

**AN INTERVIEW CONDUCTED BY BERNARD O'NEIL WITH MR BOB FAWCETT OF KLEMZIG, SOUTH AUSTRALIA ON THE 14<sup>TH</sup> OF DECEMBER 2004 FOR THE PROJECT ON THE HISTORY OF THE DEPARTMENT OF AGRICULTURE IN SOUTH AUSTRALIA.**

[Square brackets include comments and corrections provided by Mr Fawcett in April 2007]

**Tape 1, Side A**

[0.25] Bob, thanks very much for agreeing to be involved in the project. I'd like to record a little bit of your reminiscences of your time in the Department and also a bit of your own career over time, working in the agricultural field, so perhaps I'll just throw it open to you and set the ball rolling a little bit of a personal story perhaps.

I had grown up at Kapunda and then went to the Kapunda primary and high schools. We had a small farm up there for several years before I went to Roseworthy and graduated in agriculture in 1948.

So you were born in Kapunda?

Born in Kapunda, yes.

The year?

That was in October 1927.

Schooling in Kapunda and then went to Roseworthy?

Yes, that's right, yes.

Were you living at Kapunda itself? On a property?

Living outside, about 3 miles (5 km) outside, just a small farm about 50 acres (20 ha) or so. These days you'd call it a hobby farm probably. However, it was good to be on. We had access to [electric power]... There was one farmer up the road [who] was quite a mentor in a way – introduced me to botany. He was keen on wild flowers. He was ahead of his time for germinating native shrubs and trees [from seed] and growing them [on his farm]. Also, he knew where all the wildflower spots [in the district] were and he was quite a good ... [This] sort of information led me into botany in one sense and plants generally, so that was good.

Bob, how was that connection established?

He was a [close] neighbour, [only] a couple of miles up the track.

And you were just a young lad interested in amateur ...

Yes. In those days farmers helped each other as appropriate and we would see George [Hazel] at ... so that was him.

So you grew up on a farm, had schooling in the town ...

That's right, yes, [school in Kapunda]. Rode the pushbike; at one stage a horse would ..., but mostly pushbike, yes.

Were you interested in following in your father's footsteps?

The farm was too small to take over so it'd be a case of interested ... Well it worked out to go for a scholarship at Roseworthy and so I was able to get a scholarship that paid about half the fees and that just helped things through. In earlier days a couple of uncles actually had been through Roseworthy too, so we had known of the organisation of course. After that, job opportunities came for technical officers at CSIRO, Primary Industry [Division] in Canberra and [I successfully] applied [for] one of those and got [one] in plant nutrition work on the Southern Tablelands. That was pretty interesting too, but the time was coming [for higher qualifications being required for positions in CSIRO.] When we first started, research officers needed to have a pass degree, but after a few years [they] needed a PhD and I felt as though I was getting into a pleasant rut and decided to take a years leave and come back to university and start on Agricultural Science. As it turned out, I missed out on two or three of the subjects and decided to give it away, but after a couple of years of CSIRO I decided, 'No, I've still got to go', so I resigned ... and came back and started with Ag. Science and pushed ahead and did an Honours years under Jim Quirk, Professor Jim Quirk.

Adelaide University?

Yes, over at [the Waite Institute] where the university campus is. Then Harold Jenkins, who is a graduate [of] and had been working at the Waite Institute, was appointed Director of the new research establishment in Narrabri, northern New South Wales and invited me to go up to be on the inaugural staff there. So we went up there. By that time I was married. Let's see. Can you stop it for a minute? ... Would've finished the Honours year in 1959 [1960] and then started in Narrabri in 1960.

[6:00] So the Ag. Science degree, was what – about '57 to '59?

Yes, with the Honours year tossed in as well. So it was starting in a completely new field really, because the Department of Agriculture had a research organisation, if you like, at Tamworth and this ... Narrabri was under the auspices of the University of Sydney so it was part of the university campus. Started with some nutritional work: there been some nutritional work done on wheat cropping and so on. The Wheat Research Institutes were concentrating on wheat production and one of the university staff, Dick Jackson, had done some fertiliser response experiments in the northwest New South Wales where Narrabri was. I completed some of that. On the black soils they were very highly fertile and so no responses there. But what became obvious was the ... cross-water relationships and also the rates of seeding. It was found out that ... While we were still learning about putting down field experiments and instead of putting some down around the plots to neaten them off, I just put the plots in and could see where the ... had gone in and ran out so the seeding rate decreased. But it was the best thing ever because I saw where the seeding rate was pretty low, the seeds grew much better and the plant survived

and this put me on the track that we needed to go and do some [rates of] seeding work. One of the farmers was going in to seed production [of new wheat varieties] and he was doing his best to get all he could out of each pound of grain. He was getting down about 6 lbs per acre of seed, as I remember it, and all tidy in that we needed to look at rates of seeding and there were double-sown headlands, that's where we had a lot of drought effects and ear tipping, which as some of the farmers were putting down to frost, they certainly got up there, but they couldn't understand why frost just went down the double-sown headlands. They realised, of course, it was just the high seeding rates and running out of water too soon, so that all led through to work with fallow as well as the lower rates of seeding, getting a response to ... for the rates of seeding, but then the ... 'What can we do to get moisture stored in the fallow period?'. It was as though relying on the summer rains, mainly, because you were in no-mans land up there for winter and summer rainfall and a whole range of getting both or neither one or the other. We got in to stubble retention work, on the early stubble retention and worked with ICI with the ... works. To do any work up there, some of the first work, was all New South Wales.

[9:30] It was very much research work?

Yes, very much so.

What had attracted you to that area as opposed to being a practical farmer after your Roseworthy days?

Because I was invited to a job up there. You needed work.

To 'go-with-the-flow'?

That's right, yes.

But did you have a keen interest in research?

Yes, yes, that's right. Yes, it has been my working life really, as it turned out. I've said to others, it's almost like having a hobby and being paid for it. (laughs) It's really good.

But no great desire to go and work on the land?

