every so often, and then I gradually increased the amount of time that I spent up on the farm and less time on campus. And then, particularly after I had kids. So yeah, mostly, mostly based up here on the farm.

**Oli Le Lievre** 03:44

Yeah, lovely. And for people who aren't familiar with with the area, how would you describe this region to people who are living over on the East Coast?

**Fiona Dempster**03:50

So this region is pretty typical for large scale, broad acre cropping and livestock. So predominantly sheep, not too many cattle sort of up around this way. So there's quite a mix of soil types, I suppose, like it's quite known, like the sand, most of the sand plain, it's called sand plain farming systems up here. And it's quite variable in terms of the number of different sands that you can have. So right through to from yellow sand, highly productive, through to white sand, which you probably would find at the beach. So that can be quite challenging. There's also quite a lot of heavy country, so red loams, some heavy clays, yeah. So quite, quite a mix in terms of soil type and also rainfall, I suppose would be the other one that's, yeah, sort of a medium rainfall zone right through to low rainfall the further sort of East you go, or Northeast from the coast.

**Oli Le Lievre** 04:50

And it's incredible. And I think I'm pretty lucky coming through here in September, because these amazing rolling hills, and there's just some huge areas where it's just canola as far as the eye can see. It's pretty special.

**Fiona Dempster**05:02

Yeah, there's a lot of canola up this way. Love our canola, yeah. So yeah, canola, lupins as well, quite an important part of the rotation, and lots of wheat. So yeah, those are probably, those would be the three sort of main crops for the area.

**Oli Le Lievre** 05:18

And for you, similar to me, I grew up in Sydney, but you're Perth girl originally. So how did this transition? And how did you fall into agriculture?

**Fiona Dempster**05:25

Well, I think I fell in love.

**Oli Le Lievre** 05:27

Yeah, easy way to fall.

**Fiona Dempster**05:30

It's an easy way to fall. Yeah well, I went to university and did a science degree in natural resource management, and at that time, it was quite well linked with the Agricultural Science degree. So we had a lot of joint, sort of all common, you know, units. I learned all about plants and different soil types, genetics, all of those more ag. sort of based things at university. That's where I met my husband, and he is from Mingenew from a farming background, and I guess, yeah, we fell in love and got married. And yeah, I decided that I could probably give this life a go. So yeah. it's been

**Oli Le Lievre** 06:10

It’s been alright since.

**Fiona Dempster**06:11

Yeah.

**Oli Le Lievre** 06:12

For you, so was it was agriculture an option straight afterwards, after studying natural resource management or, like, did you, I'll say, flirt with the other industries. Obviously, mining is pretty big over here to look at where your skills could be best suited.

**Fiona Dempster**06:24

Nah I went into work for the planning department after my degree. I don't know how that sort of came about, but they had a job going in environmental and coastal planning. So I went and worked in there looking at, you know, developing policies for coastal management or environmental management. So yeah, did that for a while, sort of yeah, I guess throughout my degree enjoyed more of the human sciences, or, you know, geography, like those sorts of things, more policy related aspects of science. yeah and then I suppose yeah, decided that that wasn't…government wasn't really for me, and just yeah I wanted to go back and do some more study, so I enrolled in PhD, and yeah, and did that for a while, and finished off that degree and…

**Oli Le Lievre** 07:12

What was the PhD in?

**Fiona Dempster**07:13

Oh, it was on...so at the time, when I was in working for the planning department, there was big debate happening within the community about where Perth should source its drinking water from. Because the dams are drying out, the whole, you know, climate change in the southwest had really hit Perth's water supply. And there was a lot of heated discussion around whether we should be investing in new desalination plants, which were very expensive, or perhaps whether we should look at alternative sources of drinking water, such as managed aquifer recharge using recycled wastewater. But with that, becomes a lot of sort of emotion and things for people in that well, do I actually want to drink recycled wastewater? It's been through an aquifer, and perhaps, you know, being, I don't know, purified or cleaned in some way, but it's…yeah, still, the perceptions around that were quite, quite strong. And yeah, I was quite sort of interested to look at whether, whether people could be incentivised through discounts of their water bills, to to accept, manage, like for recharge as a source of water.

**Oli Le Lievre** 08:19

Interesting. Where did it land?

**Fiona Dempster**08:21

It landed at most people could be incentivised to accept that water source, but there was a like a pretty sizable chunk of the community, about 30% that were really quite disgusted by the thought of drinking wastewater. And those people, it was really quite hard to shift them off that sort of emotional aspect of their decision-making.

