



carbonlink™

**First at-scale  
soil carbon  
projects show  
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grazing  
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## MEDIA RELEASE

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### First at-scale soil carbon projects show overwhelming benefit for grazing industries

In a milestone for the pastoral industry, two Queensland beef enterprises that are part of the nation's first project accurately measuring soil carbon, at scale, have been issued with a combined 151,312 Australian Carbon Credit Units (ACCUs).

The ACCUs were issued by the Clean Energy Regulator today for Tom and Antoinette Archer's 3851 ha "Rexton", near Goondiwindi, and Andrew and Meagan Lawrie's "Moora Plains", near Gogango west of Rockhampton, in what is an unprecedented demonstration of the impact active land and livestock management has on removing carbon from the atmosphere and mitigating greenhouse gas (GHG) emissions.

Overseen by CarbonLink™, the broader project spanned more than 18,000 hectares across Rexton and Moora Plains, a further property in Central Queensland and one in the North Burnett, as well as a fifth near Walcha in New South Wales, with soil carbon measured over five years between 2016 and the end of 2021.

Over that period, 10.6t of CO<sub>2</sub>-e was sequestered in soil for every one tonne of livestock grazed on Rexton over five years and 12t for every tonne of livestock grazed on Moora Plains, after accounting for all emissions including methane, an exceptional result for this geographic location of Australia. Importantly, this is the first data to indicate the application of regenerative farming practices, even throughout periods of severe drought, can contribute to net gains in carbon stored.

### Challenging the carbon narrative

CarbonLink Chair, Dr Terry McCosker, said the study reported sequestration rates more than three times the conservative original estimates and proved livestock could be positive contributors to carbon storage and ecological health.

"These findings represent a significant advancement for our agricultural sector. They mark a noteworthy milestone for CarbonLink and our partners, following over a decade of focused investment in cutting-edge technology and rigorous scientific methodologies to precisely gauge and monitor soil organic carbon," Dr McCosker said.

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“These outcomes serve as a compelling testament to the potential Australian agriculture holds, not only in driving the advancement of their respective businesses and industry towards carbon neutrality through enhanced soil and landscape health, but also in making enduring contributions towards national emissions reduction objectives in the long run.

“This was achieved over a five-year period that included two years of severe drought in 2018 and 2019 – the worst some parts of Australia had seen in 100 years. This shows these results are not theoretical and have been achieved at scale.

“I think the impact of consumers having an understanding that beef can be significantly carbon negative, and the amount of carbon that has been stored in the soil per adult animal, could be enormous.”

### **Ecological and economic benefits**

On both properties, the net carbon value generated, after accounting for all discounts including but not limited to methane emissions, expenses associated with carbon measurement and project-related fees was in excess of that generated through livestock production.

“This unquestionably shows there is more value to management than just the impact that you have on livestock production,” Dr McCosker said.

“In the first instance it is important that management decisions are being made to elevate production businesses through greater soil health and biodiversity and, in the case of Rexton and Moora Plains, this was achieved through employing strategies developed by RCS Australia (Resource Consulting Services). For the Archers and Lawries, carbon has now proven to be a strong secondary source of income – a bonus for getting the management of the landscape right.”

### **The carbon journey**

Key on-farm practices implemented on both Rexton and Moora Plains included the implementation of intensive grazing systems to facilitate greater soil and pasture rest periods, to support plant health and the sequestration of carbon.

“We became involved in regenerative farming about 20 years ago when we wanted to better look after our land and business, but learnt we were also managing for soil health – and that led us down the path to soil carbon,” Mr Archer said.

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“We did it to care for our landscape and improve production, but after making new changes, what we now have is a complementary income stream that is perhaps less volatile than that generated by livestock.” “What we also really like is that a lot of the projects and research out there is aimed at avoiding emissions, this process has gone beyond that by removing carbon from the air and storing it in the soil.”

At Moora Plains, where the Lawries run up to 1,500 head of trade cattle across 3,553 ha, soil carbon is now considered an additional business to the grazing enterprise. “The change of activity requirement of the project motivated us to take stock density to the next level. This has had the added benefit of allowing longer rest than usual in paddocks badly affected by pasture dieback – up to 300 days in places – giving new plants time to establish,” Mr Lawrie said.

The incredible effectiveness of the regime has, at times, surprised the Lawrie’s given, in the five years between testing rounds, Moora Plains was impacted by a flood and two years of extreme drought. “To now have in the back of your mind you are managing a soil carbon enterprise keeps you a little more focused on ground cover, soil health and plant health than if you were just running an animal production system.” Mr Lawrie said.

### **Shielding carbon from drought**

The management implemented on both Rexton and Moora Plains promotes storage of carbon at levels that serve as “safe havens” beyond the more vulnerable soil surface, protecting it from events such as drought and fires that can strip out valuable reserves.

“Simply, the deeper the carbon, the less opportunity there is for it to escape the soil. We also now know 44 per cent of new carbon in soil was sequestered below 30 centimetres,” Dr McCosker said. “Using regenerative practices, the carbon goes into the ground and stays there, even throughout drought, and CarbonLink was able to capture that because we measure at depths of 120 centimetres – much deeper than the 30 centimetres research programs generally measure to.

“The results we have seen through this landmark project have shown growing soil health and carbon storage can have an overwhelmingly positive impact on beef business productivity, carbon negative product and ecological health. “We’re now looking forward to continuing our work and investment in technology, with partners including the CSIRO, to lead industry in carbon management and measurement.”

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