No. You need a fair bit of capital: I didn't have capital. I was getting satisfaction out of research work and working with farmers and with the district agronomists and made a point of involving them and the farmers in working out what's needed to be done. So all our research work, or most of our research work, was done on farms and with certain amounts in the research centre there was at Narrabri. This applied elsewhere too. Anyhow, that went on for about 11 years.

[11:00] Just out of interest, Bob, to round it out a bit more, what happened to the family farm? You'd been at Roseworthy and ...

When my dad, in a sense, retired, they moved into Kapunda and sold the land and bought a house in Kapunda itself, so that was it.

So your farm got taken over for a bigger property or ...?

Yes. It wasn't a living area: 50 acres (20 ha) wasn't enough. It's as simple as that. That was OK.

Was that your end of the connection with Kapunda is it?

Yes and no. It's no in the sense of getting interested in the family history and in going back there to help organise a family reunion some years ago and writing up the history of the family and they'd been pretty good from that point of view – for photographs and what have you – and had a couple of small booklets, just in relation to that. You got the titles of those when you looked up the State Library did you?

Yes, the State Library database. I was just wondering if Kapunda was going to come back into the story a bit later when ... We'll pick up when you're in New South Wales.

Yes. From a work point of view, it started really in New South Wales. But then, as I said, wheat quotas came in. It worked out I'd go to Thailand then. The University of Sydney had research work going over in the central region of Thailand and I was invited to go over there. It mightn't have been allowed the first place we would've gone, but it turned out to be a very interesting experience. We had the two boys by that time, 8 and 10 when they left to go over; they were old enough to learn a lot from the experience.

Just to clarify that probably: who was your employer at this time?

This was still the University of Sydney.

You were working for the university?

Yes, that's right, yes.

Did you work for the New South Wales Agriculture Department?

No, no.

So it's only so far the CSIRO and the university?

That's right. That was interesting, working out on farms there too. It's worked in with the research people at the research experiment centre at Chainat, it's [in the] Central Region. Again, it was an experience working out on farms; having experience with horses in earlier days, at least I was able to relate to animal-drawn implements for ploughing and so on, not that I actually drove the bullocks, but there was the option – at least I could relate to it though. We had some tillage work going on, they were there as well, as well as other research out on farms. But you had to be fairly careful because Australia doesn't really under-experiment – might be several acres or hectares but it's very small proportion of the farm. But the farmer in the central plains of Thailand, several acres, there's a high proportion of the farm. At the end of it I realised we should've built in some recompense for where these experiments didn't work too well and yields were reduced and so on. But that was in hindsight.

It's interesting that you're going overseas for this sort of ...

The opportunity opened and so we went.

You've got things like the Colombo Plan and so on, this is into the '60s?

Yes. That was part of that Colombo Plan: the University of Sydney was in charge of this particular project though, yes.

In a sense it shows an outward looking nature for the agricultural area generally.

Yes. Then the entire staff, those that wanted to, went to Sydney University for their Masters Degree in ..., had to do a project and write a thesis and when they got back, so I was doing some supervision of that work as well.

How long were you in Thailand for?

Three years. Then we came back and wondering where we'd go next. Anyhow, walked in to apply for work in the Department of Agriculture here and Allan Beare, who was the head of the Soil Conservation at that stage, interviewed me in Sydney, so was able to get work out at Northfield and continue with the tillage and the stubble retention that sort of work.

So you were coming over to South Australia, or back to South Australia?

Back to South Australia, basically.

In 19?

1975.

1975.

In late 1975.

What was the reason for coming back?

The job closed off. It was only a contract for only 3 years, so we had to look for work somewhere.

No offerings in New South Wales?

By choice, we would prefer to come back here because our respective parents, well Helen's brother was still alive and my parents were still alive, so we wanted to be closer to those, most of them, so one thing and another it worked out to come back to South Australia.

It's just that there's a very long period between your Roseworthy days and as I say 'coming back', pretty well all that time you'd been out of the State.

That's right, yes. I see it as an opportunity to get experience elsewhere and that comes in handy from time to time back here too. Yes. Whilst I was at Narrabri, because the University of Sydney was running an experiment centre, I started to work in front of the lecturers there to submit the results of the research work that I was going to do anyhow for a PhD so worked out to get that as well. [PhD, Sydney University 1968]

So 1975 you're coming to South Australia?

That's right, yes.

Now Allan Beare: is he going around interviewing people or just ...?

I'd applied for work here and it worked out to be out at Northfield in the soil conservation work. So that's how all that unfolded.

[18:40] We'll pick up on that story now. I was just wondering there when I asked about Allan, whether he'd been going around the country interviewing people and just happened to be circumstance turned up on your doorstep, so to speak.

As I remember, I'd applied and it worked out for him to get to Sydney and for me to get to Sydney, because I was still working out my contract in Canberra, so it was a convenient meeting spot.

Did you join on a full-time job, full-time basis?

Yes.

And you were going to be based at Northfield?

That's right, yes.

So we'll pick up on the story then of your work in the Department.

Yes.

You were aware of the Department of Agriculture, obviously, through your ...

Yes, yes.

... connections, but becoming a public servant?

Well, very happy there. Yes, we did start off with some nutrition work, but then saw the need for doing work on land management and tillage, stubble retention, reduced till, role of herbicides, all that sort of stuff. We started off with six experiments picking different soil types around north of Adelaide as well as out as far as Lameroo and down out the South East – better range of soil types and environment. With tillage experiments, tillage treatments and the stubble retention, we were working with Shearers at that stage too, with some of their stubble retention equipment. They built us a 3-point linkage trash worker, so we could use equipment that was something that farmers could use or could adopt.

[20:50] When you say Bob, 'We were working', had you joined an established group, or was this a new ...

No. I was working [in the Soil Conservation Branch at the Northfield Research Centre]. Reg French was involved there as well and Jeff Schultz. Certainly, a well-established group.

So you and your team going along ...

It was in soil conservation research, yes.

And the experimental work you were doing, is that something under the direction of people like Reg?  
He was to be the overall supervisor of it, yes.

So did you have to devise research programs, experimental programs?