**Oli Le Lievre** 08:44

Interesting and so was that…you go from like this interesting kind of environment to…was this where that human kind of psychology and human behaviour piece really piqued your interest?

**Fiona Dempster**08:56

Yes, absolutely. I was really fascinated with that whole yeah psychology around that decision on, you know, on whether to, you know, drink, you know, water or not. Like I'd…yeah, like economics, like the study of economics itself is, is really about human behaviour and how people sort of operate in in economic markets. So it absolutely has that sort of psychology, social psychology aspect to it. So, yeah, I find…found that that was a really sort of key part of the PhD, for me, was understanding more about how people think and why they make those decisions.

**Oli Le Lievre** 09:33

It’s funny, I was chatting to someone who works in recruitment recently, and they were like, we're dealing with the most volatile like product ever, where in people, they'll say they want to do one thing, and then this emotion will come into it, and all of a sudden, like what seems to be rational, normal decision making, and even what they'll tell you kind of one day becomes the complete opposite. It genuinely fascinating.

**Fiona Dempster** 09:54

Yeah.

**Oli Le Lievre**  09:55

So where did you guys close out that kind of research, and where did it take you once you handed in that PhD paper?

**Fiona Dempster**10:02

Yeah, so it took me to a Post-Op position in the university that one was working on…more sort of around the economics of prescribed burning. So looking at, was it worthwhile from an economics perspective, you know and guess, to…or where was it most worthwhile to do prescribed burning within the landscape to best protect assets within the landscape, such as property, life, native vegetation, those sorts of things. Yeah. So I had quite a few years working in that sort of natural disaster space, which was really interesting, yeah, and then sort of moved into biodiversity policy and things and…and I guess as I spent more time up at the farm and less time in Perth, I probably realised that it’s much more efficient, I think, for my research to actually start moving towards looking at more farming systems problems, because I had just this great resource of people that I could tap into to…yeah, really sort of find out, like, what, what are some of the biggest issues and challenges that are facing farmers, and how could some of, sort of my research interests, I guess, help with that? So…

**Oli Le Lievre** 11:19

What have been some of those projects and pieces that you've worked on since you've been able to come back to the farm or to the farm?

**Fiona Dempster**11:26

Yeah, so there's been a few. There's a couple that are…yeah that have been really interesting. So there was, there was one around which was on looking at herbicide resistance and the role of testing in in sort of making decisions about how to manage potentially herbicide resistant populations of weeds within within crops. And that one was quite interesting, because we met able to take sample weed samples from the paddocks, test them to assess their resistance status. So we had all that scientific sort of knowledge around what the resistance status was. And then we asked the farmers…so we didn't share that knowledge with them, and then we went and asked them, What do you think? What sort of resistance status Do you think it is? And it was really interesting then to compare what their perception was on the resistance status with what the actual test results said. And there was…mostly they got it right. They were pretty spot on. But there was a, you know, there was a group who didn't always get it right, so they either overestimated resistance status, and had therefore ruled out a heap of chemical options to try and manage that resistance so it was actually costing them more money. Or there was the group that sort of underestimated resistance status, and in, in that case, that then sort of, you know, weren't sort of managing those weeds in the way that they should be. And the real Ah-ha, sort of, Oh like, light bulb moment came when we presented those results to a workshop of, you know, setting of farmers. And we're like, so what…like why do you think that is that you had this mismatch? And they're like, oh, maybe there were some other things then, like, maybe I actually didn't spray it, you know, during the correct spraying window, or maybe I got the brew wrong or…and it was, yeah, like, a really compelling sort of piece of self-reflection. And yeah, so for me, like, I think that's where I sort of saw how you could match up some of the behavioural work and exploration with some of that scientific knowledge to really sort of get people thinking about how some of their biases or the way that they make decisions could be, you know, sort of challenged by evidence.

**Oli Le Lievre** 13:33

Yup. It's fascinating, like, and it would be such an interesting piece that you…like the two worlds that you sit in between of yeah, what the the science says, and then look at, I guess, the expertise that individuals have.

**Fiona Dempster**13:46

Yeah, absolutely. Yeah.

**Oli Le Lievre** 13:49

And as we were kind of chatting about beforehand, so that that has continued into some of the work you're doing today as well, in terms of what you're looking at, so if you like, from a personal interest perspective, is there like, one part of agriculture, or, I say, the human psychology side of things…but yeah, is there is there one part of, like, agriculture that you're just really, truly, kind of fascinated by, and just keep getting in the in the weeds for?

