



Professor Mark Howden, director of the Climate Change Institute, at Australian National University, believes rural Australians have huge innovative capacity.

OPENING THE DOOR TO INNOVATION & OPPORTUNITY

By Michelle Thomas

Farmers have always had their eyes on the horizon - anticipating the weather, looking out for rain, planning ahead for the next season, the next year, the next generation.

Some people, perhaps mainly city dwellers, might have assumed that those old-fashioned country folk don't have their head around this new-fangled sustainability thing.

But it's farmers, more than almost anyone, who have been doing it all their lives.

It may not have borne the name, but what else do you call rationing your drinking water during a drought? Or putting aside enough feed for the next winter? Meeting your own needs, and dealing with your own waste, because there's no one else to do it?

"Agriculture holds such a unique position in regards to climate change," said farmer and agro-ecologist Anika Molesworth.

"The industry is one of the problems, as well as being one of the most vulnerable and exposed sectors. But it's also a key component of solving this thing."

Ms Molesworth is one of the founders of Farmers for Climate Action, and her commitment to sustainable farming,

environmental conservation and climate action has seen her garlanded with awards, from the 2015 Young Farmer of the Year to 2017 NSW Finalist for Young Australian of the Year.

She splits her life between her family's arid outback sheep station in Far Western NSW, her PhD crop trials in central NSW, and rice paddies in South-East Asia, working as a researcher in international agricultural development.

So she's in a position to know what's happening in the development of strategies to deal with a drier climate while still running a business, and what she sees makes her feel surprisingly hopeful.

"We've got some huge challenges on our hands, but I see a positive future," Ms Molesworth said.

"I'm a realist not an optimist. Even though we have these big challenges, they can be overcome. We have access to the technology, so with political will and leadership, we can do incredible things."

People in regional areas have been adapting their land and resources to develop other income streams while they wait out the drought, and many of those could be continued into the future.

"I think there's a lot to be excited about, such as farmers being able to capture

carbon in their soils, and being paid for it. They can host solar panels and wind turbines, so they won't just feed and clothe the world, they'll power it as well," she said.

Native bush foods grown and sold to growing markets, and the farming of alternative protein sources, such as insects, are also on the rise.

Professor Mark Howden shares Ms Molesworth's sense of hope.

As director of the Climate Change Institute at the Australian National University and vice chair of the Intergovernmental Panel on Climate Change, he has a big picture view of the national situation.

"I tend to be an optimistic person, so that's reflected in my opinion, which is that rural Australians have a huge amount of innovative capacities," said Mr Howden.

"Lots of challenges have been thrown at us over many years and we've overcome them, so there's a capacity to adapt."

He has a caveat though. Innovation will only occur if the threat is taken seriously and appropriate action taken.

"I hear people frame climate change as climate variability, and to me that's daft - that presumption that what's happening is an aberration that will fix itself up. It ignores the strong trend component."

"This thing doesn't go away if we don't mention it, like Voldemort. We have to turn and face it head on and recognise it for what it is, and act."

"That's not to say there's not challenges, risks and downsides, but they'll be bigger if we don't act. Then people would be poorly positioned in the future."

Ms Molesworth agrees, saying the bushfires that have swept the country this summer are a case in point.

"The fires underline the urgency of the situation, how much of a crisis it is," she said.

"So many are losing so much - the impact on the people is real, and heartbreaking."

"It's getting in the media at the moment, of course, but isn't it unfortunate that we have to come to such a crisis for people to start tuning in. Why does it have to be the death of the Darling, dust choking New Zealand, or so many hectares burnt, before people pay attention?"

"That frustrating and disappointing - the science has been there for decades predicting exactly this. We have failed to act and now see the result."

Getting on the front foot is key, and Mr Howden cites several examples of regions or companies who have responded early and reaped the rewards.

Whether it's a town like Birchip in Victoria, that has reinvented itself as a tourist destination based entirely on Australia's passion for vanilla slice, or wine growers setting up in Tasmania, creativity and an openness to new ideas are crucial.

"We remain one of the most efficient and innovative agricultural nations that I've seen," said Mr Howden.

"We've dealt with an incredibly tough environment, and dealt with it in really constructive ways."

"For example, several decades ago the Mallee was really in decline, but modern farming practices are turning it around. Using water management that retains ground cover, nowhere else in the world getting yields like ours with such little rainfall."

He also acknowledges groups such as Landcare and similar farmer organisations as unparalleled throughout the world.

There's no doubt, though, that there are plenty of naysayers, from farmers to legislators, who are dragging their feet, if not living in outright denial.