[Yes.] I did all the work to get [individual experiments] started, that's right. We had to go for the trust funds and that sort of thing. We got a lot of help from the – I'd have to look up the figures now – but from the State Wheat Committee as well as from the Wheat Research Council, they helped us a lot. As I say, I can't remember in total – it [was] over \$1 000 000 probably by the time we finished.

Was it regarded at that stage as fairly innovative sort of work or was it ...

Other people would have to judge that. (laughs)

I was going to say, is it routine? By this stage the Department's very much into research ...

Yes.

... routine to have a whole series of experiments, say, at one time.

That was what I was used to and that's what we went and did. Yes. There's certainly research work well established. You had the research centres going and Northfield going and there was ... You know when that started? 1963, I think it was. [1964.]

About then.

Yes, so Reg was very much involved there from that stage.

You worked under Reg French's direction.

He was the overall supervisor, but he was vetting the projects going though, yes.

Under the direction of means you're out in the field a fair bit, I guess.

Yes, that's right, yes.

Did you like travelling around?

Yes. It gets a bit cold and wet at times and sheltering behind a tree when you're writing some notes. (laughs) However, it's part and parcel of the system, yes.

[23:20] The way you were describing earlier there, you weren't just working at Northfield. You were going out in to the regions.

I made a point of getting out on a farm, getting experiments on farms. Of course, it led to work with farmers and with district agronomists. They were, in most cases, involved when you were setting up, deciding what was needed from the experimental point of view. I had my inputs, but they had theirs as well. That'd been the aim to involve those that also had never been on farms and have farmers involved, some more than others. The extreme case, in a beneficial way, was working with Fred Maynard out at Lameroo, because he really was one of our research officers, in a sense. John Hannay was the district agronomist at that time. We had about 50 ha of plots

there and Fred used his own equipment, so together these plots were large enough to be able to use his commercial equipment. From an extension point of view that was really good, because the farmers could relate much more to these larger plots and the farmer actually working with it, speaking on the whole thing, than they could with the small plots. But from a research point of view, we'd just have to have smaller plots at some stage to test ideas and then work it through from there.

That needs good liaison, obviously, with the farmers ...

Yes.

Did you have to work hard at getting good relations?

Only needed to do the right thing by them and involve them. It seemed to work pretty well. But, again, working in with the district agronomist – they were helping to choose farmers as well.

[25:00] You'd come back at the time when the regionalisation process had been underway, just started to open up there. So you were going out to the regions or the regional centres and so on. There's lots of travelling involved and going out to meet people?

That's right, yes. Lot of travelling, that's right. Not so good for staff at times, when you're coming home late and all the rest of it, but that's how it goes.

Regionalisation was going when you came back as that process was underway so, in a sense, it's a bit hard to ask you how you felt about regionalisation. That was the status quo for you.

Yes. Probably points for and against. If you're working from one centre, you've got the whole picture there, and the control is from there. But there's a place for both, but it needs cooperation between both sides of the fence and because there's reasonable people there all the time and they probably see more of it in many aspects than we would've from Northfield, although travelling through the country, it depends how much you want to look at the country as you go but certainly get a good picture of what's going on as you travel ... Therefore, it's for and against, whichever way you go.

[26:25] I asked you about the liaison with farmers. You've just mentioned district agronomists. You've got liaison with the staff in these regions and so on. How did you manage that? Particularly more in the early days when you're a newcomer in the mid '70s for the next few years getting to know people in the Department.

A bit hard to remember the details, but we would've just made a point of talking it over with them and meeting up with them.

Did you arrange appointments to meet one-to-one or have meetings or seminars, conferences and so on?

Would've been probably a mixture of them all in different ways. It's a fair question. All the process was, you were happy to hear what their views were too, of course. No, certainly made a point of keeping in touch with them; with field days, of course, they were involved there to see what we were doing.

So you attended field days and ...

We organised field days. There was always experiments at field days often, when they were going.

That whole network of field days and agricultural shows and so on, you could spend a lot of time going to them.

I wasn't involved with the shows, I don't think, at all. But just as far as our experiments were concerned, we would have a field day for the group. It might've been an Ag. Bureau group or a group of farmers, but the number coming varied depending just on the interest and so on and so forth. We certainly had the farmer inspection of the plots, put it that way, yes.

You haven't talked in detail about some of the actual experiments but, somewhat on the same theme here is presenting the results of your experiments. You mentioned Ag. Bureaus and I've mentioned seminars and so on. Did you give any talks on ...?

Yes. Always talking to the Agricultural Bureaux, but then realised that we needed to really get together with CSIRO and all the rest of it to discuss research results and so on. This is where we organised in 1979, I think it was the first of the ... What did we call it? A tillage workshop. This is involving Albert Rovira, he was strongly supportive of that sort of thing, plus his staff. The whole aim was to bring together what was the going current research work so people could see. It turned out to be mainly research people that came, but it would've been for people to come from Victoria as well as district agronomists around the place and ...

So you did advertise interstate, or at least people know.

Yes. We'd be letting say the Horsham Research Institute know and how the word got around.

That was the first one and then by the time I retired in '92 it was a workshop at that stage but ...

They get a little bit thicker as time goes on, these [referring to the volumes of proceedings].

I know, that's right, yes. We kept them back to two pages and we only had 10 minutes to speak.

It was interesting to see in earlier days they used to crack a few jokes, but then the bell would ring for [time], so you'd like to use that 10 minutes pretty carefully.

Ten minutes is not enough.

The thing is that we started to get quite a lot of papers and it'd run over a couple of days. It got to that stage and just to get things through and to have some general discussion at the end we just had to keep it so that they really came through as a highlights and that was what we're looking for.

So it was a one-day session?

Sometimes two days.

In '79 ...

There was just a small set of seven or eight of us there, just around the table at Northfield and then it developed from there.

Just for the record Bob, the working papers for the first session, the first workshop on tillage rotation, ... and soil-borne diseases was March the 9th 1979, a very slim volume and the comparable volume in 1992 for March 26th and 27th was rather substantial and it got to the stage of having an ISBN. (both laugh)

After I retired, it was '97, they went to glossy pages, [my aim was to keep] the cost down to a minimum, a little bit. I've noticed they kept the logo of the tractor coming through, but ...

