Speaker 1:

Welcome to Ag Vic Talk, keeping you up to date with information from Agriculture Victoria.

Drew Radford:

Imagine farming on some of the most fragile land in the State and being able to say, after the worst rainfall figures on record a mere 25% of your 250 ml average, that you harvested a viable crop from 50% of your farm seeded area. And a further 25% was used as fodder. It's the remarkable story of Ron and Nick Hards, who farm in the Millewa at Yurara in the Northwest corner of the State and key to their success has been passionately protecting their topsoil. Ron Hards joined me in the Ag Vic talks studio and told me his journey into topsoil preservation began with switching to no till farming.

Ron Hards:

We had a fairly good long progression into no-till. We tried to reduce tillage for start with chisel ploughs and prickle chains and sowing on 14 inch spacings and that sort of thing. But only on cereals, we didn't venture into legumes at that stage, it was something that not very many people had done. We started off there probably 30 years ago, Drew doing that. We progressed through that and we did a lot of trips, with the Landcare Group, did a lot of trips through into South Australian and southern Victoria, where they were using no-till knife points and press wheels. And we started to get itchy feet, if you like, we could see how they were doing it, the reduction in bare fallows and stuff like that. It became very attractive to us.

Ron Hards:

So in about 2002, we actually changed our machinery. We thought there's no point in half doing it, we would change our machinery and make at work. At the same time, we employed an agronomist. We were sick of dust, bare fallows, erosion, and basically driving tractors. Because when you're doing a reasonable amount of tillage and bare fallows you were just finished one run and you just go back and start again. It really was extremely expensive and it wasn't getting us anywhere. So, we changed to no-till, and that of course involves boom sprays and chemicals.

Drew Radford:

So, did you see results change pretty much overnight, Ron? Was it a seasonal change or did you have to tough it out for a few seasons to start to see the benefit?

Ron Hards:

Yeah, look, we did Drew. It took a while. I think the soil's actually got to change with you. It does certainly change, become more friable. It certainly absorbs moisture better. You can see a thunderstorm goes through and there'll be water all over the stubble and within an hour so it's all gone. It's just soaks straight in and you don't have puddles in your paddock and water doesn't run like it used to. It changed the composition of the soil and certainly opened it up and it lets the moisture in right where it falls, which is a great advantage, I think.

Ron Hards:

And I'd think probably three or four years, we could see the difference. We could see the crops were improving and our control of weeds and what have you was getting better. I suppose we concentrated mainly on cereals for about seven or eight years. We had a little go at canola for three years. The inputs in this district were about the same as anywhere else, but the outputs are certainly less. So the profits weren't there with canola, so we dropped that out of the system and moved into vetch and peas and chickpeas and lentils and what have you to get the rotation a bit longer and open up our farming practices. We often do a fair bit of hay as I said.

Drew Radford:

So, in terms of the results that you are getting Ron, you've had a couple of the driest seasons ever on record. And from what I understand, you were able to harvest a viable crop from about 50% of your seeded area and further 25% was used as fodder. Could you have imagined those sorts of results 30 years ago before you changed your farming practices?

Ron Hards:

No, no Drew, I went through the 82 drought and know exactly what that sort of situation was. And I think actually the drought last year was probably worse, lower rainfall of what was in 82 when we virtually got nothing in that year, so a lot of crop didn't even come up in 1982. I think we harvest a little bit of seed off one paddock. Whereas last year it was the driest on record, as I said, and one paddock actually went 1.4 tonnes to the hectare of wheat. We did harvest some barley and some oats, but aren't even patches on the paddock. There was flats that didn't have anything on them. It was covered, but no viable crops.

Ron Hards:

And then we used a lot of the vetch and other product for fodder with the sheep. So certainly we had a little bit of drift on the paddocks, but they never actually scoured out. There was enough root matter under the vetch crop to actually hold the soil pretty well in place, even though there was some dust coming off of it, it wasn't doing any great damage to the soil. So we were pretty happy with last year and that was the biggest test we'd ever had since we started no-till.

Drew Radford:

No-till seems to be the foundation of all of this, Ron, but you seem to have some fairly firm rules about how you run the property these days to make sure that you can deal with drought. Maintaining ground covers, obviously part of that whole equation there but beyond that, you also have a fairly fixed plan. What are some of the key parts of the plan? Because I understand sowing early to deal with wind is really important, isn't it?

Ron Hards:

Yeah. I think so. Look, we sit down in January with our agronomist and do a paddock plan and that's after a visit straight after harvest. We certainly inspect all the paddocks then, but January is the main time, we do the paddock plan and endeavour to set out what we're going to do for the season with that visit. Weed populations in paddocks, count and previous crops and the rotations and so forth. And we set up a system from January through, the seasons through the year, of what we're going to sow where. In which paddocks and what the rotation is going to be.

Ron Hards:

And if you've got a plan like that, it makes it fairly easy to make snap decisions at the time when you're going through the seeding process, you know where you're going and what you're doing. And I think it helps knowing, by having that plan and trying to stick as closely as we can to it. We did change a little bit in the drought. We actually dropped two or three paddocks off altogether and didn't sow them. And starting seeding, we usually start late March with sowing vetch and fodders and just work through without too many stops. It makes it easy to run the program when you've got a plan set out.

Drew Radford:

Ron, I understand one of the other things that you've done in terms of protecting your ground cover is actually just slow down on your property in terms of vehicle speed.