**Fiona Dempster**14:13

Yeah, I reckon…yeah. I think what I find really interesting is, is how farmers weigh up those different things in, in their decision making, and like, there's so many…like, if you're like, someone who's not from a farming background, or, well more so if you're someone who's never really worked in a farm business, it's such a challenging thing to really understand the complexity of those decisions that each you know farm manager is making every day. Like, there's so many things coming into it, like, there's logistics, there's agronomics, there's you know what the market's doing, there's labour management, there's all your personal things around your family obligations and things, and then there's all of your community obligations. And it's just such a complex thing to weigh them all up and then make a good decision. And I find that really interesting…is to sort of the, you know, how farmers prioritise, like logistics over, you know, profit per hectare, or crop choice, or those sorts of things. I…yeah, find that aspect of it really interesting.

**Oli Le Lievre** 15:19

And as you say in that like, it just makes me think that in order to run like a successful farming business, there's so many like, individually, there's so many areas of specialisation that farmers are becoming generalists in but also how potentially easy it is to have a blind spot pop up that you're just unaware of.

**Fiona Dempster**15:36

Oh, absolutely. You've got to be a jack of all trades, really, and you sort of spread over so many different areas of expertise, it would be easy to neglect, I think things that perhaps might, yeah, be really important in that decision. And I guess that's where advisors and HR consultants or accountants and other people get brought in…into the mix. But I mean, you still, I think it's still in your interests to have a general knowledge and appreciation for each of those things. Yeah.

**Oli Le Lievre** 16:09

Yeah. No, for sure, and just having those different people in the toolbox that you can…

**Fiona Dempster**16:15

Oh, absolutely, because I agree…like I think that you need…to be successful, I think you do need to have oversight over all of those things, but that that is hard.

**Oli Le Lievre** 16:25

Yeah. And for you, like I saw at the moment, you're working on a couple of different projects. If we park the grains industry for a second and just talk about some of the work you're doing in the livestock space, because I actually think that's probably going to be really interesting, and how that then informs and shapes some of the other work you're doing. Can you give us a bit of a bit of a run through of what the project is that you're working on in the beef industry?

**Fiona Dempster**16:46

Yeah, so the…so we're working…we've been working on this project called beef links for the last four or five years, and it's this one's specifically working with the rangelands cattle industry in WA and beef links has been quite a large program of research. It's covered off over grazing management, things like virtual fencing, low stress or reduced stress stock handling, for example. And our sort of part of the project has been more around, sort of linking those things together and trying to sort of more track animals across or through the supply chain, which runs from the north of WA down to the south, where most of the feed lots and the abattoirs are located. So yeah, it's been really interesting to try and pull together information across the supply chain. That's been quite challenging. There's, you know, different sort of data captured at various points, and there's lots of different challenges at those points as to why people do and don't collect data that might be useful in, you know, decision making. So that's, yeah, that's been a very time consuming exercise, but I feel that we're…we've certainly made a lot of improvement and really starting to get to the crunchy end, where we've got a really good set of data, and now being able to look at that and say, Well, what is, you know, what are some of those sort of performance measures in feedlots and at the abattoir in terms of the meat quality traits and, you know? And how could they be, you know, how could they be improved, say, through better genetics or better handling practices, for example. So yeah, really about being able to provide more of a sort of tangible output, I guess, to breeders…like to producers to assist them with some of those management decisions on on the stations. Yeah.

**Oli Le Lievre** 18:37

And I don't know if you can comment on it or not, but like, when you get towards the end of some of this work, do you end up finding yourself just with more questions in terms of like, how do you…like, I guess…if there's an action someone can take which is going to benefit their business and that either makes them more money or saves them money it becomes easier, but when it comes to making other people's lives in the supply chain easier or more insightful, or whatever…like, yeah, do you find as you get towards the end of these research projects, you kind of end up with more what ifs and how questions?

**Fiona Dempster**19:11

Yeah. Haha. And that's the problem, because I've only got so many days in the week, and yeah, it would be…oh, just come to the end of these projects, and oh there's just so much more that we could, we could do. And, you know, sort of taken like the last 18 months on this particular feedlot project, has…it was quite slow to start. It took a lot of effort to get, you know, all the data that we needed to be able to do some of this performance analysis. And I feel we've finally gotten there, and we're sort of at the end of the project. So, you know, now it's always in that situation of, okay, well, you know, is it worthwhile extending this? And it is like there's been so much interest from the producers and also the feedlot industry, yeah, to be able to track animals. And, you know, really, sort of provide some answers to some of those queries around why animals do or don't perform better, and what are some of the things that we can put in place at various, you know, at the station or at the feedlot to be able to assist those animals in…in really, sort of, you know, hitting the performance metrics, yeah.