By the '97 volume, it's this *The Farming Systems Development 1997* and that's again in March and it's a couple of hundred pages.

I don't know whether it's still going or not, it was certainly going up to that stage anyhow.

It's one thing to do the research and the other, of course, is to get the information out and about, whether it be to your colleagues or to the farmers and so on.

The big aim of this was really to share information between colleagues (it turned out to be interstate as well) so people were aware of what current research was.

You were the convenor for the first one and you maintained that role ...

Yes, right through.

... through to '97?

No, '92 when I retired.

**[32:20] End Side A, Tape 1  
Tape 1, Side B**

[0:05] A bit of a pause there during which we had a look at some of the papers you put together and a little bit of a family history, the publications you put together as well. Perhaps if we could just pick up on that theme. We were talking before about the convenor for the meetings in '79 through to '92, just on the publications aspect. Your work in publishing the results and ...

Yes. The main aim there, with the workshop, was to give people an opportunity of reporting on what their current research fields and let other people know and to bring people from different organisations together. This worked in well with CSIRO locally and it worked out to get people interested from interstate as well. People had an opportunity to present a paper. They had to put the paper together and they were responsible for the editing and that sort of thing and had 10 minutes to do their reports. An exercise in learning how to bring out the salient points of their work without telling any jokes and there was no complaint about that. So that's how that developed.

Were they on an annual basis?

Yes. They kept going from 1979 until I retired. Then, as I was saying, there was pressure to keep them going until ...

'97 wasn't it?  
'97, yes.

I'll follow that part of it through. Was that the main series of presentations you were involved with?  
That was an annual one. The other ones were reports to farmers, and part of this to the research funds, of course, but giving reports to farmers for field days, so they had something in their hand as well.

And these were being published, published in the sense of ...  
They were just being published.

... in a Roneo, Gestetner duplicated job?  
That's right, yes. This is one that Peter King put out (he was in our section) on water repellent sands. That gives you some indication.

This one here is the Coonalpyn Study Group on Water Repellent Sands in 1978. That's back when you were Agriculture and Fisheries.

Yes, a long time ago. We didn't get around to publishing very much in the scientific journals, we were concentrating more on results that we could get out to farmers, rightly or wrongly.

But things like the *Journal of Agriculture*; did you use that as a medium?

No. But things were changing in the Department with the *Journal of Agriculture* – I can't remember what the score was down there – because that faded away after a while, didn't it?

Lapsed to my mind a little bit towards the latter period, but it was certainly going in the '70s.  
Yes.

I know some people got things published as stand-alone pamphlets and hand-outs and that sort of thing.

Yes. But I'd have to look through their list of publications and records, that'd give you an idea of what was there.

There's a bit of a list in that bibliography there for the National Landcare awards submission.  
Right, yes.

I noticed there was a lot of titles.

That's right, yes. It has to be there somewhere.

It's interesting because some people are keen to publish in the scientific, technical journals and develop their reputation that way. You were more direct hands-on with the farmers.

Yes. Points for and against, and probably we could've done a lot more publications from the scientific point of view, but didn't get the opportunity.

[5:00] It's part of the working life, but you also had work to do, work as such. It's interesting that looking at the conservation/land management submission and ...

Thirty-eight.

But you started to ... Well you had moved towards this area of conservation and improved soil.

That was the work that was really ... working on land management right from the word go with the Department.

Land management under a different name?

There were conservation land managers (the name changes) to protect the soil as well as to utilise the soil, is what it amounts to.

I guess the ethos there is to utilise the soil in the 'best' possible fashion to increase production, or better quality production, or ...

Yes. It involved the ... Can you ...

The modern term now is sustainability as the big thing to make sure the land is viable for the longer term.

This is one of the overheads that I was using for ... Let's see, you might like a bit of the background. The aim was to look at the 'whole system', if you like, but to keep in mind the saying that good research won't work on each facet, but because they weren't being done with different ones, but these are different facets, to deal with crop production and the aim, as I see it, was to make sure as a group, that everyone was collectively looking at the whole system, getting back to the economics as well, that farmers had to pay their way to get on to any of the new ... Well, had to pay their way irrespective of how they were farming.

We're looking at an overhead of the components of the land management systems. Is this something you used talking with staff and colleagues or with the farmers?

Both, yes.

Both.

Sometimes at workshops and so on. I can remember at one stage, they were just going through the different parts of it to relate, 'Yes, that's where we're fitting in and that's where they are fitting in' and so on and so forth.

It's interesting Bob, in one sense there you're training up your own troops. Were the staff people receptive to these sort of ideas of a total package on land management?

Oh ...

I suppose we're talking over 15 or so years you're there.

That's a fair question. You'd have to ask them to see how they thought of it, but they were certainly going along with general concept that you realised you needed to fit into the whole picture of things. There were interactions with other things. You can't do research or work on everything, but at least to know it does interact with other things and this is where these tillage workshops worked in well to bring in people from other disciplines. It all tied in with this, the whole picture, this is where we'd say, 'Albert Rovira's group was good with ... to see the

effects of the root diseases'. We could do things from having a look at rotations and so on, but his group were doing the research work and looking at the details and we could pull up some roots and say he was ... or take all of it, but he had all the basic information behind it all as well, which was good to be able to liaise with people like Albert's group.

[9:20] What about liaison across the Department? We start to think about, say the livestock area, or the crop people, the actual horticultural people.

No, we didn't have anything to do with the horticulture as such. We were on the field crops and if you're broadacre farming without ... We didn't really do any research work with any of the animal people. There was one stage we were working with, at Halbury, we did work with the farmers and they were there to bring sheep in, just grazing the pasture and so on. And that also of course worked out at Fred Maynard's at Lameroo where he was bringing stock in as a ... because it had the area fenced off, so he could handle it, which was a mini paddock, as it were. There was such a strength in that experiment.

[10:25] I was just wondering there whether you're working the soils area and the land management systems, you're actually in a sense working independently of people such as the livestock people, who were going to put their animals on the land.

This is true too, yes.

Did you sense that at the time that they were independent? You were all perhaps operating independently

Probably would've, but at that stage probably couldn't see how we could grow any closer. It's more probably in the extension. Fair question. We had our hands full just doing what we were doing, thanks very much.