This is where responsible leadership comes in, says Mr Howden, from the scientific community as they communicate the message, from the agricultural industry as they solve the problems, and from government, as they grapple with policy.

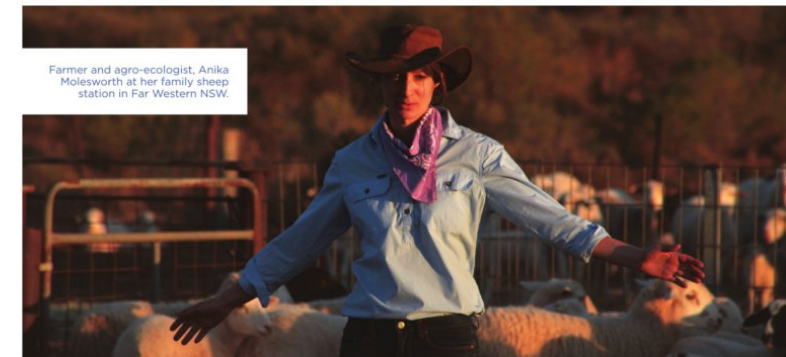
He points to groups such as Ms Molesworth's Farmers for Climate Action as very important players for the future.

"They are opening the door to have non-conflictual conversations about climate change and talk about practical solutions," he said.

"By opening that door, you have opportunities for conversations about innovations - conversations that are non-judgmental and engage people on their own terms. Then people can adapt that to their own circumstances, whatever they believe about climate change."

Ms Molesworth adds that the people of regional Australia need to continue to push for change to policies that affect the land they rely on.

"It's happening here in Australia now - what we produce, where we produce it. We just have to look out the kitchen window to see the impact on our land, on our wallet, on our families," she said, issuing a final challenge to government: "If you are an elected representative who stands for rural Australia then you need to show leadership. A lot of conservative MPs say they're representing rural Australia and they're just not."



Farmer and agro-ecologist, Anika Molesworth at her family sheep station in Far Western NSW.



The Blue-E cattle have been bred to maximise feed conversion, eating less and gaining the same weight.

Having our meat without a side order of emissions

BY MICHELLE THOMAS

There's a farm in Cowra where the cows are blue.

It's not something out of a children's story book (and to be honest, they're more of a blue-black).

This is a line of cattle - known as Blue-E - that have been bred to maximise feed conversion, eating less and gaining the same, and the colour is just a nice side effect of breeding an Angus Shorthorn cross.

Feed efficiency has obvious economic benefits, but according to Jon Wright of Coota Park, the family cattle stud that has been working on the Blue-E strain for almost 20 years, it has environmental implications as well.

Less feed equals less greenhouse emissions, which means consumers may be able to have their meat and eat it too.

"The beef industry emissions are the

same as the whole transport industry in Australia," he said.

"People need to eat less meat, and producers will have to change so the product has less emissions per kilogram."

This is a startling admission from a cattle farmer, and wasn't a position he came to easily.

It took the discovery that methane from cattle wreaks at least 25 times the environmental havoc as carbon dioxide (due to its much higher refractive index) to stop him in his tracks.

But methane only lingers in the atmosphere for 10 years, compared to 100 years for carbon dioxide.

"So changes to the cattle industry would have a quicker impact because of methane's short life," said Mr Wright.

"If you make a 10 per cent impact on

methane, you'll see the effects in only 10 years."

Mr Wright wants to see his industry make those changes, otherwise, he worries, they'll end up being seen as the new millennium's tobacco industry, caught digging up scientists to deny the facts and suffering the consequences in public disapproval.

"We could deny, litigate, lie and so on, and consumers will not trust us. Our job could be wiped out," he said.

"Or we could be supported and encouraged to change. We have a responsibility to make changes, and if we do, we're more likely to make a difference. It'll be a hard journey for us, but there's a great opportunity as an industry to make a difference."

Globally, beef production results in over 40 per cent of all animal agricultural greenhouse emissions. In fact, if the

world's cattle got together and formed a nation, they'd only be out-gassed by the US and China.

Cattle are a very inefficient way of producing protein, with the by-product being lots of gas. The fact that Coota Park has been able to ascertain a 15-20 per cent improvement in feed efficiency means that they will be able to take a product to market that addresses the public's growing concern about the environment.

"There will always be people who want to eat red meat - this is a way to do it in a way that is better for the environment," summarised Mr Wright.

The development of the Blue-E breed is just one small example of how regional Australia can punch above its weight in the fight for better and more sustainable practices.

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