**Oli Le Lievre** 20:18

And then coming back into the grains industry, you're working on a little bit of a project there as well. So how do some of those learnings and pieces come across? But also, what is the project that you're working on at the moment?

**Fiona Dempster**20:30

So the project I'm working on at the moment is RiskWise. It's a national project with lots of grower groups, CSIRO and other universities involved, and…and then, I guess the main sort of part of the project, from our team's perspective, is around understanding why and how farmers make decisions. Are they more sort of analytically based, and so evidence-based decisions? What sort of pieces of information do they use? What is the process by which they gather that information and use it in a decision? Or are they more, you know, gut feel intuition, intuition-based like using experience, or are there potentially some biases, or perhaps some rules of thumb that they might use? And it's not really to say that, yeah…there's probably a bit of a mix of both, I reckon…that's probably what we're sort of observing at the moment. So, yeah, I think it'd be quite interesting, and we're looking forward to sort of drilling into more under what circumstances or for what types of decisions is, you know, is an experience-based or intuition-based decision best, versus, say, an analytical decision.

**Oli Le Lievre** 21:41

And…how long was that project going for?

**Fiona Dempster**21:43

That's going until…I think it's going for another four years.

**Oli Le Lievre** 21:48

Oh, wow. Okay.

**Fiona Dempster**21:49

I think it's till 2027.

**Oli Le Lievre** 21:50

Yeah, okay. And as you said, that's…it's around the country, so it's…and purely on grain farmers? Or is it looking at…

**Fiona Dempster** 21:57

No, yeah. So that's…yeah, specifically for grain farmers. But, I mean recognising that many grain farmers are mixed, you know, operating mixed farming systems with livestock. So yeah, and livestock can be an important sort of part of the decision-making process. Yup.

**Oli Le Lievre** 22:14

It’s…I guess, a slightly different angle. But like, How important has it been for you? So being able to, I guess, live the lifestyle of being on the farm, but be able to continue professional career as well.

**Fiona Dempster**22:26

Oh, it's really important for me. I went through, you know, a couple of or three rounds of maternity leave, and I did get a bit stir-crazy. I just…yeah, just sort of need to use my brain in that way. Like I…yeah, for me, like just being able to be curious and really sort of dig into things and sort of speak that…yeah, it's quite important, I think, for me. So…what was the question again?

**Oli Le Lievre** 22:54

Yeah, as in, being able to, I guess, have the lifestyle, but then also being able to pursue the professional career as well and keep both alive.

**Fiona Dempster**23:03

Yeah. No, it’s really important…Like I probably…just yeah, didn't really consider not doing that. I think…I don't know. Like, Mum always worked. My grandma always worked. I don't know. Just grew up with around working women. And, yeah, I don't know…and I just yeah, I guess that's just been my role models, I suppose. And I've always…yeah, just seen that that's what you do. And…but for me, myself, and in that’s very interested in…yeah, knowing how things work and research and things, I think yeah, just a pretty firm part of who I am.

**Oli Le Lievre** 23:37

Yep. And that…the ability to work on national projects would be very exciting in being able to, as you were saying kind of earlier, like being able to work with all sorts of different stakeholders and groups from right across the country.

**Fiona Dempster**23:50

Oh, it’s amazing, like to be able…like, people are so familiar now, with online meetings and…and things and it, and it's really great to be able to connect with people across the country. Yeah, I found that really, yes, really sort of valuable, yeah, being part of that large program, yeah, just to be able to be connected with grower groups in…in the eastern states and and some of these really high quality researchers from CSIRO and the other universities that we're working with, as well as the many consultants that are part of RiskWise, everybody brings so much experience and a really unique perspective. And, yeah, so it's, it's, yeah, been a really exciting project to work on.

**Oli Le Lievre** 24:33

Yeah, I can imagine. And I think being able to live in this part of the world and be able to work on projects like that is just so cool.

**Fiona Dempster**24:39

Oh, yeah. And it, it's really beneficial, I think, as well, I just…I feel like, very lucky that I'm very connected with the on ground, you know, side of these projects, so very connected with the end user and that, which is the farmer. And to me, that really sort of, I think, keeps me grounded. It's probably sometimes not a good thing. Hahah. Like, Oh is this really going to be helpful? You know, what I'm working on right now? Like, yeah, sometimes worry about that. But yeah, I think yeah…just be really great to just be able to have that sort of, you know, ground truthing of, okay, am I on the right…like, are we on the right pathway here to be able to go and talk to friends and husbands and other farmers about what's important for them.