I don't mean it unkindly, but you were concentrating on your own empire within the broader empire.

Yes, that's right. We all felt as though we had enough to deal with what facet of the system we were dealing with, and looking at it specifically from crop production.

[11:35] Were you based at Northfield throughout your time?

Yes, except right at the end before I retired and we did move out to the Waite, but ostensibly the bulk of the time was at Northfield. That worked in quite well. That's why we bought here, cause it was handy to Northfield.

Just down the road, so to speak.

Yes, that's right, yes.

The Northfield establishment – any particular recollections about working at Northfield?

It was certainly a very pleasant place to work at. The staff were a good group to work with. Somewhere along all of those question marks you had about canteens and whatever, we had a lunchroom there and it was very good. As long as the weather was OK they had lunch under the vine trees there. The seats were there and we were able to get together. I noticed once or twice

when I was having lunch in town that people seemed to go their separate ways, didn't have that grouping together that we had out at Northfield. That was just a minor instance.

It's minor in one sense, but there are two elements to the people's working lives. One is the actual work and being motivated by that. The other is the group of people you work with and the facilities you have. If you've got somewhere to liaise with people and get to know them better, perhaps that spins off to your own work.

I'm sure you're right, yes. It was certainly a good working atmosphere out there from my experience.

The actual working arrangements, working conditions, you mentioned earlier you travelled out to the regions and so on, but you were also happy to work out at Northfield. You had good facilities there?

Yes, they were adequate. Had a good lab. out there; the ... was a good one. What we needed to do in soil physics, we were able to. We would have our own laboratory work there. No, I don't think we were held back at all by any limitations there.

Did you find the Department was receptive or supportive of your need for new facilities or new equipment or keeping the laboratory up to standard?

Yes. Didn't have any troubles there. We had a lot of help from research funds as well, so that would've helped to contribute to us buying equipment as needed and so it worked in. Didn't have any hassles.

So nothing comes to mind where you felt the Department wasn't being overly supportive?

No, I can't say I did, no, no.

[14:45] My question implies you've had some comparative situation; you can look at other States or overseas, see what's being done elsewhere. What sort of liaison did you have with ... contact with Departments interstate?

Not a great deal. I'd have to think back at times. I had been to other laboratories, I certainly had been around near some of them, but this doesn't say we were going each year or anything like that. When I was working at Narrabri we were starting from scratch there; it was just a completely new set-up. Got into soils work there for soil water work, which [I] continued to look back here at chemistry side of it; we did a little bit but then it was worked in more with one of the local organisations for the Wheatgrowers Association. They had a chemistry laboratory (they were doing proteins and wheats and that sort of thing) so used that for our grain quality analysis. Needs were met in different ways and so long as we had enough to do what we needed, I was happy.

Were you one for going to conferences, nationally, interstate or ...?

Yes. We were in quite a lot of conferences, one way or the other.

So you got to meet people from other Departments?

Yes. I'd be getting work from trust funds and whatever for going to this conference or that one, within Australia but also overseas as well, so we were able to travel quite a bit.

Were you actually working with other Departments perhaps with any sort of cross work at all? It may not have applied to you personally, your region, your area rather, but ...

No, there's very little. I would have to confirm this, but I don't recall doing any collaborative work. It was more of being aware of what each other's doing and each is doing their own work within their region and so on, but their results and how they're going about it and then working out what's needed in our own patch, as it were.

[17:50] It's an interesting observation about the agriculture field generally is there is so much collaboration. Your reports here reflect that. Soil and water conservation people work with the CSIRO, working with Waite. It's interesting, there are so many different groups with an interest.

Yes. This is right, different facets of the whole system. I've mentioned CSIRO were looking at detail at ones, the disease aspect and some of the other things, that we didn't have the resources to do. But we could latch on to their results and be aware of them and interpreting their own work and so on rather than doing fieldwork as well. That was complementing what we were doing and vice versa. It wasn't as though they were actively involved in our experiments, but were interested in our results and vice versa, so we were liaising in that way.

[19:05] I know I'm putting you on the spot with a personal question, but it's appropriate to ask were there any particular projects, experiments that you got a lot of satisfaction out of, that were innovative or some good results? I'm asking, Bob, what are the key things over that time with the Department, 15–20 year ...?

Just their whole program and coming to grips with the stubble retention and the different hassles that were involved there. Work through the things. Again, looking at the whole system of say where ... seeds were coming through and incorporating what others were finding and with the rotations and this and that and the other things. I got a lot of satisfaction with doing that tillage work, but looking at the whole picture as it were.

That took some time to develop that overall ...

Yes. I noticed one of your questions here about environmental impact on one's work. I looked at the range of environmental tools of trade in a sense. The environment was putting pressures on the experiments – 'OK, you've made the most of it to see what were the effects' and so on – but it has an advantage and it has a disadvantage. OK, I wouldn't have liked it if the plots that are flooded we just had to re-sow, but even then you can get information out because that's what happens in the real world. So we are taking samples of the environment too and you just make the most of it.

Were there any particular peaks in this scene of environmentalism that you might've observed? You're talking from your Roseworthy days all the way through, rather than just with the Department, but there seems to be quite a few shifts in the story of environmentalism in that last 50 years or so.

What do you mean in that?

The fact you're developing a total land management system is an example: there's a great awareness of environmental factors.

Right.

And the level of work you're working you've got a Soil Conservation Branch. As we were saying before, it's operating independently of other groups. Now there seems to be a more integrated approach to managing the resources whether it be land or [static interference]

So your question then is?

Are there any key periods or key developments that you see in the last 50 years that impacted on your own thinking?

One of the big things is the retention of stubble or actively keeping more surface cover on. The pluses and minuses there. Then the introduction of the herbicides. Like everything, they're a bit like fire – they can be a good friend but a bad enemy. With the herbicide resistance coming in in weeds and just one of the few genetic modification of things, where they are getting herbicide resistance built into the crop now, does that crop become a weed more so in the following season if they're self sown? Any crop, in my experience, if [its seeds were] going over the header, it becomes a weed next year and if it was herbicide resistant to one herbicide or more, I just wonder what practical implications are coming through there. Got enough weeds as it is, let alone having some others. So I'm just wondering about that. But as with any system it's always in a state of flux in some respects. You feel as though you're getting to some stage, but then other issues come through that need addressing. Seems to be the way this life goes.

