BESTPRAC

Case study series – No. 2

Weather watch – giving yourself the best chance of success

Background

Susan and Ben Carn run a 10,000 hectare property just out of Quorn in the Flinders Ranges of South Australia. They primarily run Merinos (usually around 7,000) for wool and meat, but if conditions are right, putting in a crop can be quite a profitable exercise.

Whilst they can get rainfall of up to 300ml in the hills and 250ml in the plain country, it can be very unreliable and increasingly so during autumn and winter. Rainfall patterns also seem to be changing, from a predominately winter pattern to more summer rainfall.

The challenge

We all know that managing climate variability is critical to the success of any farming enterprise. The question then becomes: How do you give yourself the best chance of success? It's this question that prompted Susan Carn to look at how they make decisions on their property.

The result is a set of very easy to use tools (Weather Watch Cheat Sheet & Decision Making Matrix template) that now form the basis of their decision making, and could be applied to any farm, anywhere. The Carns use these tools throughout the year to plan and make decisions across both the sheep and cropping sides of their business.

Susan's journey

The 80s provided some very prosperous and bumper years in South Australia, however the 90s weren't as kind and Susan and Ben found themselves faced with some very difficult decisions about the future viability of their farm.

"It felt like the drought was unrelenting. We needed to understand whether what we were going through was normal or extraordinary, and how it compared to what had been seen on the property over the years.

"We bought part of the farm from Ben's uncle, and still had both Ben and his uncles' weather diaries. So we pulled them out and started to look over them. As I read through them it sparked an interest in me, but I realised that I needed to understand more about climate and weather patterns to gain a real insight into what had been recorded.

"I started doing some research and in 2001 I took part in a climate risk management course at the South Australian Research and Development Institute (SARDI).

"Although the early 2000s provided some relief, 2006 proved to be a terrible year. "Late in 2006 I attended a presentation that included a slide on the combination of the Southern Oscillation Index (SOI) and the Indian Ocean Dipole (IOD). Both of these climate drivers can have an impact on our region, particularly the IOD, and provide a good indication of whether we're likely to see rain, and when.

"I set out to find out more about the IOD and started my quest by doing internet research, where I came across a transcript written by international climate change scientists who were predicting that 2007 would be a very similar year to 2006.

"If we'd known how 2006 was going to pan out we would have made different decisions at the beginning of the year, and we definitely wouldn't have sown such a big crop. So I wanted to know if we really were facing a similar year in 2007 before we made the same costly mistake.

"Having read the views of international experts, I was keen to get an Australian perspective. I contacted Australian climate scientist, Dr Gary Meyers, and was lucky enough to meet up with him in Adelaide. I had a raft of questions for him and he was extremely helpful and supportive.   It really spurred me on.

"2006 was the last year where we didn't incorporate climate data into our decision making. We didn't get a crop due to very little winter rain and no spring rainfall to finish. That year we lost $50,000 in inputs.

Cropping results

"In 2007 we sowed a small crop and were able to harvest some of it. We knew what the year was likely to look like and we were able to manage that risk.

"2008 was similar to 2007 with another dry finish. With a promising forecast for 2009 we sowed more hectares and reaped a good crop.

By the time 2010 rolled around, Susan had developed a good understanding of what climate data she needed to look at and when.

"The consensus of forecasts for 2010 indicated above average rainfall for the second half of the year. We'd also had a dry summer and low sub-soil moisture. We've had a very wet harvest once before and it was very difficult to market the downgraded grain. We therefore decided not to go overboard

on hectares planted and decided to sow less so that we would be able to get in and harvest quickly and ensure that we had higher quality grain.

"The result was fantastic. We ended up with up to 14 bags an acre, and considering that the historic average was 7 and that over the last 10 years we'd averaged 4 bags, we were thrilled.

Sheep results

"This year we turned our attention to some important decisions about lambing. The forecasts pointed to La Niña lasting to the end of autumn, which meant that we would have abundant feed from summer through to autumn and winter might be drier, with diminishing feed. This is usually the time of year when we lamb, and if it is drier our lambing percentage drops off.

"So we made the decision to lamb earlier. Our lambing percentage jumped to over 100%, when we normally see around 80%. Next year is shaping up to be very similar, with a weak La Niña trying to form, meaning we're likely to see more rain in December and January, but possibly a drier winter. We're planning for an early lambing again next year – it really seems like a no brainer.

Using weather watch data through the year

"We now incorporate climate and weather data into our decision making process across a range of grazing and cropping decisions. We actively use this information throughout the year to help us plan, and if we need to, change our course if the weather patterns are indicating a different outlook.

"Whether you're facing a good or bad year, it's about having the information early and being able to put plans in place to manage what's ahead.

As Susan would attest to, there is a wealth of information out there and trying to make sense of it, and then understand what it means for a specific part of Australia, can be a fairly overwhelming task. However, the work done by Susan is something that producers across Australia can tap in to.

"I now know what is useful, where to go to find easy to understand information and when in the year I should be looking at different climate data. It's just become a normal part of business.

"The truth is that there is no silver bullet; you have to take each year on its merits, look at several key sources of information that use different models for predicting climate and weather patterns and make an informed decision.

"Along with commodity prices, diesel and fertilizer costs, debt levels and machinery, seasonal forecasts are an important part of the big picture.

Results money can't buy

"For all the positive benefits to our business and our bottom line that have come from incorporating climate data into our decision making process, the one thing you can't put a price on is peace of

mind. For example, knowing that there is a good chance of a prolonged dry spell allows us to get our heads around it and make plans.

"Discussions we once had about selling up and what our tipping point is just aren't a part of our conversations any more.

"We know that we are giving ourselves the best chance of success, our business has become more profitable and we are much happier.

Go to www.bestprac.info to download the:

- *Weather Websites Cheat Sheet*
- *Decision Making Matrix template*