**Oli Le Lievre** 25:28

Oh, and I think they’re probably such, like important questions to be asking as you're working through those different research projects and what not that you are actually sense checking as as you go.

**Fiona Dempster**25:36

Oh, it's critical to do that, because you could just get very lost, you know, in the…in the space of, of a, you know, of a four year project. And so, yeah, I think that's one of the big like benefits of RiskWise, is that it is so connected in with grower groups and farmers, and what is, you know, the priorities on the ground. I think that's a real, yeah, benefit.

**Oli Le Lievre** 25:59

So…maybe one final question, and it's a little bit more to the township, but if people are thinking that they'd love to come over to Western Australia and have a bit of a look and a drive through the wheat belt, what is it about this region that, yeah, you think people should, should come and see and experience?

**Fiona Dempster**26:14

Oh, well, many things. I mean, it's um…so at the moment, there's a lot of wild flowers out at the moment. So this area is quite well known for the everlastings and orchids. This year's been a really good year for rainfall, so there's lots of flowers out and about. We're also really close to the coast, so we're very fortunate in that respect, in that we farm…probably well, where we're sitting at the moment, we're only 50 Ks from Dongara, which, yeah, has amazing beaches. Geraldton as well. But this whole coastline is, yeah, the beaches are really great, and we spend a lot of time at the beach over summer. So it's, it's, you know, a pretty great place to farm and that you can just duck over there on the weekend and really, you know, relax. And, yeah.

**Oli Le Lievre** 27:02

Yeah, it's incredible. I reckon, like it kind of…I'll say, feels like you're in the middle of, like a farming district, which we are, but then, like these most incredible coastlines are just around the corner.

**Fiona Dempster** 27:14

Yeah, yeah, it is. It's very lucky. But yeah, and they and they are really great. They're small communities, but they're very close, tight knit communities. There's a lot of good will and volunteering, and yet, people that are, you know, willing to pitch in their time to make sure that the kids have got sport to play, and, you know, we've got other activities in the town like to keep everyone entertained and a sense of purpose. So, yeah, these Wheat Belt communities are really great for that.

**Oli Le Lievre** 27:45

Yeah, fantastic. Well, Fiona, thank you so much. Is there anything else that you want to talk about before I wrap it up?

**Fiona Dempster**27:50

Oh, the only thing I probably did want to talk about…I guess we probably did touch on it a bit, but I do really feel like passionate about researchers getting out into the farming areas and actually talking to farmers and just getting a bit, you know, of that sense of what it's like to manage a farming enterprise. And it's not…there's all these great things that are coming out of the research space, but at the end of the day, it's a choice, and it's like, you know, for the farmer to make a decision on what to invest in or what to implement in their system. It's not always about what's the best performing in terms of the research sense. It just…it comes in as part of the mix and all of those things around logistics and what's happening in the markets, and what are their own sort of personal preferences, or, you know, personal sort of considerations about how these new technologies fit in with their own sort of business…so just really important things to consider, because ultimately, that's what drives…like those things also drive adoption, as well as, yeah, efficiencies and profits so…

**Oli Le Lievre** 28:55

Well…trying to remember if it was a phone call or if it was someone who I've spoken to as part of this series, but someone was saying that, like, you also really need to identify…It was a phone call, actually, I remember, but you have to identify, like, is the farmer in it for, I guess, like a business and a profit driven farmer, or could they be a lifestyle farmer? And then it's like, the influences around their decision making are really different. And that's…

**Fiona Dempster** 29:16

Oh, absolutely.

**Oli Le Lievre** 29:17

As you say at that point of, yeah, it's not just like, here the the canvas of the buckets they fit into. It's like a where it's really just a continuum, isn't it? And people at different times, depending on stage of life or whatever, can really pop up anywhere on that kind of line.

**Fiona Dempster** 29:34

Oh, yeah, absolutely. Like, those things are…yeah, really important to consider, like, yeah, particularly where, what stage? Yeah, that business is in, if it's in a growth stage or it's in a, you know, wind down stage, yeah, I think that is, yeah, really important.

**Oli Le Lievre** 29:49

Fantastic. Well, Fiona, thank you so much for taking your time and having a chat. It's been really, really cool to come and see your little pocket of the world.

**Fiona Dempster**29:58

No worries. Thanks for coming.

**Oli le Lievre** 30:00

Cheers.

**Oli Le Lievre** 30:06

Thanks for joining us for the GRDC in conversation podcast. This series is a GRDC investment that's sharing the stories of the people who are living and breathing the Aussie grains industry. Make sure you check out some of our other conversations and hit follow on your favorite podcast app to never miss an episode.30:06