It's certainly not a static thing. You're dealing with land and land is changing and evolving; and you've got your human intervention, you mentioned herbicides, fertilizers.

Yes.

And the farming techniques themselves too – are they creating soil erosion or preventing?

It seemed to me at the end of the working life there, you put out the most appropriate management practice that's suitable for that particular paddock in time, as far as you can. One can't be just say, 'You do this for ever and a day'. It's different; things change. Farming's complicated enough as it is and that even makes it more so. It's easy enough to be farming from Northfield or whatever, but to be in the real world it'd be a different kettle of fish altogether.

You'd have to be reasonably pragmatic.

With any of this research work, in the final end of things, it needs to be, whatever comes out, if it's going to be of any use to any farmer, he has to be able to afford it and be able to apply it with the equipment he either has or can get within, by reasonable modification, or be justified in purchasing other equipment. A lot of these issues would have to come in from a practical point of view.

[25:25] That notion of being 'a farmer from Northfield'. Did you find that a hindrance at times? Did you get farmers that were going out to Ag. Bureau's or meetings or whatever that ...?

If we'd been doing all our work at Northfield it could've been. But, as I say, I had made a point of getting on farms with our research work, talking over the farmers during the course of the experiment as well, as much as we could beforehand, and with the district agronomist, Chris Rudd. He was a big help at one stage there – did a survey of farmers in the Mid North, different aspects. I can't remember the details, but there was a cooperation there. That sort of thing, it was certainly working for.

As a rule, would you say that the farmers were receptive to the work of the Department?

I would think so. It applies to farmers anywhere. Same over in Thailand: if they could see an idea that was in their capability of doing (capability in the sense they had the resources to do and could be worth their while), they adopted it. But otherwise they'd sit back and just think a bit more about it, to see whether it was really worth their while and ...

In that sense everyone has got a degree of vested interest.

Yes. They've got to make their money, of course, and want to be sure that if you adopt something new that it does really help them, doesn't hinder them, rather than a short or a long term for the benefit.

There's an interesting tension, we can observe: you've got something like fruit fly, for example, if you impose fruit fly controls you might upset the producers but, on the other hand, you need to have those controls to protect the interests of the producers.

Yes, that's right, yes.

It comes down to personality. Some people will say, 'You're from the government, you're here to help' and some people would say, 'You're here from the government, you're going to obstruct'.

Yes. Still dependent just how it's explained to the individuals and how much it relates, can be shown to be related to them and how it affects them positively as well as the negative sense (if it's something that needs to be corrected). Yes, depends just how you work in with people.

[27:55] So you remained with the Department for almost 20 years, or 17, 18 years there.

Yes. I retired in 1975, that's right.

'75 to '92?

It was '75 when ... No, I beg your pardon, getting fault[y]. Was '92, yes. (laughs) Something you can check out.

We pushed you a bit for that! So that's 17, 18 years. And you retired at the end of your working life or did you retire early?

No, retired at 65.

Sixty-five.

Yes.

That'd be right.

As I said before, virtually having a hobby and being paid for it, why stop? (laughs) No, I found it very rewarding sort of work.

It sounds like it was an enjoyable time. There's always some negative experiences, of course, in anyone's working life.

Oh yes.

You weren't tempted to toss it all in and move on at any stage?

No. I felt as though this was the right place for me, so stick at it with everything, whatever came, yes.

It's a satisfying working career with the Department.

Yes. Satisfying with each of the jobs I've had. Yes. Narrabri, I was up there for 11 years.

Any particular highlights about your time with the Department on a personal level or a departmental level, where you got a lot of satisfaction from, a job well done or the Department got due recognition for?

Any new highlights? When we got the Landcare Awards for the State, that was one of the things. Then there was the Banksia Award, but we had put that in as the whole section: we got it as a section for the work we were doing, which is essentially the same as what I put in for the Landcare, but [had] to modify it a bit too.

Landcare was the 'Conservation land management report 1991'?

Yes, that's right, yes.

So in a sense you might look back and see that period of time with the Department is almost leading towards this, because you're talking about your total land management and ...

Yes. It was relatively new. The Department suggested that we put in for the Landcare and it seemed a good idea so we did. Went over to Canberra for the national ones, but we didn't get a guernsey there though. However, it's alright ... was associated with that one. It certainly came in well with the work.

We haven't talked much about the individuals and people you worked with and so on and we've got Director-Generals through to directors of divisions and your actual colleagues and so on. We're just about out on this tape, so I'll put a pause on for now ...

Right.

... and that also gives us a chance to have a quick look down the list and see if there's anything we might need to ...

[31:25] **End Side B Tape 1**

## **Tape 2, Side A**

[0:05] ... Jeff had had his long-term experiment, rotational experiment, at Tarlee and that was a lot of information out of that one.

I just note this Tape 2, Side A, Bob Fawcett. We were just talking about Jeff Schultz.

He was in our section and he certainly put [in] a lot of good work with his long-term rotation experiment, plus other work that he'd been doing with Reg French and so on before I came on the scene. Technical staff: Noel Pederson certainly helped a lot from the technical side, building up equipment. Brian Dubois, he wasn't with us as long as Noel, but both he and Noel worked together in different facets. One of the things that I brought in, this is when Dave Malinda was with us as well, getting the rainfall simulator built up, which we could simulate rainfall and do research work with it, but also do demonstration work. We just had a square metre target area and also the demonstrations were just bare soil or we would put some stubble on it and just show the difference in run-off. It opened farmers eyes quite a lot just to see the storm rain, this was a ... .. just how bare soils just gave up the ghost very quickly whereas with stubble the water just kept going in. It certainly highlighted the effect of surface cover, not only to retain moisture but the red brown earth tended to seal over to get water into the soil and that was one of the critical things. Often people say with the surface mulch, it keeps the moisture in. But that's only one facet of the story. There are other things to get into the soil in the first place. With a water repellent sand, of course, it's a different kettle of fish, different soil altogether. Peter King's work with that, different tillage methods and so on. But the red brown earth tended ... it was poorly structured then it'd set hard or slake down and it'd feed water penetration or anything to protect the surface, make's all the difference.