Ron Hards:

Yeah, I think any form of cultivation needs to be done at a reasonably slow pace. 10 to 12 Ks seems to be an ideal speed. It doesn't shatter the soil so much and certainly with no-till knife points and press wheels, you need to be going at this speed that way you don't throw soil too far because the soil carries the chemicals with it too. And you'll end up with chemicals on top of your seed in the next row and that's something we need to avoid. So that speed is around about where we sit all the time. We've only got one pass a year with the seeder and we normally sow between the rows as well. So, I try not to interfere with last year's stubble. So your crop actually comes up and is protected between last year's stubble rows and with no-till knife points and press wheels and with guidance we've got these days, so, it makes it pretty easy to do that. And I think that that helps too.

Drew Radford:

I understand sheep are also part of your mix but it's also, I imagine a fine line in terms of how long you keep them on a paddock when things are marginal?

Ron Hards:

It is Drew, and I think that's one of the little mistakes we made last year. We left sheep in a paddock for probably only a couple of days too long, but it did make it a bit more vulnerable and we lost a little bit of soil, but in normal terms we run the sheep very conservatively over the stubble paddocks. Usually we buy in lambs in September, October and run through until Autumn the following year. So, they're not here consistently, but there is a fine line between stock and cropping and you're trying to do what we're doing and we're cropping most of the farm. You've just got to make full use of your containment areas. And that means a little bit of hand feeding in the containment areas. But I think it pays in the long run if you can containment feed for a couple of months of the year and maintain all your ground cover and your paddocks and get the crops up and moving without any haircuts with sand moving. I think you're far better off.

Drew Radford:

That requires very close monitoring then Ron, if you're talking literally a couple of days, the difference between damage to the top soil and getting the sheep off?

Ron Hards:

Well, it was Drew. There was actually some quite good feed on a couple of sand rises and the sheep insisted on staying down in the flats where obviously the feed was sweeter. And I thought, I'll just give them a couple more days and they'll clean those rises up, get the seeds off and so forth, but they didn't. They decided where they want to go, I can't make them go where they don't. And yeah, so it was a mistake. But it was a mistake you learn by.

Drew Radford:

Ron in terms of weed control, as part of your plan, how does that work?

Ron Hards:

Look it's very important. That's probably one of the main things with the rotations Drew is to maintain your weed control. Grasses are a curse right throughout any cropping area. And if you can keep those grasses under control in your legume phases, and sometimes we might run two legumes in a row, peas and vetch or, peas and lentils or whatever, however we do it to get two grass control phases in your legume crops before you get back into cereals. At the moment, we've got a couple of paddocks that are under a four year break. So we'll have peas and then we might follow those with vetch and possibly then, you might go to another, even two vetch crops in a row and then an oat and hay crop that you can spray out before you cut it and get the weeds in. So, you get your four year break in that way.

Ron Hards:

So it's a fairly intensive system and monitoring is a big thing. We probably monitor weeds in paddocks three or four times a year and make sure that we know what we've got and it doesn't take very much grass in one year if you let it seed and let it go through and do another crop. It's very quick to take over and so you've got to watch it very closely and make sure you've got it under control.

Drew Radford:

Ron, you touched on rotations a bit, but how important has it been in terms of getting nitrogen levels up since turning to no-till farming?

Ron Hards:

Yeah, it just an added benefit though I think from no till where all the legumes you put in a really good dose of natural nitrogen into the soil and you can certainly see the benefits in the following crops especially when you go back to cereals. You know I think its invaluable the fact you can do that absolutely free, just transitioning nitrogen from the air into the soil. It is great.

Drew Radford:

Your move to no-till and preserving your topsoil has been a big learning curve, who has helped you in that process?

Ron Hards:

There has been several things as I said earlier, we did a lot of trips into South Australia with the Landcare groups looking at what farmers were doing in other places. But, in the last twenty years there has been a huge amount of research gone on in the Mallee. Mallee Sustainable Farming with the three states involved, South Australia, Victoria and New South Wales has been extremely important, not only their research, but their extension that we can see what we need to do. And also with the help from the Department of Ag in Victoria and the CSIRO have been extremely important as well. I think these three organisations certainly need some accolades for getting us to where we have got.

Drew Radford:

Ron, you talk of losing topsoil is not only damaging for your productivity, but also for your own wellbeing. What do you mean by that?

Ron Hards:

Oh, look, there's nothing worse than sitting inside or in the shed on a windy day and watch your paddocks go past. It's pretty distressing. I think the last year where we've seen dust storms go through the Mallee, particularly in our area here in the Millewa and Mildura was getting pretty fed up with it actually. Because normally your strongest winds are from the South and South West and in the West and they're right in line for it. So, Mildura was blacked out a couple of days. Doesn't do your image much good when you go to town next time, tell them where you come from. So, I think, we owe it to everybody to make sure that we try and keep things where they are and you can't grow crops on soil if it's gone. I think that's the most important, most valuable asset that you've got is your soil and the top 10 cm is probably the most important part of your farm and if it blows away, well, you start from scratch again and it takes a long time to get that country back, if ever, if you take that top soil off.

Drew Radford:

Ron, it sounds like you're doing a fabulous job with you and your son, Nick, keeping your topsoil in place. Thank you ever so much for joining me in the AgVic Talk studio.

Ron Hards:

Thanks Drew, appreciate your time.

Speaker 1:

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Speaker 1:

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