Empowering farmers to save native ecosystems in agricultural landscapes

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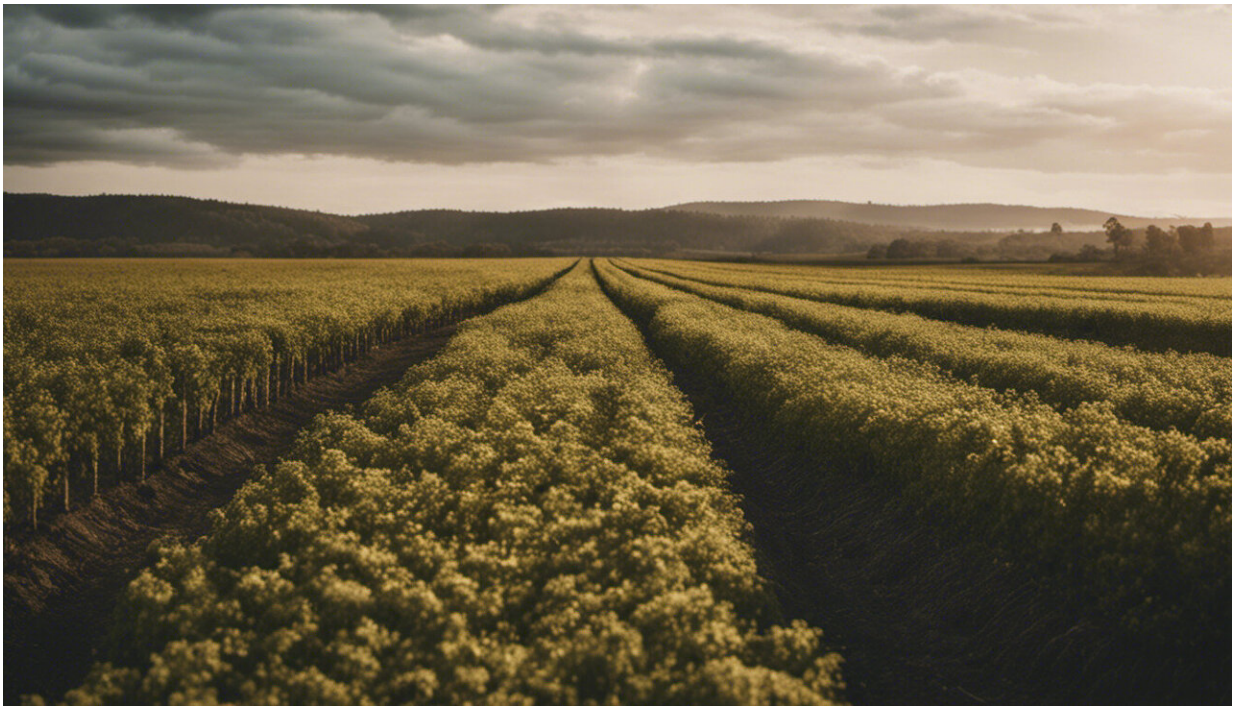

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With less than 5% of native vegetation remaining on private properties and roadsides on the Yorke Peninsula of South Australia, University of South Australia researchers are calling for dramatic changes to land management measures in order to retain native ecosystems and prevent further biodiversity loss.

In a move to understand the barriers to native habitat conservation on and around farming properties, UniSA researchers surveyed 35 farmers managing 11% (56,980 hectares) of farming land on the Yorke Peninsula. The study is published in the journal *Agriculture and Human Values*.

Conducted in partnership with the Kangaroo Island Research Station, the new study found that native vegetation conservation was often hindered by a lack of trust and cohesion between farmers and the local Council, and a lack of access to natural resource management information.

UniSA researcher and Ph.D. student Bianca Amato says farmers and rural communities must prioritize working together to protect and maintain native ecosystems.

"Agriculture is one of the main causes of land degradation and land clearance, leading to irreversible species and ecosystem endangerment in Australia," Amato says.

"On the heavily cleared Yorke Peninsula, native vegetation loss has terrible consequences for ecosystem functions and biodiversity conservation.

"Little appropriate information is readily available for conservation, and most farmers rely on their own experience to manage vegetation."

On the Yorke Peninsula, 86% of farmers use an agronomist for support and advice on new technologies, policy, best practices, and commercial enterprises. The researchers say that agronomists could play an important role in conservation.

"Dependence on agronomists for farming productivity means that most of the Yorke Peninsula area is in great part managed by very few

agronomists, who currently have little stake in conservation. The inclusion of on-farm conservation as part of their role would be an effective way to facilitate positive landscape management," Amato says.

"We need a radical change in policy and education to permit agronomists to champion conservation as part of their work, and to empower farmers to make positive changes in farming practices."

The researchers also found that farmers' distrust in Council and State Government organizations impeded conservation.

"Farmers believe that roadside management by Council is inadequate and that they can do a better job," Amato says.

"Some also believe that other Government agencies are distanced from their needs in landscape management and their experience.

"To protect native vegetation, farmers must be empowered as leaders of conservation projects, with the support of Government agencies acting as facilitators rather than project managers. Only by working together will we be able to save some these remnant native habitats."

Globally, agriculture occupies about 40% of the world's land and is a major contributor to biodiversity loss and extinction. And 86% of threatened species are at risk of extinction because of agriculture.

On the Yorke Peninsula, 24 out of 30 terrestrial native mammals are locally extinct.

Co-researcher, UniSA's Sophie "Topa" Petit says that demonstrating the tangible benefits of wildlife and remnant/roadside vegetation to farming, via Government schemes, could facilitate on-farm conservation.

"Farmers are attached to their land and care about wildlife. But those who are high adopters of on-farm conservation practices tend to be shunned by their peers," Petit says.

"They mentioned that the high competition among farmers tended to overshadow social connections. Loss of social networks can lead to isolation, High adopters of conservation felt somewhat ostracized and unable to share their views with their peers.

"We also noticed that farmers were hesitant to speak about their emotional connections to the land. They would say something like 'native vegetation makes me feel good… but is that a benefit?' Well-being is most definitely a benefit, and I suspect that accepting that well-being is central to successful farming could improve social connections and conservation in many farming landscapes.

"We recommend that, with the support of Government schemes, conservation be considered an integral part of farming success and be celebrated

"Farming success is more than yield. It is quality of life, the safety of ecosystem services, habitat and wildlife conservation, and the vibrancy of a close-knit community."

More information: Bianca Amato et al, Improving conservation outcomes in agricultural landscapes: farmer perceptions of native vegetation on the Yorke Peninsula, South Australia, *Agriculture and Human Values* (2023). DOI: 10.1007/s10460-023-10458-y

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