One of the things about working in South Australia and, indeed, most of Australia is it's such a large country. You have these diverse land systems throughout. What might apply in one area doesn't necessarily apply elsewhere.

That's right, yes. Different soil, different conditions. It's a difference on the swelling black earths, northern New South Wales, they were certainly a different soil from the water repellent sands. You couldn't have any greater contrast! Bay of Biscay soil that we speak of here; the soil that swells when [it wets and shrinks when its dry]. The black earth is even worse than our soils here. We've got probably some equivalent to it, but there are different soil-water relationships there.

Therefore, Bob, for your own personal working life did you have limitations on (limitation mightn't be quite the right word), limits on your research areas, regions of the State or types of soils or did you cover the whole State?

No. Depending on what the aim of the project was. Initially, when I started off with these tillage stubble handling and so on, I did intentionally pick some brands of soil types. We were able to get the funds to be able to service those sites to say who were, looking at a range of

things to get a feel of what was going on, because that then highlighted the instance of root diseases and so on. There's so many facets in the whole scheme that you had to cope with, the farmer had to cope with, and we had to see how much we as a general research group should be addressing. We've always been keen to get out on farms where we had quite a few sites and around the region, from the dryer to the wetter and so on and so forth. It's just part and parcel. It appeals to different people in different approaches. That's been my approach – to sample the environment, within regions, as much as we can.

Was there one area or a couple areas of the State that you were more attracted to, more interested in? The South East, the Riverland, the West Coast?

No, I don't think so. They all had their interests. The far-flung ones we were attending to ..., working in the ..., just keeping in touch with reasonable people then. We were working with people over at Minnipa at one stage and then at Struan at another. But then it started to contract a bit more as we got into our own projects more and looking at things in more detail.

[6:10] We were talking there, before we got underway, that aspect we were talking about individuals you worked with. You mentioned Reg French.

Yes, well ...

Reg seems to have a very good reputation for the quality of his work.

Yes, this is right. He'd done a lot of work earlier on, before I'd come into the Department and ...

Was he your director?

He was my director, yes. Yes, that's right. His title was for the Chief of the Soil Conservation Branch, if Chief is the right word. He was the head of the branch. Jim ??? was in our group too for several years and he continued more detailed work from the stubble handling and so on, but he certainly got some good results too. I hope I'm not missing anyone else that I should be ...

Of course it changes over time.

Then we had different field assistants and other staff that were coming and going. I won't try and mention them all but we had different people coming and going. Some of them were on trust funds. At times the funds would cut out, they went elsewhere; so staff were changing. But research staff and the senior technical ones stayed pretty well. Noel was probably there all the time; ??? was for a period and so on. They each contributed very well to the whole success of that group anyhow.

So a reasonably coherent group over time?

I thought so. As I say, there are others that I haven't mentioned and I don't want to just mention the ... important they were. On the whole, things worked out pretty well. At times there were

some personal things, but generally they were resolved. There's one instance that wasn't resolved as what it might've been, but, however, we'll just leave it at that.

[8:50] You've mentioned before about the fact you're working at Northfield as more or less a discrete group. What about your relations with other people in the Department, in at head office? Did you have much to do with senior people?

Within the Soils Branch certainly had close relationships as appropriate with the branch meetings and that sort of thing. With the other Adelaide groups, not a great deal. The chemistry people, of course, some of them were in the Soils Branch anyhow. But horticulture, OK we saw them, we spoke to each other, but we weren't growing fruit trees on the pasture plots or tillage plots, so we were quite discrete there. Probably more liaison with the plant pathology people and those in the department, but then more particularly with Albert Rovira's group, because he was getting into tillage as well and looking for interactions with diseases and so on, it fitted in with what we were seeing as well.

[10:30] With a range of people, as I mentioned before, one of the reports referred to the Fisheries people who came in for three years or so. There's not much fishing out at Northfield!

No, we didn't do any fishing on our plots. (both laugh) No, they were quite a separate ... Just as the horticulturalists were quite distinct and Fisheries and dairying [are] quite distinct too.

Things like plant quarantine, animal quarantine, ...

They didn't come into our ...

Try and look at the Department as a whole, Bob. Did the Department ever get together? Did they have Departmental social days or ...?

Yes. They had their Christmas get-together and that sort of thing; also in Northfield and they had the piggeries group out there and the dairying. You've got me now, but as far as I know they would've all come in as well.

Did you have that at Northfield for the Northfield people? Anyone from head office would come out to join in or anything?

Some of them would, but I don't think the whole head office would've been, but you're getting me there a bit.

I was just looking at the totality of the Department. You've got a whole department and you've got 1000 people, maybe more ...

My impression was that we had more different people. Like groups sort of thing could've worked together more.

[12.15] Did you have any senior people, Director-General or anyone, coming to an annual inspection at Northfield, for example? If it doesn't stick in your mind, maybe it didn't happen!

Would've been coming out every so often, but there wasn't any flag flown especially for the occasion.

You didn't plan your field trips accordingly did you?  
(laughs) No, we went on our way with working.

What about someone like the Minister of Agriculture? Did the Minister come out, any of the Ministers come out, to ...?

They probably would've come out. I don't remember meeting any of them though. If it was, it would've been rather rare anyhow.

Were you interested in that political area at all?  
No.

Like through your work with ... I don't mean party politics as such.  
No.

Through your work, working conditions, the Public Service Association, anything of that type?  
I was a member of the Association, went along to whatever meetings they had and so on, but generally it seemed to be ... Didn't have [clock rings] any relevant issues anyhow.

We had a pause for the chimes there, Bob, and you were just talking about, in your working life, the Public Service Association. You indicated that while you were a member of the PSA you weren't actively involved in anything.

I wasn't involved in as an officer or a delegate or anything like that.

