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Dr Mary Cole, the 2025 Victorian winner of the AgriFutures Rural Women's Award, is on a mission. As a cattle farmer and one of our country's pre-eminent soil microbiologists she wants other farmers to understand the secrets of Australian soil.

"For me it's more than just a job or research project – it's my life's work. We need to stop asking the land what it can do for us and start asking what we can do for the land," says Cole.

In 2025 Australian farmers have felt the full force of the Australian climate, from droughts to flooding rains. While farmers in NSW and Queensland have dealt with devastating floods, Cole's region is facing extreme drought.

In January, when her Angus cattle stud in Garfield, Victoria, hadn't seen rain for months she made the difficult decision to sell her entire herd.

Cole says selling the stock in the drought, which is still impacting parts of Victoria, South Australia, Tasmania and Western Australia, was the right decision. "At least now we don't have that heartbreak. It makes us weep to see what's happening on the farms around us. We still have green grass on our farm, where others have nothing," she says.



Dr Mary Cole on her farm in Garfield, Victoria.

As a scientist, Cole is a proponent of regenerative farming, a holistic approach that eschews the use of chemical inputs and focuses on restoring and enhancing the functioning of the whole ecosystem, which includes careful livestock management.

Cole founded [Agpath](#), a research, education and consulting company, to teach Australian farmers how to look after their soil so it can continue to feed Australia for generations.

In its simplest form, “if we feed the soil and the microbes and care for the land, then the soil and the microbes will feed us,” says Cole.

She says regenerative practices make an enormous difference in protecting farms from drought.

“When you have good healthy soil with deep rooted vegetation and mixed pastures you hold a lot more water down deeper in the soil. So the high temperatures don’t have the same effect, and the pastures hold on longer.”

The Australian landscape is unique, and Cole says that means we can’t farm sustainably for the long term in the same way as farmers overseas.

“Our landscape is so incredibly ancient and over time it has weathered. When Europeans came to Australia they brought plants, animals and farming methods that were incompatible with the environment and destroyed it at a rapid rate. We’re losing topsoil at 20 times the rate the Earth is creating it.

“However, we can turn that around.”

Cole says the key is mixed cropping (as opposed to planting just one single crop at a

time), avoiding ploughing and ensuring 100% coverage of the soil by plants.

"Americans and Europeans can't conceive of the age of our continent and the fact that we have very little soil. But we can make it work for us by caring for country. We may be the driest continent (aside from Antarctica), but we just have to look at it from a different perspective and farm differently and with care."



Dr Mary Cole pictured in her laboratory, where she studies Australian soil and the organisms living in it.

Cole's passion for caring for the land and studying the Australian landscape started when she was four years old, living in Far North Queensland where many of her friends were First Nations people.

"The First Nations people don't see themselves as owners of the land, they see themselves as custodians for generations. There's a nurturing and a humility that's so different from the Western culture of ownership and possession, and as a young child I was encouraged to cultivate that sense of nurturing."

Regenerative farming may be based on science and ancient knowledge, but it's still a grassroots movement rather than mainstream practice. Something Cole hopes to see change in her lifetime.

She plans to use the \$15,000 grant awarded to her by Westpac for winning the Victorian AgriFutures Rural Women's Award to film videos with farmers who have successfully enacted regenerative farming practises to increase the health and output of their land, so they can share their learnings with others.

"Farmers need to hear from life experience and learn from each other," says Cole. And right now, she said, that's more important than ever.

"As farmers, we must realise that we are going into a changing climate and we need to be forward thinking when making decisions. We can't take a business-as-usual approach, because business is not usual anymore."