CLIENT CASE STUDY

Best practice key to a sustainable and healthy farm system

***Megan McDowall,** Esperance, WA*

For Esperance grain growers, Megan McDowall and Ashley Reichstein, an intrinsic commitment to maintaining a healthy production system through the adoption of best practice has driven the transformation of their farm and business since they took to the helm 25 years ago.

Together with their four children, Megan and Ashley have adopted a 'modus operandi' to "try and do what we do in the best possible way with a view to the long-term.

"Built into that business model," Megan explains, "has been expanding at a manageable rate with the view that if more than one of our children want to farm, our business has the scale and capacity to be viable, expand, and grow."

This has seen the family expand their farm operation, from the "original home farm" of 1400 hectares to 8676 total hectares in the Esperance region.

Growing wheat, barley, canola, and legumes and running 1600 breeding ewes, the farm aims to be at the forefront of sustainable and innovative farming practices.

"Since before I was involved in our farm, my parents-in-law and my husband, Ash, were planting trees, and so our farm has had a tree planting program for about 40 years," Megan says.

A big turnaround from "government policy" stemming from the 1960 Esperance Lands Agreement Act which dictated that, "some land in the region was released on the proviso that it was cleared at a certain rate and put into production," Megan says by the "late 80s and early 90s, there was the realisation that we were farming in a very fragile landscape.

"It had really only been cleared for 20 years, and already there was evidence of the intrinsic salt in the landscape becoming mobile and showing up in saline patches where they weren't before."

This realisation, coupled with the inception of the National Landcare movement and the establishment of their local catchment group, saw the family embark on a tree planting program. Large elements of this over the years have been subsidised or co-funded by various Landcare programs, Megan says.

Planting four to five hectares a year on-average, on top of a "big planting" of around 180,000 trees in 2002, Megan estimates around 21 per cent of their total farm footprint is now a combination of remnant native vegetation and planted revegetation, or other conservation works to protect their "lakey, low-lying, or riparian areas".

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"We currently farm less than 80 per cent of the land we manage, so there is also a significant non-farmed area that we are custodians of," she says.

Initially planting for wind protection and shade for livestock with low species diversity, their plantings now include riparian zones along creeks and around historically saline lakes, as well as areas prone to waterlogging and salinity. While they have also changed their approach, to use exclusively native and preferably local species more suited to each specific place in the landscape.

"We are now beginning to ask ourselves; how can we work toward making those plantings reflect an actual ecosystem?

"This has seen us increase the diversity of our plantings and the height diversity, to have some high, medium, and low species in the stands. And we now have some stands we have planted that have all sorts of bird species flitting around in there, so that's really exciting."

While Megan stresses that they "aren't doing anything particularly stellar but just going about their business in the best practice way they know of," the transformation has been significant over time.

"We had some international visitors a couple of years ago, and Ash got out a 1989 aerial photograph of our original home farm. He rolled it out on the dining room table, and it was almost devoid of trees. I hadn't really realised how bare it was until he did that.

"He then showed the current satellite map on the iPad of how it looks now, and the contrast was really amazing. It is one of those things where you just plug away and do a little most years."

It is this consistent best practice approach, combined with an innovative mindset, that has seen the family adopt a number of farming practices to "make their farm and farming system as resilient as possible, to the maximum range of seasonal outcomes".

"In terms of having a productive, profitable farm; that drives all of the other things. And gives us the luxury of being able to continue to do these other things we really would really like to do."

It is this "engine room" that has seen the couple continually strive to maintain or improve soil health through controlled traffic farming, site specific soil amelioration, incorporating legumes in their five-year cropping rotation, retaining stubble and implementing a more targeted approach to their input usage.

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"Retaining stubble over time is probably one of the big elements of increasing the organic matter in our inherently very poor soils," Megan explains. "While having a deep-rooted perennial lucerne in the system has proven a significant "element of our salinity management alongside our tree planting".

In terms of fertiliser use, Megan says they use a variable rate fertiliser application. "We apply a reduced rate where we know the productivity is constrained by something else, reducing the risk of offsite losses."

The same applies with herbicides, she says, with the couple using an optical camera spot sprayer "retrofitted onto an existing sprayer" for their summer and autumn applications.

"This again makes economic sense. As well as not applying herbicides where there is potential for losses into the landscape or sitting in the soil profile and all the potential downsides of that."

In terms of general pesticide use, they "use softer, more selective pesticides where possible".

"We are playing a bit of a long game, by not using the non-selective, cheaper ones."

The district, as an early adopter of no-till, saw the family introduce this practice into their business 30 years ago. As a result, Megan says they, along with many in the area, are able to "establish a crop on very marginal moisture to a much greater degree than they were able to 25 years ago.

"Being able to achieve an establishment in the first place under marginal conditions has, I think, helped reduce the number of years where you have a very poor seasonal outcome."

But, she says, "the climate curve ball" to their business has been increasing frost incidents.

"We haven't really had to consider it before, but we have had two substantial and one lesser frost event in the last five years that have had a significant impact on our production. So that's something else we now have to consider in our risk management."

Into the future, Megan says while they feel enabled, "with a good start from my parents-in-law to farm, the way we want to farm", she feels "a bit worried about how this now looks going forward".

Citing rising land prices as the "big elephant in the room," Megan says values have risen from around $3,800 per hectare in 2009 to recently jump to around $14,000 per hectare.

"It becomes more difficult to make the case to set aside four, six, or eight hectares for non-productive purposes each year as the opportunity cost to do this has proportionately increased. This would be especially true for recently purchased land servicing a substantial loan.

"And if that puts pressure on people to farm in a less holistic way, I just worry how that looks going forward. It has to have an influence. The financial stakes are too significant.

"Every farm will have their own financial considerations and pressures to weigh up when making these decisions, so we can't claim some moral high ground because we have been able to plant lots of trees. These things are only possible when there is the financial wriggle room to prioritise some of these other things."

Megan says while she estimates 15 to 20 per cent of people would already be implementing some of these nature capital practices at their own expense in line with their personal priorities, a substantial percentage would follow if they could do it in a way that is revenue neutral or positive.

"And of course, there are many elements of best practice farming, and nature positive farming which are not mutually exclusive at all." Citing the utilisation of available technology and highly localised data to use inputs in a highly targeted way, as having both financial and ecosystem benefits.

"I think most times people baulk at doing something different because they can't see the pathway and are not sure of the consequences. So, I think if you eliminate those two hurdles and make the pathway obvious and financially viable, then you have the pull through. Many farmers also hope that their farm is an intergenerational business, so right there is the intrinsic motivation to pass the land on in a healthy state."

"I really don't think we are doing anything particularly amazing, however. There are many farmers that also aren't on schemes or aren't signed up to versions of something visible, that are also going about their business in the best practice way they know and can afford."