

Careers in Primary Industries- transcript

Coordinator Analytical Services, Sarah Morrison

Hi, I'm Sarah Morrison and I'm the Coordinator of the Analytical Services at the Wollongbar Environmental Laboratory.

What is the purpose of your role?

So my role is to oversee the laboratory process as a whole. So I look after making sure our turn around times are up to scratch, so we have to get the results out within a certain timeframe. It's also my job to look for external contracts, so go out and look for analytical work that they laboratory could do, and also to support researchers on any testing that they might need to do, so liaise with researchers about upcoming projects and make sure that we have the staff and the equipment that's going to be able to do that analysis for them.

How does your role fit in with the work of the Department of Primary Industries?

OK, so the Department of Primary Industries is always looking to be able to improve agriculture, improve crop production and improve sustainability so laboratory testing gives the backbone for a lot of the natural resources. So soil, water and plants we often need that information that analytical testing provides to be able to make smart decisions. We don't want to be over fertilising crops, we don't want to be using poor water for purposes that it's not suited to so the analytical testing it gives the answers to the questions that a lot of people are asking.

What is a typical day like in your role?

There's probably not even a typical day, they all vary a lot. Because I oversee that laboratories some days my role would be taken up with people management, other days I'll actually be in the lab analysing samples, sometimes I might be having meetings with researchers about some up and coming analysis, I might be having to organise pricing, I also compile big tenders when we are going for large projects of work. It's quite varied, I probably wouldn't have a typical day, which is nice it keeps it interesting.

What do you love about your job?

I love that I get to work with a lot of really interesting people, a lot of people in our team have really varied backgrounds, so we've got analytical chemists, we've got people who've worked with CSIRO, people who are soil scientists, then we've got fisheries on site, we've got the cattle tick program. So every day your surrounded by people with all this amazing knowledge so there's always something to learn when you come to work which is great.

What makes your job difficult?

Probably the most difficult aspect of our job is trying to explain the scientific information that our reports generate to the general public and making them understand the limitations of what the information is that we can provide. Sometimes people would not understand that we can't give them all the answers, we can only give them the answers for the testing that we do, so we can't necessarily tell you is your water 100% safe to drink? We can say yes, it's safe to drink on the things that we've tested, but there's probably a thousand things you can test for a water. So making people understand the limitations of analytical testing can be difficult.

Does creativity play a part in your role?

I think the creativity comes into it probably not so much in the scientific element because the thing with laboratory testing it all has to be really accurate and it has to be done in the same way to have repeatability. Where the creativity does come into it is the trouble shooting so if something goes wrong and you don't get the right answer and you have to work backwards and try to figure out why and quite often you will have to think outside the box as to why something's gone wrong. I do actually enjoy taking apart really expensive pieces of equipment to see what's gone wrong and then you just cross your fingers and hope that you can put it back together.

What qualifications do you need for this role?

So I've got an analytical sciences degree, so we've varied amounts of degrees in our department, through to pure chemistry, environmental science, so something definitely in the sciences.

Where did you study?

At Southern Cross University in Lismore.

What other roles have you had?

Other roles I've had have been working for a water environmental laboratory, so I really enjoyed the part of the role where we had to go out sampling a lot. So I have done a lot of Beach Watch sampling which involves getting up to waist deep in the water to take water samples of the beach and also a lot of river sampling and reticulated water systems so drinking water sampling. So that was a good job, and I have worked in the laboratory here and also the customer service angle so helping people with results and which tests to choose for the analysis that they want.

Where did you grow up?

I grew up in New Zealand, in Christchurch.

(How did you end up here?)

So I moved to the north coast to finish my university degree / go surfing.

What personal attributes are beneficial in this role?

OK, so for a laboratory role, it's really important to be meticulous and methodical. You need to be someone who is comfortable with dealing with large amounts of data, and also someone who is able to troubleshoot and think outside the box when they need to. So if things go wrong you need to be able to figure out why, so you need quite an analytical mind. And you need to be really curious, you need to be wanting to know 'why' all the time.

What advice do you have for young people who are interested in this sort of work?

I guess working in the science field, it's so broad and so if you go to university and get a science degree, it probably doesn't matter which particular stream you choose. Once you start in the workforce so many different platforms can open up to you. So for example I run the laboratories but I am also a surfer and I am really interested in the marine environment and then we run the Shark Management Strategy so I also work on that as part of the communications and stakeholder engagement for that because that's another part of my life that I am really into. So because I have got that science background I can now work in both those sections quite fluidly. So I think once you work in a department say like Primary Industries it's such a broad scope of the things that you could get into and as your career progresses and you find new things interesting you can head off in that direction, which is really great.

What impact do you see technology having in this field in the next 20 years?

OK so technology plays a huge role in what we do already, say 25 years ago most of what we do in the laboratory would have been manually done. These days 80% of it's automated and things are getting more and more automated. But you still need to have the understanding so in the laboratory field there is a thing called automated ignorance. Now that is getting a whole bunch of people who know how to just push the button and then the machine does everything and then you get a result. But that's really something that we need to avoid because you really need to understand what that instrument's doing, why and how so that if things go wrong you can fix it or if for some reason it is not working you can still do a lot of these processes manually and have that understanding. So although technology is amazing and what it does in the laboratory is it speeds things up and keeps things repeatable but you definitely need to have the understanding behind what you're doing.