What about professional associations? Did you like to join in with ...  
I was with the Institute of Agricultural Science. Had been Treasurer at one stage of the game.  
Actually Treasurer again in retirement as a matter of fact. (laughs)

So you were a little bit more active in that?  
Yes, that's right.

A limited number of associations that you joined?  
Yes, that's right. No, they were the only two related to work.

One of the things about professional associations, of course, is that you get that collegiality with people, colleagues and so on, and the other is that you get access to the journals, newsletters, whatever, so you're keeping up with meetings and developments, so that leads me to ask you how did you keep up with developments in the field? You indicated before you weren't a publisher of articles as such.

Keeping an eye on the different publications that were coming through. Probably could've done more than I did, but with the workshops and that sort of thing, I felt as though I was keeping in touch with the current things. This is where the tillage workshop helped too, of course. The conferences, yes – I'd have to look through the list now, just what conference I went to, but again keeping in touch with what developments were interstate as well as intrastate. Keeping in touch more that way.

You get that formal process when you're going through doing a PhD and so on, there's a formal education process there, and an informal one through these networks and associations and ...

That's right.

Looking there at that almost osmosis process where you're learning all the time.

Yes. With research, getting new ideas that are coming through, new results and either they were what you expected or hoped for or they're not and 'Why is it so?'. Some things you're getting more depth and others you've just got to accept them or whatever or perhaps other research can explain what's going on. At the end of it, it's a test to work in the field.

[17:10] We seem to have covered, in passing, or in some detail, many of the aspects ...

What have I got here in front of me [on the list]? Changes and equipment. Of course, computers came in. Over my working life, I've gone from the slide rules to the Facit and other electric calculators to some of the early computers, 'you beaut' things that could [calculate sums of squares] and that's about it, into the little [calculators] that do everything, programs and all the rest of it, so big changes there.

Substantial. You can also see that on the farms themselves, the technology they use ...

Yes. Just when I retired it was getting into a pretty interesting stage with the GPS systems to be able to hear this remote sensing that you're getting monitoring yields as they're going around the paddock or this can relate them to the application of fertilizer or whatever, but that was just coming in as I was leaving. It would've been a very interesting one too.

[18:25] Those sort of things – monitoring results and so on – you've got better equipment, of course increased knowledge, you're doing your experiments, you've got all these extra tools now.

Yes. You still have to do proper plots if you want to get the yield of growth or whatever and harvest the plots for grain or so on and so forth, it's still that manual sort of stuff, but still have to do that in some shape or form, unless they've dreamt up something else for it in the meantime. (laughs)

In a sense, things like, and it relates back to your early days in Kapunda, you're seeing things like the size of farms, the properties getting bigger just to be economic.

That's right. Yes, the population has decreased a lot. At one stage they were wondering about the Wanbi Research Centre whether to keep going or not and we'd been in a working party on that and I looked at the social things there of people bemoaning the fact of decreasing population, they couldn't keep the footy team going or the schools were being closed and all those social things were coming in as reduced population. How? Why is that? In earlier days in the Murray Mallee there were umpteen railway lines. They put them on the magic figure that farms were no more than 13 miles (21 km) or whatever it was [from a railway]. In the horse-drawn days it was pretty important to see a lot of trains, but motor vehicles, of course, there are some sidings somewhere around, but not very many. Big changes there.

It was a struggle, those changes. The fundamental remains the same: agriculture is pretty basic.

They've still got to be able to relate to the environment and the soils and the markets and terms of trade and all the rest of it, that's right.

As well as being basic, it's obviously quite vital for us. (laughs)

That's right, yes. We don't eat if the farms don't work, yes.

[20:10] You've given some insights into your working life and your involvement in areas of agriculture. If we put a pause on it for now and if we think of other things down the track or things come out of the transcript process, we can follow it through.

Alright then, OK.

It's good to talk to someone who's had a hands-on and out there at Northfield for 17, 18 years.

It's been a good experience. The life, different changes, had their ups and downs, pressure on families at times, of course, with the travelling away a lot and coming in late and for the staff as well, long hours for some of the travelling, in northern New South Wales travelled fair distances there, 'a travelling circus' as they called it [truck, trailer, tractor, 3-point linkage tillage/seeding equipment for plot work], with the truck and trailer for equipment, we're taking our own equipment around to the farmers for tillage and so forth, so a fair bit of travelling involved there.

It sounds like you had good fun, overall.

Yes. You'd have to speak to the staff how they felt about it all, but they seemed to work in pretty well.

They might give me the inside story, you give me the overview! (both laugh)

Yes, no. I was pretty ... A rewarding ... is how I felt anyhow.

You had an enjoyable time and you stuck with it.

Yes.

No work experience is totally satisfactory for 100% of the time.

Yes. I was pleased with the way things went.

Thanks very much, Bob. We'll put a pause on it today and then we'll see how we go with the transcript.

It's been good. Good for the lads, my two sons: one's did an economics degree and chartered accountant who's into consulting work now on his own; and the younger one went into aviation in the Army and through to be a test pilot and did training over in England and so on and in the States, now he's just joined the Federal Parliament, the electorate of Wakefield.

A newly elected Member?

That's right.

I wondered if there was a connection.

That's right, that's our younger son.

You'd be pretty pleased?

Surprised, but he's got his wits about him. He's been a few years in the Army and was down at Edinburgh with that base there from the aviation point of view and he's had a pretty wide experience within the services as well.

I was going to ask you before about the PSA and any political interest there, so I wonder where did he get his political interest from?

Meeting a lot of politicians when he's heading up the work out there. There was good points and perhaps deficiencies too, perhaps that's the ...

You can be pleased with the way ...

Yes. With both the lads. They've worked well for what they've done and got stuck into their studies as appropriate and thought through their work pretty well.

They didn't follow your interests in the ...

Agriculture – no. Perhaps they'd seen enough for the time being. Anyway, they used to hop out to [the North West Wheat Research Centre] when I was going out there on the weekends, they hopped on the tractors just make pretend they were driving and so on. At least they had an introduction to agriculture. But hasn't hurt them at all.

That's interesting, Bob. We'll put a pause on it and we'll be back in touch with the transcript.

[23:30] **End of interview**